ADAPTATION FUND

REGIONAL PROJECT PROPOSAL

PART I: PROJECT INFORMATION

Title of Project/Programme:	**Building urban climate resilience in south-eastern Africa**
Countries:	Madagascar, Malawi, Mozambique and Union of Comoros
Thematic Focal Area:	Disaster risk reduction and early warning systems
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	United Nations Human Settlements Programme (UN-Habitat)
Executing Entities:	For Regional coordination purposes: Disaster Risk Reduction Unit of the Southern Africa Development Community (SADC), in partnership with DiMSUR: Technical Centre for Disaster Risk Management, Sustainability and Urban Resilience In Madagascar: Municipality of Morondava; National Bureau for Disaster Risk Management (BNGRC) In Malawi: Municipality of Zomba; Department of Disaster Management Affairs In Mozambique: Municipality of Chokwe; National Institute for Disaster Management (INGC) In Comoros: Municipality of Moroni; Rescue and Civil Protection Operational Centre (COSEP)
Amount of Financing Requested:	**US$13,544,055**

Project Background and Context:

i. Introduction: African context of climate change, urbanisation and adaptive capacity

Africa is undergoing rapid urbanisation that will result in almost 1.33 billion people living in cities by 2050, compared to 470 million at present. Although Africa's population remains mostly rural, the continent will become predominantly urbanised in the next 20 years with an urban population of over 50% by 2036[1]. With a lack in local capacity to manage this rapid urban growth much of the population expansion is taking place outside or in absence of official planning frameworks. A large part of the housing demand is being met by growing informal settlements characterised by poor living conditions, lack of access to basic services and infrastructure. These are often located in areas exposed to natural hazards.

[1] United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision

Urban risks are exacerbated by the increasing severity and unpredictability of climate change effects. These impact on a range of sectors from water supply, food systems and health, and adversely affect the urban poor. Urban areas are generally more vulnerable to disasters than rural areas, due to denser populations, concentration of assets and variety of activities within comparatively smaller geographical areas. Given the critical political, social and economic roles of cities, these risk factors bear on urban settings and often become national in outreach when disasters occur. The secondary impacts - including damage to infrastructure, disruption of services, food scarcity and an increasing prevalence of vector and water-borne diseases – are likely to worsen the condition of the poorest part of the population.

This is particularly the case in developing countries with low levels of socio-economic development. There is a direct correlation between poverty and vulnerability to environmental risks. Low-income groups in African cities are relatively disenfranchised from decision-making, having the least resources at their disposal to meet lifestyle challenges, even less during times of change or disaster. Research on African cities has highlighted the lack of capacity and awareness of climate change, and often extremely high levels of vulnerability among the continent's large and rapidly growing urban poor populations.[2] Among the urban poor, especially women and the very young are shown to be most at risk from disease, pollution and disasters.[3] At the same time, cultural biases and sensitivities often lead to the exclusion of women from decision making processes.

The impact of climate change is particularly acute in small to intermediate sized cities in Africa as they host the largest share of the urban population (54%), and are projected to be the world's fastest growing urban agglomerations in the decades to come.[4] At the same time, they face significant lack in governance capacity and are therefore poorly equipped to plan and subsequently implement risk reduction and resilience actions. Hence, developing local governance capacity in risk management and resilience planning is a key strategy to reduce the multiple risks cities are exposed to and adapt to the adverse effects of climate change.

The Fifth IPCC Assessment Report[5] presents strong evidences that average temperatures in Africa have increased over the last 50–100 years. In particular, the report suggests that climate change has already impacted on the magnitude and frequency of some extreme weather events in the continent, and that the health, livelihoods and food security of people have been affected. The severity of the consequences of climate change on environmental, economic and cultural systems across Africa will increase with rising temperatures, a very likely scenario.

The Report also highlights that climate change is among many drivers of rural-urban migration. Rapid urbanisation calls for significant investment to create jobs, and provide infrastructure and services. African cities, in most cases, lack those financial resources. Across the continent, most adaptation to climate variability and change is reactive, short term, at the individual or household level, and is not supported by government stakeholders and policies.

The impacts of climate change in Africa can be witnessed in disaster losses. While globally the modelled mortality risk associated with floods and tropical cyclones was estimated to have

[2] Revi, A., D.E. Satterthwaite, F. Aragón-Durand, J. Corfee-Morlot, R.B.R. Kiunsi, M. Pelling, D.C. Roberts, and W. Solecki, 2014: Urban areas. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, p. 552

[3] UN-Habitat 2014, The State of African Cities 2014 Report – Re-imagining sustainable urban transitions, p.33

[4] Ibid

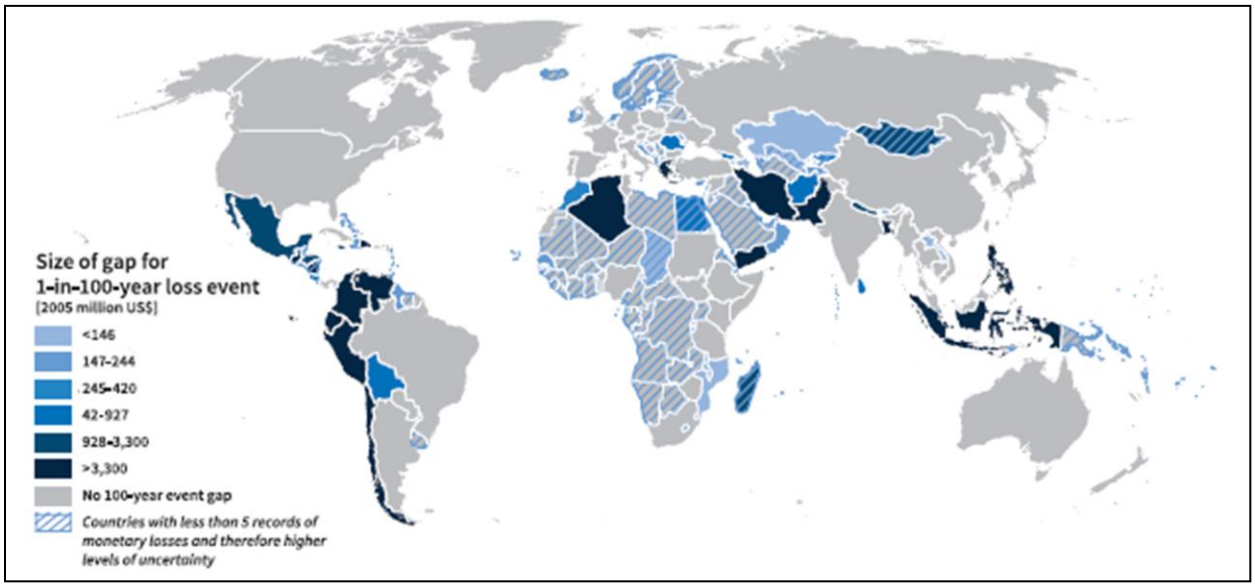
[5] Niang, I., O.C. Ruppel, M.A. Abdrabo, A. Essel, C. Lennard, J. Padgham, and P. Urquhart, 2014: Africa. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change; p. 1202

peaked in the year 2000 before trending down, the flood mortality risk in sub-Saharan Africa has grown consistently since 1980 because increasing population exposure has not been accompanied by a commensurate reduction in vulnerability[6], which can be attributed to low levels of adaptive capacity.

Furthermore African countries are among the ones with the biggest financing gap for addressing climate vulnerability, and are hence severely challenged by rising economic loss. Most loss is uninsured and governments do not have the financial reserves or access to contingency financing that would allow them to absorb losses, recover and rebuild.

For example, while Canada and the United States would only face challenges in absorbing the impact from a 1-in-500-year loss, Madagascar and Mozambique would face difficulties finding the resources to absorb the impact from as small as a 1 in 3-25 year loss[7]. Clearly, the financial risk to these countries is substantial. In particular, a very significant number of countries would not pass a stress test of their financial capacity to absorb the impact of a 1-in-100-year loss (see figure 1).

Figure 1: Countries facing a financing gap for a 1-in-100-year loss event – UNISDR Global Assessment Report 2015, p. 102.



Multiple uncertainties in the African context mean that successful adaptation will depend upon developing resilience in the face of uncertainty.[8]

Planning for climate change adaptation requires that urban planning and development are focused on producing urban systems that have greater capacity to absorb shocks and adapt to impacts. In fact, urban planning is concerned with the way the street layout is done, including essential infrastructure such as drainage system (which is essential for flood risk reduction, for example), good connectivity for ensuring an adequate transportation system in case of emergency, proper land plotting methodologies, etc. At times of disaster, impacts and losses

[6] UNISDR, Global Assessment Report on Disaster Risk Reduction, 2015, p. 44
[7] UNISDR, Global Assessment Report on Disaster Risk Reduction, 2015, p. 102, and citations therein
[8] Niang, I., O.C. Ruppel, M.A. Abdrabo, A. Essel, C. Lennard, J. Padgham, and P. Urquhart, 2014: Africa. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change; p. 1126

can be substantially reduced if authorities, individuals and communities in hazard-prone areas are resilient: well prepared, ready to act and equipped with the knowledge and capacities for effective disaster management within a longer-term development perspective.

Building adaptive capacity at the different levels is essential for ensuring future urban climate resilience. Participation and inclusivity are key elements of boosting adaptive capacity at local levels, to help identifying the key existing and potential vulnerabilities in specific communities, and to link short-term priorities to long-term plans.

Yet, despite the fact that urbanisation has progressively taken on a central role for understanding risk and its associated vulnerability, there is a noticeable lack of contextually adapted urban risk reduction and resilience initiatives in sub-Saharan Africa. Existing tools and approaches are not appropriately targeting low capacity local governments in the region, while at the same time tend to be dedicated to a narrow audience. They often heavily rely on outside technical expertise, are too technical in nature, and depend on costly data collection methods, creating a disincentive to local governments in kick-starting a process of resilience building and climate change adaptation.

In the context of this project, four countries were selected where the main activities are expected to take place, Madagascar, Malawi, Mozambique and the Union of Comoros. They are located in the south-eastern part of the African continent, which is a region very vulnerable to transboundary extreme climate-related events, in particular floods, drought and cyclones.

Four cities or towns with similar types of vulnerabilities have been selected in these countries to implement pilot adaptation projects following a participatory approach, namely: Morondava, Madagascar; Zomba, Malawi; Chokwe, Mozambique; and Moroni, Comoros. These urban settlements were selected in coordination with the national authorities, according to the following criteria: (i) high exposure to climate-related hazards (floods, cyclones, sea level rise and/or drought); (ii) low institutional and financial capacity of the municipality (typical situation of a fast growing small/intermediate city/town of sub-Saharan Africa with a population ranging between 50,000 and 100,000 inhabitants); (iii) cities/towns in which the United Nations Human Settlements Programme (UN-Habitat) has recently engage in implementing risk reduction and resilience building activities.

ii. Sub-regional, country and city perspective

a) Environmental context at sub-regional and country level

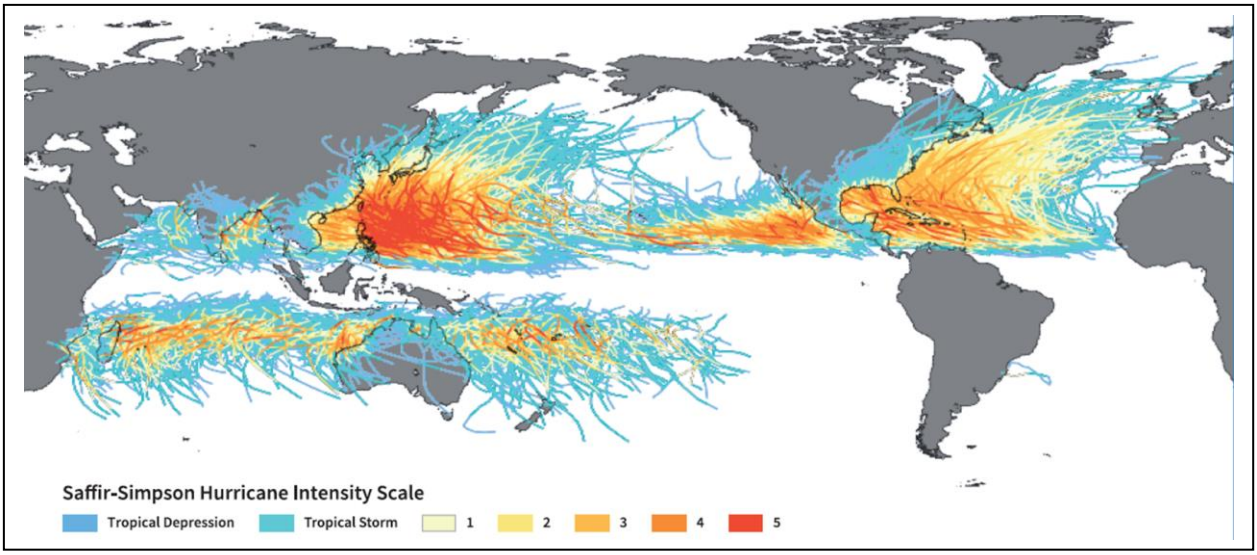
Southern Africa is very exposed to the impacts resulting from recurrent natural hazards such as cyclones, floods and drought. More threats exist in this region that compound the effects of these natural hazards, some of natural origin (such as earthquakes, volcanic activity, among others) and others induced by anthropogenic interventions, such as land and environmental degradation and uncontrolled urbanisation. In this section, the intent is to first describe the common/transboundary natural hazards which threaten to cyclically break the economic development process of the region.

More specifically, the IPCC projections indicate that as of consequence of climate change there will be higher risk of drought, especially in south-western sub-regions, while there is uncertainty concerning projected changes in landfall of tropical cyclones originating in the southwest Indian Ocean which led to intense flooding in the last decades. As for precipitation changes in the region, drought and heavy rainfall have been experienced more frequently during the last 30

years. An increase in extreme warm indices (hot days, hot nights, and hottest days) and a decrease in extreme cold indices (cold days and cold nights) in recent decades are consistent with the general warming. The south-western sub-regions are projected to be at a high risk to severe droughts during the 21st century and beyond. Large uncertainties surround projected changes in tropical cyclone landfall from the south-west Indian Ocean that have resulted in intense floods during the 20th century. Future precipitation projections show changes in the scale of the rainfall probability distribution, indicating that extremes of both signs may become more frequent in the future.[9]

The four selected countries where the proposed project is expected to take place, Madagascar, Malawi, Mozambique and the Union of Comoros, are annually affected by cyclones originating in the Indian Ocean and moving westwards during the period stretching from November to March, hence provoking strong winds, high precipitations and floods with devastating effects in urban areas (see figure 2).

Figure 2: Worldwide historical tropical cyclone tracks – UNISDR Global Assessment Report 2015, p. 67.



According to the UNISDR Global Assessment Report 2015, with the exception of Small Island Developing States (SIDS), the Philippines and Madagascar are the two countries in the world with the largest proportion of their capital investment at risk as consequence of tropical cyclones, again highlighting the importance of prospective disaster risk management. In the sub-region targeted by the project, Mozambique and the Union of Comoros follow Madagascar as the most vulnerable to this type of natural hazard.

While Malawi is affected to a lesser extent, it is impacted through tropical cyclones in the form of severe flooding, similarly as the other three countries. In early 2015, devastating floods disrupted Malawi's economy and displaced hundreds of thousands of people. In addition, Madagascar, Comoros and Mozambique have several coastal cities which are likely to be affected by sea level rise resulting from increasingly warmer temperatures.

The hydro-geographical profile of the region shows that nine international river basins flow to Mozambique, among which the Zambezi is the largest one, followed by the Limpopo, Rovuma

[9] Ibid., p.1211

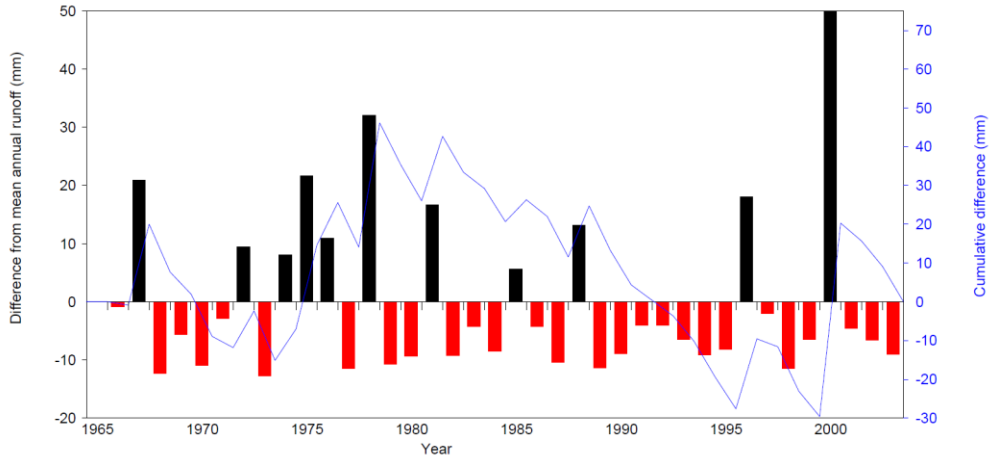
and Save (see figure 3). This means that flooding is a regular seasonal phenomenon in that country, and its extent much depends on the amount of rainfall registered in the neighbouring countries located upstream. Therefore, there is a clear need to strengthen current efforts and enhance inter-country collaboration to mitigate effectively the impact of floods in this sub-region.

Figure 3: International river basins in South-East Africa - Atlas for Disaster Preparedness and Response in the Limpopo Basin, INGC, UEM & FEWSNET MIND (2003).

Drought is a chronic natural disaster in the sub-region. It increases dramatically the vulnerability of an already poor population, in particular in terms of food security and livelihoods. Urban areas are not spared by this type of natural hazard. Mozambique is currently affected by a protracted on-going drought since early 2016. Affected populations do not have sufficient time to recover from the economic and social impacts provoked by droughts between one cycle and the next. Figure 4 shows the irregular hydrological regime of an important river like the Limpopo, showing the constant alternating of flood peaks and longer drought periods.

Disaster impacts vary between these four countries, with Madagascar and Mozambique having a different disaster risk profile because of their greater geographical size. The prominent hazards of these two countries are cyclones and floods, which are much related phenomena. In addition, both countries significantly suffer from chronic drought. Mozambique is also in the unfortunate position of being downstream of major transboundary rivers and therefore is highly vulnerable to the water management strategies of its neighbours located upstream. Malawi's concerns relate to flooding, particularly in the Lower Shire Valley, while an inherent regular dryness characterises the agricultural economy. Earthquakes associated with the Rift Valley do occur and are periodically damaging. Meanwhile, the Union of Comoros is dominated by the volcano on Grand Comore Island; sea level rise, flooding and periodic drought are also of concern to this archipelago. A rapid risk profile description for each country is provided below, including of the four cities selected in this project.

Figure 4: Hydrological anomalies in the Limpopo basin – Extracted from the presentation made by the Ministry of Public Works and Housing, Mozambique, on 15 December 2005, titled: "Experiences of Mozambique on Disaster Management".



- ***Madagascar***

As mentioned earlier, Madagascar is extremely exposed to cyclones originating in the Indian Ocean. One-quarter of Madagascar's population - approximately five million people - lives in zones at risk of natural disasters, including tropical cyclones, storm surges, floods, drought and locust invasions. Each year, an average of three to four cyclones make landfall on Madagascar. The most impacted areas are generally the eastern and western coasts. However, as a consequence of climate change, cyclones appear to have reduced in frequency but have intensified in power in recent years; impacts are now also felt further north. In 2015, over 100,000 people were affected by flooding and the after-effects of tropical storms Chedza and Fundi. As a result, more than 70,000 people lost their homes.[10]

Flooding is inherently associated with cyclones, which provoke heavy and tropical rains, and represents the second major natural threat to the country. Rains and flooding also cause landslides. Its impact has been exacerbated by the effects linked with climate change as well as anthropogenic activities leading to deforestation, erosion and, more in general, to land degradation.

Another important climatic-related threat is drought. Climate change affects the regularity of rainfall and results in higher temperatures, with a major impact on agriculture. Dryer conditions are observed, especially in the south. In 2015, approximately 80,000 people were affected and food security heavily impacted.[11]

Other natural threats that can be found in Madagascar are the risk of tsunami, fires, locust invasion and minor seismic events. There are also epidemics such as plague, Chikigunya (mosquito-borne viral disease), pandemic influenza, cholera and malaria.

[10] GFDRR country profile for Madagascar, https://www.gfdrr.org/sites/gfdrr/files/region/MG.pdf, accessed on 29 December 2016
[11] IRIN: Disaster-prone Madagascar battles flooding and drought, http://www.irinnews.org/analysis/2015/03/05/disaster-prone-madagascar-battles-flooding-and-drought, accessed on 29 December 2016

- *Malawi*

The main natural hazards affecting Malawi are floods and drought. Studies indicate that climate change will continue to affect their incidence — notably, the mean annual temperature in the country has increased by an average rate of 0.21°C per decade over the last 30 years. Flooding results in sediment deposits in river channels, reservoirs and floodplains. In turn, this causes catchment degradation, loss of arable land and damage to irrigation infrastructure. Most recently in 2015, the country was impacted by unprecedented flooding which affected more than 1.2 million people and destroyed agricultural fields and damaged key infrastructure leading to a massive loss in livelihoods.[12]

As consequence of climate change there are disrupting rainfall patterns with dry periods in the middle of the rainy season while drought spells are lengthening. Regarding flooding, the lower Shire River is particularly at risk. In that area people build their houses with clay which expands with increased humidity when settling closer to the river. Communities live close to streams due to their dependency on agriculture, fishing and other subsistence activities. Meanwhile flooding events are increasing because of deforestation and silting of rivers.

- *Mozambique*

Mozambique ranks third among the African countries most exposed to multiple weather-related hazards, suffering from periodic cyclones, drought, floods, and related epidemics. Drought occurs primarily in the southern region, with a frequency of seven droughts for every ten years. Floods occur every two to three years, with higher levels of risk in the central and southern regions.[13] Major rivers flow into Mozambique so heavy rainfall in upstream countries often determines seasonal flooding, impacting on the large population living along the river banks and depending on agriculture activities. High profile events are the 2000 floods especially in the lower Limpopo River and those of 2001, 2007 and 2008 in the lower Zambezi River. Floods in urban areas are often caused by poor drainage, creating conditions conducive to malaria and cholera.

Due to the effects of climate change, rainy seasons have become more irregular, starting late and with an uneven distribution. As a result, cyclones are becoming more intense in recent years, the latest being in 2007 and 2008, and are affecting the population settled along the coastline of the country enduring high levels of poverty and livelihood conditions are difficult to sustain. In addition to the impact on housing and public facilities, especially affecting the roofing structures, cyclones have damaging effects on infrastructure. Storms and strong winds below cyclone strength also cause a lot of damage.

Hazards caused by anthropogenic interventions are deforestation and land degradation leading to soil erosion and desertification, mangroves depletion and bush fires. Sea level rise as potential threat linked with climate change is a great concern as Mozambique's major cities are located along the coast.

[12] GFDRR country profile for Malawi, https://www.gfdrr.org/sites/gfdrr/files/region/MW.pdf, accessed on 29 December 2016
[13] GFDRR country profile for Mozambique, https://www.gfdrr.org/sites/gfdrr/files/region/MZ.pdf, accessed on 29 December 2016

- *Union of Comoros*

The Comoros is a volcanic archipelago, with Karthala volcano dominating the Grand Comore, the main island. In 2005 an eruption of this volcano affected 245,000 people. Flooding occurs on a more regular basis and can have a serious impact, especially as a result of cyclones. The latter, as already explained, are a regional hazard which has intensified in power and reduced in frequency over recent years. Hence, as a result of climate change, stronger and irregular weather events are compounded over shorter time periods.

One of the biggest threats is seal level rise as consequence of climate change. According to projections, sea level rise within the country may increase by 0.13 to 0.56 m by the 2090s.[14] This potential hazard can be highly destructive as main settlements are located along the coast, and it is not likely to be contained by dykes.

Climate risks listed in the country's National Adaptation Programme of Action (NAPA) include: both seasonal and acute drought; increased incidence of heavy rains and cyclones; and a rise in sea level. Comoros' Initial National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) also discusses the potential impacts of climate change in key sectors of the country, including: an expected increase in the occurrence of malaria; a decrease in crop yields, agricultural production and fisheries; and flooding and internal displacement.[15]

The overall vulnerability situation is worsened by salinisation and poor water management, soil water-logging (through volcanic ash), deforestation, soil erosion and landslides. Land degradation and the disappearance of around 400 acres of forest per year also have had a negative effect on the country's socio-economic development.[16]

b) Socio-economic context at country level

Fast paced urbanisation is a reality for the four countries in the region. They show significantly high urban annual growth rates surpassing their overall population growth, indicating the increasing importance of the urban dimension in these countries (see Table 1). At the same time, local administrations face a capacity gap and are being increasingly challenged by climate change induced risks.

[14] Hilary Hove, Daniella Echeverría, Jo-Ellen Parry: Review of Current and Planned Adaptation Action: Southern Africa, p. 63
[15] Ibid
[16] Ibid

Table 1: Population and urbanisation profile of the four target countries - World Urbanization Prospects, 2016[17]

	Total Population (2016 Estimate)	**Urban Population** (2016 Estimate)	**Percentage Urban** (2016 Estimate)	**Urban Pop. Annual Growth Rate** (2010-2015)	**Total Pop. Annual Growth Rate** (2010-2015)	**Capital City and Population** (2014)
Madagascar	24,915,000	8,905,000	35.7%	4.69%	2.79%	Antananarivo: 2,487,000
Malawi	17,802,000	2,929,000	16.5%	3.77%	2.84%	Lilongwe: 867,000
Mozambique	27,781,000	9,031,000	32.5%	3.27%	2.47%	Maputo: 1,174,000
Union of Comoros	788,000	224,000	28.4%	2.67%	2.40%	Moroni: 56,000

A rapid socio-economic profile relevant to the project is provided below, country by country.

- *Madagascar*

In 2016, Madagascar had an estimated population of 24,915,000, an average annual population growth rate of 2.79%, an urban share of the population of 35.7% and an average annual urban growth rate of 4.69%.[18]

It is estimated that approximately five million people currently live in zones at high risk of natural disasters.[19] According to the Global Facility for Disaster Reduction and Recovery (GFDRR), the country has a low adaptive capacity, influenced by a high poverty rate, rapid population growth, high dependency on natural resources and weak institutional capacity. Adverse effects of flooding events are significant in urban areas due to: (i) a lack of early warning systems; (ii) inadequate urban planning; and (iii) poorly maintained drainage infrastructure.[20]

The country ranked 154th out of 188 countries in the United Nations 2015 Human Development Report and did not reach any of the United Nations Millennium Development Goals (MDG) by 2015. Between 1980 and 2014, Madagascar's life expectancy at birth increased by 16.1 years, mean years of schooling increased by 0.8 years and expected years of schooling increased by 2.5 years. Madagascar's gross domestic product (GDP) per capita decreased by about 35.5% between 1980 and 2014.[21]

The GDP was at USD 9.739 billion in 2015. The latest World Bank economic update reveals a slow economic recovery in 2015 due to a weak growth in tourism and mining sectors. Catastrophic meteorological conditions during the first half of 2015 also took a toll on the economy, resulting in higher inflation and a reduction of household purchasing power. GDP growth is estimated at 3.0% in 2015 and annual inflation rose to 7.6%. The country continues to

[17] United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, custom data acquired via website
[18] Ibid
[19] http://www.worldbank.org/en/country/madagascar/overview, accessed on 29 December 2016
[20] GFDRR country profile for Madagascar, accessed on 29 December 2016
[21] http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MDG.pdf, accessed on 29 December 2016

rank poorly on the ease of doing business index: 164 out of 189 countries in the 2016 Doing Business Report.[22]

- *Malawi*

In 2016, Malawi had an estimated population of 17,802,000, an average annual population growth rate of 2.84%, an urban share of the population of 16.5% and an average annual urban growth rate of 3.77%[23]

The country ranked 173rd out of 188 countries in the United Nations 2015 Human Development Report[24], which put the country in the low human development category and did not reach any of the United Nations Millennium Development Goals by 2015.

Real GDP grew by 5.7% in 2014 but slowed down to 2.8% in 2015 as Malawi suffered from dual challenges of adverse weather conditions and macroeconomic instability. Flooding in southern districts followed by countrywide drought conditions saw a contraction in agricultural production.[25] Natural disasters have had serious impacts on Malawi's economic development. Drought and dry spells in Malawi cause, on average, a 1% loss of GDP annually. Additionally, an average loss of 0.7% of the annual GDP is due to the flooding of lakes and the overflowing of rivers.[26]

Poverty and inequality remain high in Malawi. The 2010/11 Integrated Household Survey showed that over half of the population was poor and one quarter lived in extreme poverty. These numbers are not expected to change much with the new estimates to be available in 2017. Poverty has been increasing in rural areas where 85% of the population lives, compared to urban areas where it fell significantly from 25 to 17%.[27]

- *Mozambique*

In 2016, Mozambique had an estimated population of 27,781,000, an average annual population growth rate of 2.47%, an urban share of the population of 32.5% and an average annual urban growth rate of 3.27%[28]

Mozambique's Human Development Index (HDI) value for 2014 is 0.416 - which puts the country in the low human development category - positioning it at 180 out of 188 countries. Between 1980 and 2014, Mozambique's gross national income per capita increased by about 106.8% between 1980 and 2014[29]. Nevertheless, Mozambique's rapid economic expansion over the past decades has had only a moderate impact on poverty reduction, and the geographical distribution of poverty remains largely unchanged.

Mozambique also needs to improve its social indicators. For instance, the social progress index for access to improved sources of water and sanitation ranks Mozambique 128th and 119th,

[22] http://www.worldbank.org/en/country/madagascar/overview, accessed on 29 December 2016
[23] United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision
[24] UNDP 2015: Briefing note for countries on the Human Development Report 2015, http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MWI.pdf, accessed on 29 December 2016
[25] http://www.worldbank.org/en/country/malawi/overview, accessed on 29 December 2016
[26] GFDRR country profile for Malawi, https://www.gfdrr.org/sites/gfdrr/files/region/MW.pdf, accessed on 29 December 2016
[27] Ibid
[28] United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision
[29] GFDRR country profile or Mozambique, https://www.gfdrr.org/sites/gfdrr/files/region/MZ.pdf, accessed on 29 December 2016

respectively, out of 135 countries. Indeed, Mozambique has one of the lowest levels of water consumption in the world despite being endowed with a variety of water sources.[30]

World Bank projections place economic growth at 3.6% for 2016, with significant downward risks. The discovery in April 2016 of previously undisclosed debt worth $1.4 billion, 10.7% of Mozambique's GDP, combined with the impact of the exchange rate depreciation have led to a substantial increase in debt ratios. As a result, the fiscal position is likely to remain under stress until the end of the decade.

In the short term, adverse climatic conditions, brought on by La Niña, are a risk. Should this materialise, the costs of flood damage and impact on food production would pose a major challenge to food security and livelihoods.

- *Union of Comoros*

In 2016, the Union of Comoros had an estimated population of 788,000, an average annual population growth rate of 2.40%, an urban share of the population of 28.4% and an average annual urban growth rate of 2.67%[31]

Comoros has a dense population of about 390 inhabitants per square kilometre. More than half of the population (53%) is younger than 20 years of age.[32] Its HDI rank was 159 out of 188 countries in 2015, which puts the country in the low human development category.[33] Progress has been made on several of the Millennium Development Goals. However, one of the most important challenges will be to halve the proportion of people who suffer from hunger.

According to the World Bank, citing the most recent Household Budget Survey for 2014, 42.4% of the population (around 320 thousand people) is poor, with real monthly consumption per capita below the national poverty line. Around 18% of the population lives below the international poverty line of US$1.9 per capita per day, in 2011 Purchasing Power Parity (PPP) exchange rate. The World Bank projections indicate slow progress in poverty reduction until 2018, due to stagnant economic growth.

Recent economic developments point to a deteriorating economic situation as growth slows and the Comorian franc depreciates against the US dollar. Comoros has a small and undiversified economy. While the economy had showed signs of recovery after years of political instability, achieving an eight-year high in terms of economic growth at 3.5% in 2013, conditions since then have deteriorated with growth slowing from 2.1% in 2014 to 1% in 2015.[34]

c) City level contextualisation

- *Morondava, Madagascar*

The city of Morondava lies on the south-western coast between the Mozambique Channel and the Morondava River Delta (see Figure 5) and is the capital of the Menabe Region. The coastal city is located in a flatland below sea level that is crossed by two rivers, the Morondava and the Kabatomena (see Figure 6).

[30] http://www.worldbank.org/en/country/mozambique/overview, accessed on 29 December 2016
[31] United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision
[32] http://www.worldbank.org/en/country/comoros/overview, accessed on 29 December 2016
[33] http://hdr.undp.org/en/countries/profiles/COM, accessed on 29 December 2016
[34] http://www.worldbank.org/en/country/comoros/overview, accessed on 29 December 2016

The climatic hazards that affect Morondava have increased impacts in the city due to fast paced unplanned urbanisation, which create important obstacles for strengthening resilience and increasing adaptive capacity. Official numbers from the National Environment Office for the city population indicate 41,595 for 2000, but the municipality estimates approximately of 88,700 inhabitants in 2015. Morondava shows today the highest annual population growth (5.2%) in Menabe region, resulting in a relatively young population (40.1% of the population is below 25 years old, with an average age of 29.8 years old).

The urbanisation patterns in Morondava follow two main trends: the occupation and growth of the old city, around the historic and colonial centre, and the settlements that followed major traffic infrastructure. Today, approximately 45% of the neighbourhoods are informal with many precarious housing occupying flood-prone areas. Poor drainage and sanitation conditions directly contribute for severing the impact of floods and favour the spread of waterborne diseases. The International Federation of the Red Cross and Red Crescent Societies (IFRC) Emergency Plan of Action 2015 reports that 24 water supply and sanitation facilities were flooded or contaminated at the country level, particularly in urban areas; in Morondava, this resulted in 4,069 people infected by waterborne diseases[35].

Figure 5: Map of Madagascar showing the location of Morondava – Extracted from www.nationsonline.org

[35] http://reliefweb.int/sites/reliefweb.int/files/resources/Madagascar%20MDRMG011.pdf

Figure 6: Map of Morondava – Extracted from www.googlemaps.com

The current lack of climate adaptation and resilience capacity in Morondava is also due to the level of poverty in the region. According to the official documentation provided by the municipality, approximately 24.6% of the population lives under the national poverty line. In terms of formal education, data for the Menabe region (2010-2011) show that only approximately 50 inhabitants enrolled at university level, while the literacy rate was of 76.2% in urban areas.

As the capital and main urban centre of the Menabe region, Morondava shows some economic potential in the areas of commerce and services, tourism, craft, agriculture and livestock. Located near the renowned Baobab Avenue, which receives visitors from all around the world, the city has plans to develop its touristic potential.

From an institutional perspective, the Municipality of Morondava has insufficient capacity and resources to update and operationalise plans aiming at rehabilitating, developing and maintaining the necessary infrastructure to respond efficiently to disaster and adapt to the adverse effects of climate change. The municipality has also undergone serious difficulties in updating and implementing its contingency plans due to a lack of financial resources and equipment.

The two rivers crossing the city are undergoing siltation processes that exacerbate vulnerability to floods caused by heavy rains and cyclones, as well as rising sea levels. In fact, the municipality estimates that 65% of its neighbourhoods are located in flood sensitive areas, namely: Andabatoara, Andakabe, Tanambao, Ankisirasira Nord et Sud, Morondava Centre, Avaradrova and Sans Fil. Due to its location along the Mozambican Channel, Morondava has suffered from devastating impacts of cyclones and tropical storms in several occasions. The most recent disastrous event to affect the city was caused by the landing of Cyclone Chendza on 16 January 2015. The tropical cyclone resulted in heavy rains that caused severe flooding, affecting more than 62,000 people in the country. Morondava was the second most affected city in the country in absolute numbers (and the most affected one in terms of proportion of the

population) with more than 16,000 persons impacted and 3,184 displaced.[36]

Figures 7 and 8: Impacts of Cylone Fanele on housing in 2008

Figure 9: Stagnant water in the city after the rainy season

In addition, the siliceous and sandy soils confer to the city a high level of vulnerability to erosion. Finally, the uncontrolled deforestation and mangrove destruction have directly contributed to aggravating the impacts of storms and cyclones.

- *Zomba, Malawi*

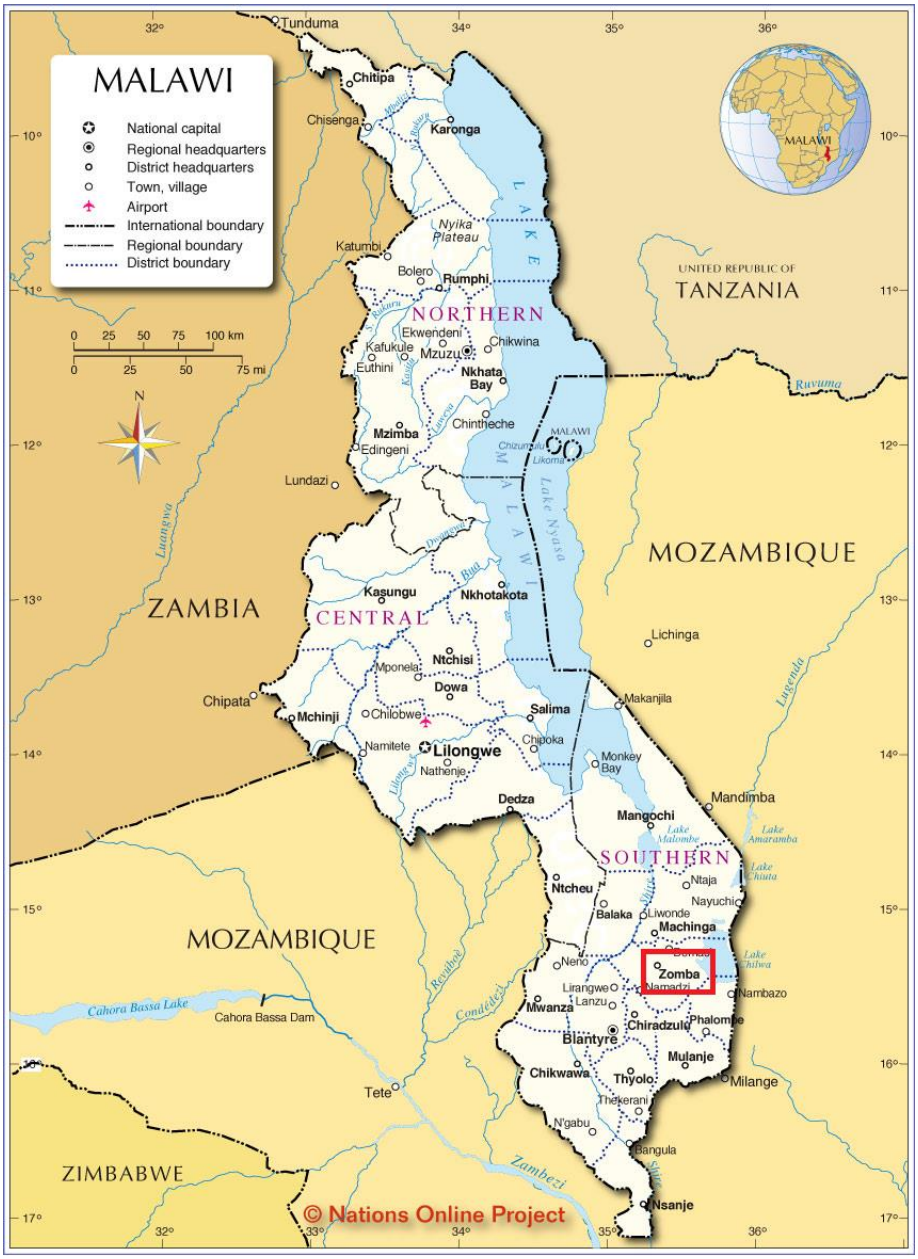
The city of Zomba is located in the southern part of Malawi, some 70km northeast of Blantyre, on the foot of Zomba Plateau (2,085 m above sea level) – see Figure 10. It was Malawi's first capital city before this was moved to Lilongwe in 1975.

The city of Zomba has a 2017 projected population of 156,020 and an annual growth rate of 3%. Like other cities in Malawi the population is relatively young with 73% of the city's population under 30 years of age. Approximately 70% of the city's population lives under slum conditions, which are characterised by poor access to basic services and infrastructure.[37] Poverty and

[36] http://reliefweb.int/sites/reliefweb.int/files/resources/Madagascar%20MDRMG011.pdf
[37] Malawi National Statistics Office (NSO) 2010

unemployment are both high in Zomba (the unemployment rate is high with 59.1% and poverty levels showing 16.3% as 'poor', 3% as 'ultra-poor'[38]), which in turn exacerbate the poverty vicious circle. These informal settlements show poor housing design, construction techniques and building materials, and are often located in marginal areas exposed to disaster risks from cyclones, earthquakes and floods.

Figure 10: Map of Malawi showing the location of Zomba – Extracted from www.nationsonline.org



[38] Malawi Integrated Household Survey, NSO 2011

The Zomba Plateau dominates the city on its northwestern side and is the source of important rivers (Likangala and Mulunguzi) running through the town. Located in the plateau, the Mulunguzi Dam supplies water to the city. The integrity of the Zomba Plateau is fundamental to the life of the city not only as a source of water and as a tourist attraction but also as an important habitat for flora and fauna and one of the top tourist destinations in the country. The plateau is also covered with forests, which provide timber and poles.

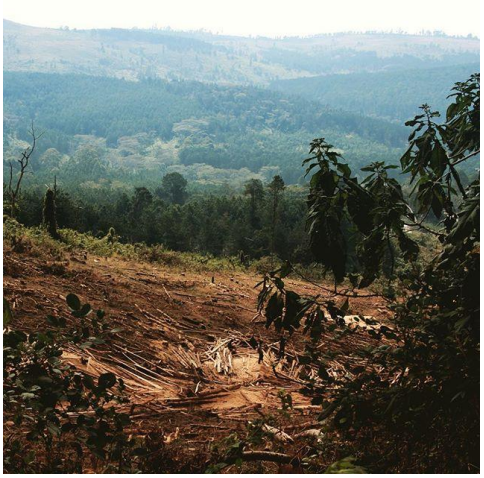
Figure 11: Map of Zomba – Extracted from www.googlemaps.com

Expanding settlements, agriculture, increasing population and urbanisation are putting severe pressure on the integrity of the mountain. Deforestation is threatening the catchment of the Mulunguzi Dam and the rivers.

The risk profile for Zomba include flooding, cyclones, strong winds, the city is in the African Rift Valley (earthquake), bush fires (especially in the Zomba Plateau and its forests and catchment). Zomba is also the location of the country's earliest recorded natural disaster – a cyclone in 1946 which killed hundreds of people.

More than 80% of Zomba's population use firewood and charcoal for cooking, which is extracted from the Zomba Plateau see Figures 12 and 13). Electricity is both unreliable and too expensive for the majority urban poor. The resulting heavy deforestation and environmental degradation of the plateau is leading to increased soil erosion and runoff as slopes are exposed, which also reduces and damages fauna and flora habitats. Poor urban governance and law enforcement exacerbate the problem of deforestation.

<u>Figures 12 and 13</u>: Problems of deforestation in Zomba Plateau



The key rivers flowing through the town cause flooding due to increased runoff occasioned by deforestation. This is exacerbated by poor and non-existent drainage that is leading to localised flooding in some parts of the city. Many roads are not engineered to have drainage. Where engineered roads exist, many drains are blocked through indiscriminate dumping of solid waste and silting. Even where urban zoning does not permit settling close to rivers, low enforcement capacity by the city council results in encroaching on the river banks, leaving those households more vulnerable to natural disasters.

Awareness on climate change adaptation and mitigation is low at the household, community and council levels. A lack of early warning systems persists, as well as a resilience and adaptation information gap.

- *<u>Chokwe, Mozambique:</u>*

The Municipality of Chokwe is located in southern Mozambique in Gaza Province, between the lower Limpopo and Mazimuchopes rivers (see Figure 12). According to the municipality, there are approximately 55,000 inhabitants mainly concentrated in neighbourhoods n. 1, n. 3, n. 4 and n. 5. Because of it location and its fertile land, the city has known an explosive demographic growth, at a rhythm of 5% per year (1997-2007), which is one of the fastest rates when compared to other neighbouring urban centres like Chibuto (3%), Xai-Xai (1,3%) or Mandlakazi (0,3%)[39].

However, this growth has mostly happened in an informal and unplanned way. The new settlements are characterised by precarious housing conditions: 55.7% of the population live in houses made out of reed, sticks and palm trees, whereas only 4.3% live in so-called conventional housing. Informal settlements in Chokwe are exposed to a number of risks and need to be upgraded.

About 60% of the population lives under the poverty line. According to the last census (2007), life expectancy only reaches 44 years of age, while child morality reaches the number of 107 every 1000 births. These numbers are higher than the national average.

[39] ANAMM (Mozambican Association of Municipalities) & World Bank (2009) Municipal Development in Mozambique. Lessons form the first decade

<u>Figure 14</u>: Map of Mozambique showing the location of Chokwe – Extracted from www.nationsonline.org

The city of Chokwe knows a rapid process of development, and is often considered the economic capital of Gaza province, especially due to its important agricultural potential. In a country where most of the food is imported from neighbouring countries, a fertile area like Chokwe has a crucial importance. Chokwe area is considered the country's barn: 40% of the country's irrigated lands are located there, with the most important production of rice and tomatoes. Approximately 80% of the active labour force works in agriculture. There are other economic activities like the food industry (cattle), clothing and commerce, however diversification remains low. In addition, most of these activities are part of the informal economy.

Figure 15: Map of Chokwe – Extracted from www.googlemaps.com

In terms of risks, due to its location in the lower Limpopo Basin, the city is exposed to the impacts of chronic drought, recurrent cyclones and especially flooding. The latter hazard severely affects the area and hinders the development of the city. The area is actually considered one of the most exposed to natural hazards in the country[40]. Chokwe has been more than once taken by the waters of the Limpopo river. The periodicity and the magnitude of the floods in the area have varied throughout the years, ranging from small occurrences to catastrophic events, notably the 2000 and the 2013 flood events, during which the whole population of the city was affected (see Figures 14 and 15). In 2000, the floods displaced 250,000 people and caused over 700 deaths.

Figures 16 and 17: Chokwe floods, January 2013

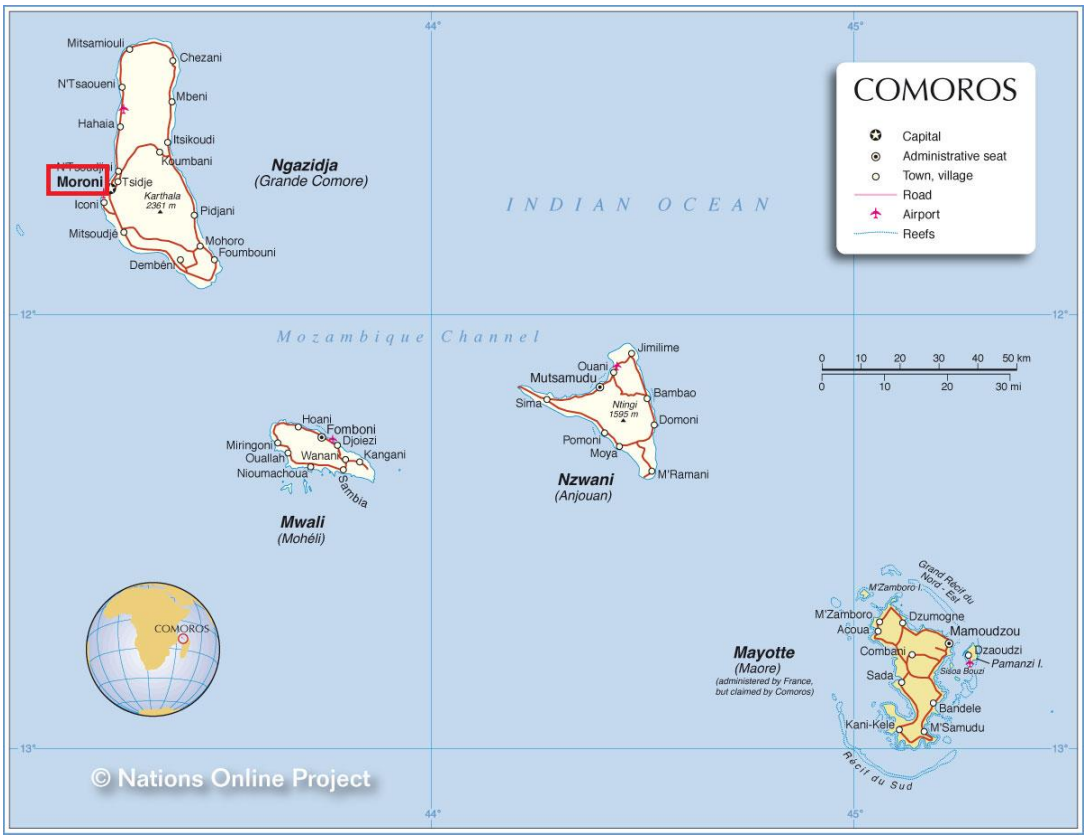
[40] Silva, J.; Eriksen, S. and Ombe, Z.A. (2010) Double exposure in Mozambique's Limpopo River Basin, The Geographical Journal, Vol. 176, No. 1, March 2010, pp. 6–24,

Chokwe is also affected by strong winds and storms due to proximity to the Mozambique Channel, considered to be one of the most active cyclonic regions in the world. Additionally, the city being located in a semi-arid region with irregular rainfalls, the area is also prone to drought.

- *Moroni, Union of Comoros:*

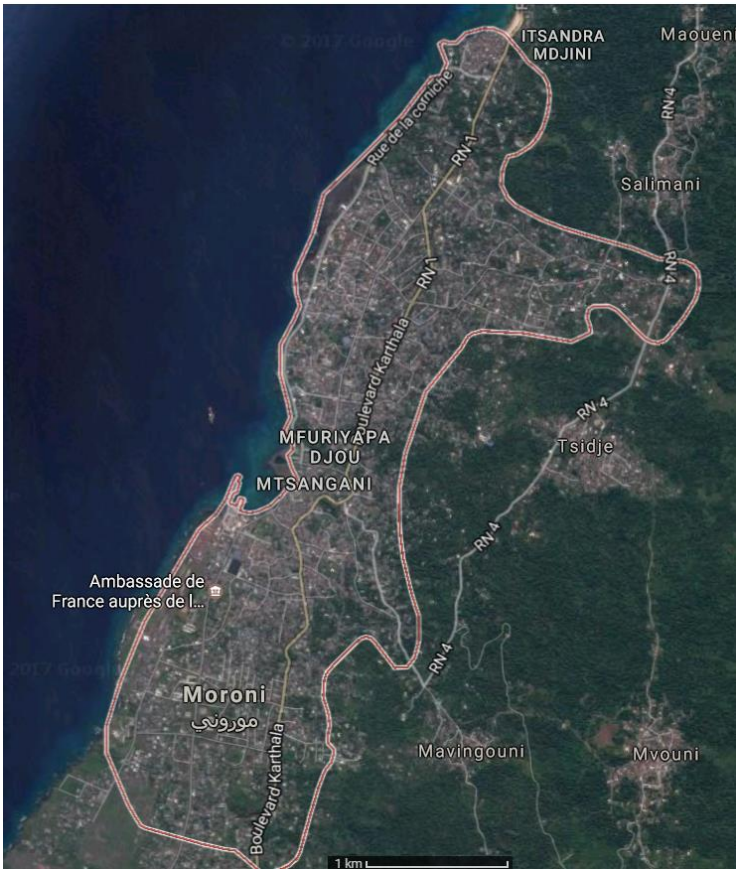
The city of Moroni is located in Ngazidja island, one of the four islands of the Comoros archipelago. It is the largest urban centre of the archipelago and the capital of the country since 1958. The population of Moroni is rapidly growing from 37,800 inhabitants in 1991 to over 55,000 in 2016 with an annual growth rate of 2.1%. Youth represent 53% of the population, with 42% being under 15 years old.

Figure 18: Map of Comoros showing the location of Moroni – Extracted from www.nationsonline.org



Despite an approved master plan in the early 1990's, the growth of the city in the past 20-30 years has been anarchic. The city's spatial development is limited by the sea to the west, and to the east by the slopes of the volcano Mount Karthala. Spatially, it has expanded to the north and the south from 15 ha in 1958 to more than 1500 ha in 2016. The northern part stretches to Itsandra with a width of less than 200 meters. The southern part shows more fragmented urban units (see Figure 19). More than half of the population resides in informal settlements under precarious conditions and often in areas most vulnerable to natural hazards.

Figure 19: Map of Moroni – Extracted from www.googlemaps.



The city management is struggling to maintain infrastructure and provide basic services. Considerable challenges exist in terms of quality of roads, drinking water and the provision of electricity. Further, there is no sewerage, drainage or wastewater treatment in Moroni. Households typically use pit latrines which can leak and contaminate groundwater and coastal and marine environments. Poverty levels are high and the informal sector is omnipresent.

Figure 20: Conditions of informal settlements in Moroni

The National Strategic Plan of Climate Change stresses that Moroni is vulnerable to a multitude of hazards from hydro-meteorological (tropical storms, rising sea levels), geophysical (volcanic eruptions, earthquakes, landslides), biological (epidemics of cholera and typhoid fever) to technological (road traffic, shipwrecks, fishing at sea). Heavy rains are recurrent due to the

proximity to the volcano Mount Karthala (2,355 m) and related thermo-dynamic effects. The latter is active and erupts every 10 to 20 years. Earthquakes due to volcanic activity are frequent as well. High rainwater runoff exists due to the impermeability of soils and massive deforestation in the vicinity of the city. The lack of a drainage system leads to regular flooding in the city.

Awareness on climate change adaptation and mitigation is low at the household, community and council levels. Among the obstacles preventing the city from coping with their climate risks was the lack of an elected municipal administration. Since 2015, the city has a city council and an elected mayor, both determined to find solutions to the challenges facing the city.

d) Institutional context

In the context of this project, the following institutional set up is relevant, at the different levels.

- *At the sub-regional level*

  - *The Southern African Development Community (SADC) Disaster Risk reduction (DRR) Unit*

SADC is a Regional Economic Community comprising fifteen Member States: Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. Established in 1992, SADC is committed to regional integration and poverty eradication within southern Africa through economic development and ensuring peace and security.[41] The Union of Comoros holds an observer status to SADC.

When unexpectedly heavy floods displaced more than a million people in southern Africa in 2007, SADC began to meet annually to prepare for future occurrences. Concrete steps were taken to ensure that DRR is effectively mainstreamed into national policies. Consequently, SADC established a Disaster Risk Reduction Unit responsible for coordinating regional preparedness and response programmes for transboundary hazards and disasters.[42] The Unit was established in July 2008, within the SADC Directorate of the Organ on Politics, Defense and Security Affairs. The decision was endorsed during the SADC Summit Heads of State and Governments in August 2008 and acknowledged for implementation and resource allocation in January 2009. The SADC DRR Unit, with the support of the existing SADC DRR Technical Committee, has the responsibility to coordinate and provide regional leadership on matters pertaining to disaster risk reduction, mitigation, preparedness and related management activities.

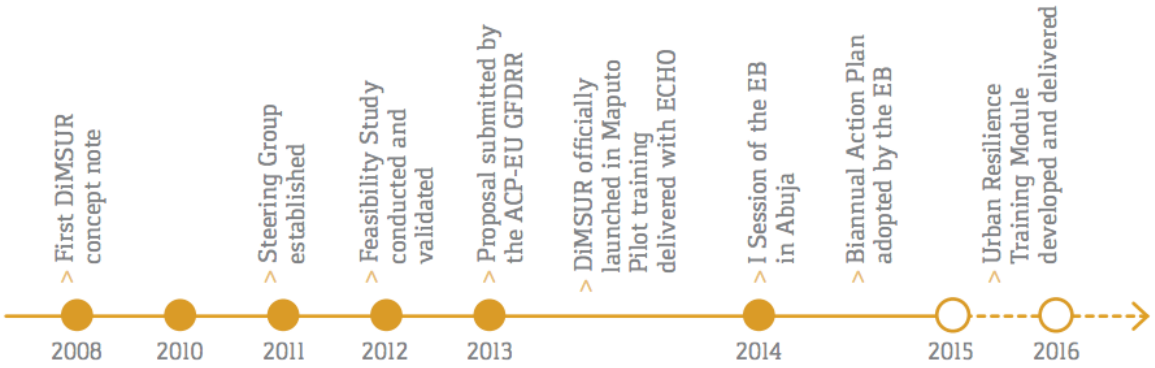
The SADC DRR Unit is a member of the DiMSUR Executive Board (see section below). The Unit Leader during DiMSUR's fourth Executive Board meeting at the sidelines of the Africa Regional Platform for Disaster Risk Reduction in Mauritius on 23 November 2016 expressed that DiMSUR's efforts such as the development of the CityRAP tool and sharing of experiences between different countries were highly appreciated. It was concurred that SADC's coordination and leadership role and the mandate of DiMSUR were complementing each other and that further cooperation was urgently needed. The current proposal reflects this and includes the SADC DRR Unit as one of the Executing Entities of the project (see Part II, section A). .

[41] https://www.sadc.int/about-sadc/, accessed on 6 January 2017
[42] http://www.sadc.int/themes/disaster-risk-management/, accessed on 6 January 2017

- *The Technical Centre for Disaster Risk Management, Sustainability and Urban Resilience (DiMSUR)*

At the request of the four countries targeted by this project, UN-Habitat has facilitated since 2010 the establishment of the Technical Centre for Disaster Risk Management, Sustainability and Urban Resilience (DiMSUR) which was launched in 2013. It was endorsed at ministerial level by the four member countries as an international non-profitable, autonomous and regional organisation through a signed Memorandum of Understanding in December 2014 (see Annex 1). The centre aims at fostering development and dissemination of knowledge and solutions as well as developing capacities for disaster risk management, climate change adaptation and urban resilience.

Figure 5: DiMSUR's key milestones



The effort to build a centre of excellence such as DiMSUR originated from the awareness of the governments of Malawi, Madagascar, Mozambique and the Union of Comoros of the need to increase coordination and collaboration between neighbouring countries to exchange information, knowledge and mutual capacity reinforcement. This need was clearly expressed at the time in key agreements and strategies of the international and regional communities. The Hyogo Framework for Action (2005-2015) defined as one of its axis of implementation for regional organizations and institutions to "Establish or strengthen existing specialised regional collaborative centres, as appropriate, to undertake research, training, education and capacity building in the field of disaster risk reduction"; while the Programme of Action for the Implementation of the Africa Regional Strategy for Disaster Risk Reduction (2006-2015) defines as one of its 7 objectives to "develop and maintain sustainable mechanisms of coordination at regional and sub-regional levels (...)".

DiMSUR is composed of four organs (see Charter in Annex 1):

- the Conference of Ministers of the member states, responsible for endorsing and validating the mission, vision, policies and strategies of the centre and other extraordinary items when requested;
- the Executive Board, composed by the National Directors responsible for disaster risk reduction (DRR) and/or climate change adaptation (CCA) of each Member State and other relevant stakeholders (UN system, academia, civil society) and responsible for making the key decisions and validating the guiding documents and products of the centre;

- the Consultative Group, consisting of recognised stakeholders of the DRR/CCA and urban resilience fields at various levels that have the role of advising and guiding DiMSUR when consulted;
- the Secretariat, which has the role of conducting all operational functions that are conducive to the achievement of the objectives of DiMSUR as an autonomous body.

UN-Habitat has operated since 2010 as the Centre's Secretariat ad interim. Following its establishment in 2013, UN-Habitat has been responsible for implementing all activities planned in the Biannual Action Plan with full acknowledgement and consent of the DiMSUR Executive Board. Among these activities, it is worth mentioning the organisation of four meetings of the DiMSUR Executive Board since 2014, the participation of the centre's representatives in numerous conferences and events worldwide (e.g. African Platforms for Disaster Risk Reduction, Africities Summit 2015, the Third United Nations Conference on Housing and Sustainable Urban Development – Habitat III, the 2014 World Urban Forum, among others), the development of the CityRAP tool methodology (see below) as well as the organisation of trainings and workshops on urban resilience involving more than 830 participants in various African countries.

UN-Habitat has also supported the Government of Mozambique in drafting and validating with all four members the Host Agreement for establishing the centre in Maputo. This has been a long negotiated process that successfully resulted in the clearance of different Ministries and concerned national institutions in Mozambique. The Host Country Agreement was approved by the Mozambican Cabinet on 31 January 2017 during the Second Ordinary Session of the Council of Ministers chaired by the H.E. the President Felipe Nyusi. [43]. In its role as secretariat ad interim, UN-Habitat has facilitated the selection process of the Executive Director and the national focal points for the centre, which will constitute the staff of the Centre's Secretariat. This is pegged to the Host Country Agreement in Mozambique as well as overall funding for the centre. These steps will lead to the full autonomy of DiMSUR as a regional institution in the coming 2-3 years.

As mentioned above, UN-Habitat and DiMSUR have recently developed the City Resilience Action Planning (CityRAP) Tool. The tool was tested in several countries and a second, revised version was developed in conjunction with London King's College under the Urban Africa Risk Knowledge Programme funded by DFID, taking into account the lessons learnt. CityRAP Tool activities have been conducted in eleven different cities in nine different countries (Madagascar, Mozambique, Malawi, Union of Comoros, Ethiopia, Cape Verde, Sao Tome and Principe, Guinea Bissau and Burkina Faso) and directly involved more than 830 local participants - from city authorities and technicians to local community leaders and civil society representatives. The main objective of the tool is to enable local governments of small to intermediate sized cities (or urban districts of bigger cities) to understand risks and plan practical actions to progressively build urban resilience. The CityRAP Tool targets local governments with no to limited experience in risk reduction and resilience planning. Its implementation helps prioritising key actions to build the city resilience. The main output of the tool is a City Resilience Framework for Action (RFA), based on local government self-assessments, participatory risk mapping exercises, and cross-sectorial action planning by the local government engaging relevant stakeholders, most importantly, communities themselves. The CityRAP Tool involves a bottom-

43 Please refer to the website of the Mozambique Government where this news is featured: http://www.portaldogoverno.gov.mz/por/Imprensa/Noticias/Mocambique-acolhe-centro-regional-de-gestao-de-riscos-de-desastres. The approval by Cabinet is expected to be officially gazetted before the end of February 2017.

up consultative process and has been designed as an enabling rather than prescriptive tool. A more detailed description of the tool methodology is annexed to the concept note (see Annex 2).

In addition, it is worth noticing that under the Nairobi Work Programme on impacts, vulnerability and adaptation to climate change, UN-Habitat has developed a number of good practices in Africa, including: (i) a tool to mainstream gender consideration into city-level climate change plans and strategies, which was applied in Kampala, Uganda; (ii) simple and low-cost pilot interventions as effective local solutions for creating climate-resilient settlements, such as school buildings built with locally available materials in Mozambique which can offer shelter to communities in case of floods or cyclones; (iii) rooting sustainable development and desert prevention in Bobo Dioulasso, Burkina Faso, through participatory sanitation improvement and afforestation; (iv) sustainable resettlement and reconstruction in flood-prone peri-urban areas in Saint Louis, Senegal; and (v) youth initiative to sustain mangroves and livelihoods in Mombasa (Kenya).

As this project falls under the umbrella of DiMSUR and the SADC DRR Unit, the following key partners of the centre are mentioned in this proposal at the sub-regional and national levels. It will be noted that, while the institutions responsible for climate change adaptation are mentioned for each country, they are more linked to the broader area of disaster risk reduction, in line with the key mandate of the two executing entities.

- *Other relevant institutions in southern Africa*

Regarding the UN system and the humanitarian partners such as international NGOs, a Regional Inter-Agency Coordination and Support Office (RIACSO) was established in 2002 in Johannesburg covering southern Africa, and is chaired by UNOCHA. The RIACSO provides support to strategic planning, assessment and monitoring of crisis situations and coordination for emergency response. It has a functional partnership with the SADC, in particular by playing an important role in the strengthening of networks such as the Famine Early Warning System Network (FEWSNET) and the Southern Africa Regional Climate Outlook Forum (SARCOF). Hence the standard *modus operandi* of the RIACSO is mainly on supporting preparedness and early warning across the region through annual plans which match the yearly meteorological cycles. Oxfam, a recognised Non-Governmental Organization working in southern Africa and part of the RIACSO, is a member of the DiMSUR Executive Board.

The southern African region is vibrant with initiatives from the Academic sector, which offers a choice of learning options, including professional training in the area of disaster management and increasingly on DRR. Among them, the Disaster Mitigation for Sustainable Communities and Livelihoods Programme implemented by the University of Stellenbosch, South Africa, apart from working with poor communities in projects aimed at strengthening their resilience in the face of disaster risk, also acts as a facilitator for the inter-university Peri Peri U project which supports ten universities throughout Africa to promote a DRR agenda. The latter project encourages interchange and knowledge-sharing between these academic bodies with a view to developing overall capacities in DRR on the continent. Two of these universities are in Madagascar and Mozambique. In Madagascar, the disaster management course (supported by UNDP) is taking momentum and is increasingly recognised. The Antananarivo University, Madagascar, which is part of the Peri Peri U, is a member of the DiMSUR Executive Board.

The North-West University at Potchefstroom in South Africa houses the African Centre for Disaster Studies, which focuses on the development of knowledge tools and offers postgraduate education courses and the facility for capacity development. The Centre is offering

a variety of modules on disaster management and DRR and increasingly host international students. It is also a member of the DiMSUR Executive Board.

- *Madagascar*

The National Climate Change Coordination Bureau (BNC-CC), which is attached to the Ministry of Environment, Ecology and Forestry, coordinates all actions related to the ratification of the UNFCCC, which is to promote a resilient economy, adapted to climate change, and to promote low-emission sustainable development of greenhouse gases. The functions of the office are to implement and coordinate all actions to adapt and strengthen climate resilience to the most vulnerable communities and to the climate resilience of the economic development sectors, to implement and coordinate all actions to mitigate climate change, promote sustainable development, strengthen the integration of climate change at all levels and promote carbon markets for sustainable development for the benefit of the Malagasy people.

There are two main institutions dealing with disaster management in Madagascar:

- The Emergency Prevention and Management Unit (*Cellule de Prévention et Gestion des Urgences - CPGU*), which is a technical unit within the Prime Minister's office managing DRR and prevention projects with the support of the United Nations International Strategy for Disaster Reduction (UNISDR) and the World Bank. Its mandate concerns the following functions: (i) to elaborate and update the national strategy for DRR; (ii) to assess and control the implementation of national policy of disaster risk management and reduction; (iii) to support the sector for the implementation of prevention activities; (iv) to assist the Prime Minister in decision making regarding DRR. The flagship intervention of the CPGU is the work developed on building norms and codes in areas prone to cyclones. The Unit cooperates with a range of national and international actors.

- The National Disaster and Risk Management Office (*Bureau National pour la Gestion des Risques et des Catastrophes - BNGRC*) at the Ministry of Interior which was established in 2006 in substitution of the National Security Council (*Conseil Nationl de Sécurité - CNS*). BNGRC supports the Council for National Risk and Disaster Management (CNGRC) and coordinates the organization and management of operations in case of emergency, as well as disaster-related activities in general across the country. It has a disaster risk management mandate, with clear responsibilities regarding civil protection, preparedness (including stock-piling and pre-positioning) and response. It has capillary presence on the ground in coordination with the Red Cross and a network of stakeholders at local level. BNGRC is a member of the DiMSUR Executive Board in representation of the Government of Madagascar.

Another key project partner will be the municipality of Morondava for supporting the execution of the project activities at the municipal level.

- *Malawi*

The Cabinet Committee on Climate Change is the highest level and enables all arms of government to coordinate their actions in climate change adaptation activities. The Parliamentary Committee on Climate Change serves to assist in lobbying for passing of environment related policies and legislations in the national assembly. The National Technical Committee on Climate Change is the technical multisectoral body advising on climate change in

Malawi. Climate change is a cross-cutting issue and is mainstreamed in all Ministries of the Government of Malawi.

The key coordinating institutions for climate change issues at national and /or district levels include:

- The Ministry of Natural Resources, Energy and Mining is the National Climate Change Management Policy holder and is responsible for the formulation of environmental and climate change policies and coordination of their implementation through the other ministries. This includes the national adaptation strategies (of the NAPA). The Ministry also provides weather and climate related information and services. Its key role in climate change adaptation is to provide scenarios of climate change and provide early warnings and communication of forecasts.

- The Department of Disaster Management Affairs (DoDMA) is responsible for disaster risk management in the country. Its role in climate change adaptation is in preparedness and response for expected changes in disaster profile.

  The Disaster Preparedness and Relief Act establishes the National Disaster Preparedness and Relief Committee (NDPRC) responsible for providing policy directions on the implementation of DRM programs. The NDPRC comprises of Principal Secretaries of all line ministries and departments. It is chaired by the Chief Secretary to the Government based in the Office of the President and Cabinet.

  The Act also provides for the appointment of a head of the Department of Disaster Management Affairs (DoDMA), which is responsible for coordinating and directing all DRR and disaster risk management programs in the country. The DoDMA, which is answerable at the level of the NDPRC, is part of the Commission for Poverty and Disaster Management Affairs at the office of the Vice-President, and is represented down to district level. DoDMA is a member of the DiMSUR Executive Board in representation of the Government of Malawi.

- The Ministry of Agriculture, Irrigation and Water Development (MoAIWD) has key roles in the area of climate change adaptation including educating farmers about climate change, promoting climate smart agriculture, irrigation and providing hydrometric modelling to aid floods early warning.

- Other key stakeholders include other line ministries of Government, local authorities, non-governmental organizations and civil society, the private sector, academia, development partners, local communities, faith based organisations and identified vulnerable groups.

Another key project partner will be the municipality of Zomba for supporting the execution of the project activities at the municipal level.

- *Mozambique*

In Mozambique, the institution responsible for Climate Change Adaptation is the Climate Change Unit, which is part of the Ministry of Land, Environment and Rural Development (*Ministério da Terra, Ambiente e Desenvolvimento Rural - MITADER*). The MITADER is tasked to organize and manage the execution of policies under the areas of Land and Geomatics, Environment, Forests, Fauna, Conservation Areas and Rural Development. The Climate Change Unit was created following the approval of the National Strategy for Climate Change

Adaptation and Mitigation and has the following main roles: (1) Coordinate and facilitate inter-institutional connections related to Climate Change; (2) Prepare programmes and annual work plans related to climate change; (3) monitor the implementation of the National Strategy for Climate Change Adaptation and Mitigation and (4) provide technical advice on climate change projects and programmes financed through funds from environmental multilateral agreements. The Climate Change Unit is hosted within the Secretariat of the National Council for Sustainable Development, under MITADER.

The National Council for Disaster Management Coordination (*Conselho Coordenador de Gestão das Calamidades – CCGC*), led by the Prime Minister and including several ministries, is the highest political body dealing with disaster-related issues in Mozambique. Its mandate is to ensure multi-sectoral coordination for disaster prevention, assistance to the victims and rehabilitation of damaged infrastructures.

Importantly, the CCGC as political decision-making organ receives advices from the Technical Council for Disaster Management (*Conselho Técnico de Gestão de Calamidades - CTGC*), which is constituted by technical staff from the concerned departments of the different Ministries represented in the CCGC, as well as partners from the UN system. In general, the CTGC meets twice a month both at the central and provincial levels. There are attempts to embrace civil society on this committee as well as the academic sector.

The National Institute for Disaster Management Institute (*Instituto de Gestão de Calamidades – INGC*), under the Ministry of State Administration (*Minstério da Administração Estatal – MAE*), coordinates the CTGC and reports to the CCGC. The main functions of INGC are to: (i) coordinate disaster prevention and mitigation activities; (ii) lead the government's response to emergencies; and (iii) deal with arid and semi-arid areas, reconstruction and resettlement. It works very much as a knowledge and reference centre, providing free access to its products in the web. The structures of INGC go down to the three regions (Southern, Central and Northern Mozambique) and eleven Provinces both politically and technically. The southern regional centre deals mainly with drought, the central regional centre with floods and the northern regional centre with cyclones. There are inter-sectorial technical committees for disaster management organized at the provincial level. Focal points are nominated at district levels which deal with the local committees. INGC is a member of the DiMSUR Executive Board in representation of the Government of Mozambique.

Another key project partner will be the municipality of Chokwe for supporting the execution of the project activities at the municipal level.

- *Union of Comoros*

The main institution responsible for climate change adaptation in Comoros is the Directorate General of the Environment and Forests (*Direction Générale de l'Environnement et des Forêts, DGEF*).

In terms of disaster management, the Rescue and Civil Protection Operational Centre (*Centre des Opérations de Secours et de la Protection Civile - COSEP*) is recognised as the main governmental institution. COSEP is a member of the DiMSUR Executive Board in representation of the Government of Comoros.

Different sectors are responsible for disaster preparedness and response depending on the type of hazard. Sectors cooperate in response once alerted by the crisis cell, and propose an action

to the government. The PIROI network, strongly focusing on civil protection, supports disaster preparedness and response.

Another key project partner will be the municipality of Moroni for supporting the execution of the project activities at the municipal level.

Project Objectives:

In alignment with the Adaptation Fund Results Framework, in particular Outcome 2 (Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses), Outcome 3 (Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level) and Outcome 4 (Increased adaptive capacity within relevant development and natural resource sectors), the project has two objectives, namely:

1. To develop capacities and establish conditions to adapt to the adverse effects of climate change in vulnerable cities and towns of Madagascar, Malawi, Mozambique and the Union of Comoros;
2. To promote inter-country experience sharing and cross-fertilisation regarding the adaptation to transboundary climate-related natural hazards and disseminate lessons learned for progressively building urban climate resilience in south-eastern Africa.

Objective 1 responds to the problematic raised in the project background regarding the low capacity of local governments in sub-Saharan Africa in identifying and planning actions for effectively adapting to the negative effects triggered by climate change. This is especially true in fast growing small and intermediate cities/towns. In these urban centres, under-serviced informal settlements are sprawling in an uncontrolled manner and municipal authorities are ill-prepared to face the unwanted consequences of this dynamic process. These range from the increased risk to climate-related natural hazards such as floods and cyclones, simply due to the vulnerable location of the new settlements, to issues compounding the impact of climate change, such as the lack of solid waste management (which is hampering the efficiency of the drainage system, for example, and increasing the likelihood of water-borne disease outbreaks), or poor techniques applied in housing construction, for example.

The application of the CityRAP Tool in several countries and cities/towns of sub-Saharan Africa provided sufficient evidence to understand that strengthening the capacity of municipal authorities works as an effective entry point to start building the climate resilience in urban areas. The project offers an appropriate duration to accompany the targeted city leaders and staff through the virtuous cycle of understanding climate-associated risk, perform a critical self-assessment, consult and involve the most vulnerable populations in risk identification and prioritisation of actions, plan and organise the necessary resources (also provided by the project) for start implementing these actions, and set up an adequate monitoring and evaluation system to apply corrective measures, as necessary. The completion of these tasks will allow developing the needed capacities of this crucial intermediate governmental layer constituted by the local authorities, which are closer to the population and need to manage their city/town on a daily basis, comparing to national authorities.

Through Objective 1, the latter, the national authorities, are also targeted. The idea is to take advantage of the practical implementation of the project at the city level to further improve the CityRAP Tool, adapt it to the national context, derive the needed guidelines in alignment with

existing policies and legislation, and thus create the conditions for replication in other cities and towns at the country level. For this purpose, the project will also allow delivering training activities to all the local authorities of the country, through appropriate institutions and networks and by building appropriate partnerships with on-going initiatives, and start laying the foundations for building urban climate resilience in the four participating countries.

Objective 2 represents the regional dimension of the project and will be anchored to the DRR SADC Unit, which will work in partnership with DiMSUR. As per the Memorandum of Understanding for establishing the Centre signed among the four countries concerned by this project (see Annex 1), DiMSUR is supposed to promote inter-country experience sharing and cross-fertilisation, and to work as a knowledge platform regarding urban resilience related issues that can be disseminated in the sub-region. One of the key "raison d'être" for establishing this institution (as reflected in the DiMSUR feasibility study[44]), is the need for these countries belonging to the same geographical region to share best practices on how to address common transboundary climate-related natural hazards such as floods, drought, cyclones and sea level rise. This certainly represents a strong added-value of the project, whose impacts could even reach more countries of the southern Africa sub-region.

Therefore, there are four Project Components (which will be described in more detail in Part II), the first three contributing to Objective 1 and the fourth one contributing to Objective 2:

1. Climate change adaptation planning at the town/city level;
2. Assistance with implementation and management of priority investments at the town/city level;
3. Tools and guidelines development and training delivery at the national level;
4. Inter-country experience sharing and dissemination of lessons learned at the regional level.

[44] NB: the Executive Summary of the DiMSUR Feasibility Study can be shared, if requested.

Project Components and Financing:

Project Components and Financing *(NB: **all 4 countries** are concerned in each component. Further information on planned outputs and their indicative budgets can be found in more detail in Part II, section A.)*

Programme Components	Expected Outcomes	Expected Outputs	Amount (US$)
1. Climate change adaptation planning at the town/city level	Municipal staff, communities and local stakeholders understand climate change induced risks pertaining to their city/town and have identified priority actions for climate adaptation	○ 4 reviewed City Resilience Action Frameworks (RFAs) identifying priority actions for climate change adaptation and mainstreaming adaptation into existing planning and legal instruments; the RFAs define responsibilities of the different municipal departments and local stakeholders in the short, medium and long term; they have a validity of 10 years and their implementation is monitored and reviewed every 2 years. ○ 4 in-depth environmental and social risk assessment studies regarding the priority actions to be implemented in each city/town.	400,000
2. Assistance with implementation and management of priority investments at the town/city level	Municipal staff, communities and local stakeholders have implemented the identified priority actions and have acquired the capacity to manage and maintain these	○ 4 detailed sub-projects designed for implementing the selected priority actions, mainly targeting informal neighbourhoods in each municipality ○ Priority actions implemented mainly through community involvement as labour-intensive manpower in each municipality ○ Municipal staff and community members trained and equipped for ensuring the management/ maintenance of the realised priority actions	8,000,000
3. Tools and guidelines development and training delivery at the national level	National governments have created enabling conditions for scaling up and replicating the same approach in other urban settlements	○ Further refinement of the CityRAP Tool, adapted to each country's context and with greater focus on climate adaptation ○ National guidelines for promoting urban climate adaptation ○ National officers trained in urban climate adaptation	2,000,000

4. Inter-country experience sharing, cross-fertilisation and dissemination of lessons learned at the regional level	Local and national governments of the 4 countries have learned from each other good urban climate adaptation practices and are better prepared to face common transboundary climate-related natural hazards	○ Lessons learned and best practices captured and disseminated through the SADC DRR Unit in partnership with DiMSUR as regional knowledge management platform ○ Cross-fertilisation activities among the participating countries are discussed and prepared ○ Regional workshops for experience sharing among the different countries, and participation to global events	1,000,000
5. Project Execution Cost (9.5%)			1,083,000
6. Total Project Cost			12,483,000
7. Project Cycle Management Fee charged by the Implementing Entity (8.5%)			1,061,055
Amount of Financing Requested			**13,544,055**

Project Duration: *4 years (48 months)*

Projected Calendar:

Milestones	Expected Dates
Start of Project Implementation	January 2018
Mid-term Review	January 2020
Project Closing	January 2022
Terminal Evaluation	May 2022

PART II: PROJECT JUSTIFICATION

A. *Describe the project components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience, and how they would build added value through the regional approach, compared to implementing similar activities in each country individually.*

The project consists of **four components**:

Under Component 1, the project intends to empower municipal staff, communities and local stakeholders of four vulnerable towns/cities in the understanding and planning process of climate change adaptation up to the identification, in a participatory manner, of priority actions that can serve as entry points to progressively build climate resilience in the targeted cities/towns. The results of the CityRAP Tool implementation in the different cities is summarised as follows:

- Morondava, Madagascar (January-March 2016): UN-Habitat and DiMSUR supported the

city of Morondava to develop, finalise and validate its Resilience Action Plan (nowadays referred as the Resilience Framework for Action – RFA) through the implementation of the first version of the CityRAP Tool. The process gave an opportunity to develop the capacity of the local government to understand and plan actions that progressively build urban resilience and reduce urban risk. After discussing the results of the different activities undertaken by the municipality during the prioritisation workshop, participants validated the Resilience Action Plan of Morondava during the validation workshop identifying 4 priority issues to be undertaken at the short, medium and long-term: (i) improve the drainage system; (ii) protect the coastline; (iii) plan the city of Morondava; and (iv) improve solid waste management. Coordination mechanisms and monitoring and evaluation framework have been added to complete the document.

- Zomba, Malawi (October-November 2015): The CityRAP methodology was conducted in Zomba through a participatory and comprehensive process. Based on the compilation of the municipality's assessment results and the community risk maps, a list of priority actions for reducing risks, fostering resilience and enhancing adaptive capacities, was discussed and the following five priority issues agreed and validated: (i) reduce and mitigate floods; (ii) improve the drainage system; (iii) strengthen citizen security; (iv) promote sustainable forest management; and (v) foster strategies to cope with rainstorms. Based on these five priorities, the City of Zomba has elaborated a Resilience Action Plan that details the expected results, planned activities, budget and calendar. Responsible actors for the implementation of each action were identified, and activities were geographically located.
- Chokwe, Mozambique (August-September 2015): UN-Habitat and DiMSUR selected Chokwe as the first pilot city to implement the CityRAP Tool and enable the local government to plan and undertake practical actions to strengthen the resilience of the City. The main output of the process is a City Resilience Action Plan identifying six priority issues: (i) plan neighbourhoods; (ii) improve the drainage system; (iii) improve solid waste management; (iv) strengthen public lighting; (v) develop the urban economy; and (vi) improve education and health infrastructure. The methodology allowed the city of Chokwe to adapt and quickly start implementing the City Resilience Action Plan with minimal outside intervention.
- In Moroni, Comoros, the Tool was not yet implemented but a training of trainers was organised in January 2016 and a preliminary assessment showed the following main pressing issues to be addressed: construct an urban drainage system (almost non-existent), implement protective measures for sea erosion control, improve solid waste management and implement slum upgrading interventions according to a revisited city master plan.

Thanks to the project funds, the produced Resilience Framework for Action (RFA) for each targeted city/town will be reviewed and a thorough environmental and social risk assessment will then be undertaken for each of the prioritised actions.

Under Component 2, the selected priority actions will be packaged into viable pilot climate adaptation sub-projects with focus on the effects of cyclones, rainfall, floods and sea level rise, to be funded by the project. As indicated above, UN-Habitat has already carried out preliminary work in the four targeted cities/towns.

The table below is extracted from the elaborated participatory Resilience Action Plans prepared for Morondava, Zomba and Chokwe (please see Annexes 3, 4 and 5 respectively) and a rapid assessment undertaken in Moroni, and focuses essentially on climate adaptation interventions. It summarises the identified priority issues in the short, medium and long term. It is clear that

these will need to be reviewed and assessed in detail according to the activities described under Component 1. Due to the time span of the project, the full project proposal development will focus on the short and medium term activities only.

Given the high number of identified priority issues, further prioritisation of interventions was necessary for the development of the concept note, whereby the following criteria were guiding the selection: (i) the intervention being a physical intervention; (ii) envisaged economic, social and environmental benefits of the intervention; (iii) sustainability of the intervention; (iv) possible duplication of efforts already undertaken at the city level; as well as (v) cost effectiveness of the intervention. The prioritised interventions/activities suggested to be carried out under the project are highlighted in bold. The table also provides an indicative budget within the limits of the planned overall budget for this component (i.e. USD 8 million for 4 cities for 4 years, so indicatively USD 0.5 million per city per year).

These sub-projects will be implemented under the leadership of the target municipalities through community involvement (e.g. labour intensive activities) and the support of local civil society organisations, in a cost-effective manner. Importantly, local capacity will be developed to ensure the management/maintenance of the pilot projects' outcomes in the longer term. The implementation of physical interventions, which constitutes the major financial investment of the project, will also allow creating temporary jobs especially targeting the youth and women. Efforts will be made to mobilise additional resources.

Morondava, Madagascar

Priority Issues	Short Term (0-2 years)	Medium Term (3-5 years)	Long Term (6-10 years)
Improving the drainage system	• **Carry out urgent interventions to avoid stagnant waters, including increasing the capacity of the water pumping system** • **Mobilise communities to clean and maintain the existing drainage channels** • **Elaborate a plan for further improving the drainage system** **(indicative budget: USD 150,000)**	• **Start implementing the elaborated plan through building new drainage channels and road rehabilitation** **(indicative budget: USD 700,000)**	• Complete the drainage system based on the elaborated plan • Further improve the road network
Coastal protection	• **Carry out an impact assessment in view of preparing a climate change adaptation and mitigation strategy** • **Mobilise communities and available machinery to maintain the existing dikes** • **Identify partner cities to establish an agreement for decentralised**	• **Establish a system of dikes and gabions** **(indicative budget: USD 500,000)**	• Build a dam to drain the affluent of the Ankabatomena river as well as dikes to protect the city from river floods

	cooperation regarding climate change adaption • **Plant trees/mangroves to reduce coastal erosion** **(indicative budget: 150,000 USD)**		
City planning	• **Map all the neighbourhoods, identify the different risks and plan the future city extensions** • **Train municipal technicians to enforce urban regulations** • **Raise awareness at the community level regarding the need to duly follow the legal procedures to obtain a building permit** • Improve public lighting in critical areas of the city **(indicative budget: USD 200,000)**	• **Update the city master plan** • **Physically demarcate areas at risk and land for future city extensions** **(indicative budget: USD 300,000)**	• Implement the city master plan
Improving waste management	• Elaborate an integrated plan for improving waste management, access to safe drinking water and to adequate sanitation • Establish an efficient waste pre/collection system and build a land fill away from the city centre	• Carry out inter-municipal planning for waste management and sanitation • Elaborate a waste recycling strategy	• Establish a sustainable waste management system at the city level

Zomba, Malawi

Priority Issues	**Short Term (0-2 years)**	**Medium Term (3-5 years)**	**Long Term (6-10 years)**
Reducing and mitigating floods	• **Draft community by-laws for flood mitigation** • **Conduct awareness and education campaigns to learn how to live with floods and to improve early warning mechanisms** • **Identify evacuation routes and rehabilitate safe haven sites** **(indicative budget: USD 200,000)**	• **Deliver training on building back better techniques, especially to local builders** • **Plant fast growing trees** **(indicative budget: USD 200,000)**	• Community level by laws on flood mitigation established and enforced
Improving the	• **Carry out a technical**	• **Start the**	• Institutionalise the

drainage system	**study for improving the city's drainage system** • **Mobilise communities to regularly clear the drainage channels** • **Conduct awareness and education campaigns to incite citizens to keep the drainage system cleared from waste** **(indicative budget: USD 300,000)**	**rehabilitation and improvement of the drainage system** • **Establish community waste collection sites/refuse banks and skips** **(indicative budget: USD 800,000)**	maintenance of the drainage system
Strengthening citizen's security	(proposed actions not applicable to climate change adaptation)	• Introduce and enhance street lighting and area tower lighting	
Promoting sustainable forest management	• **Reforestation, especially on steep slopes and fragile areas exposed to wind and rain** • **Promotion of alternative energy sources such as solar, as well as energy efficient cookstoves** • Establish area-based forestry protection by-laws Establish environmental patrol units at the community level **(indicative budget: USD 400,000)**	• Ward committees assume responsibility of sourcing and protecting seedlings and nurseries **(indicative budget: USD 100,000)**	• Area-based forestry protection by-laws established and enforced
Fostering strategies to cope with rainstorms	• Conduct awareness raising on building codes and early warning • Form search groups	• Promote adaptive architecture • Train local artisans on safer building techniques	

Chokwe, Mozambique

Priority Issues	Short Term (0-2 years)	Medium Term (3-5 years)	Long Term (6-10 years)
Informal settlements upgrading	• **Finalise the city master plan** • **Prepare the detailed urban plans of neighbourhoods n. 4 and 7, with a focus on road and public/green spaces improvement, and flood risk reduction** • **Carry out priority**	• Prepare the detailed urban plans of neighbourhoods n. 3 and n. 5 • **Implement the remaining planned interventions for neighbourhoods n. 4 and n. 7**	• Elaborate and implement more detailed urban plans

	interventions in neighbourhoods n. 4 and 7 based on the elaborated plans **(indicative budget: USD 400,000**	**(indicative budget: USD 300,000)**	
Improving the drainage system	• **Undertake a technical study and prepare a detailed plan to improve the city's drainage system,** • **Carry out priority interventions in neighbourhoods n. 1, n. 3 and n. 5** • **Maintain the existing drainage system, and carry out awareness raising activities at the community level** **(indicative budget: USD 300,000)**	• Carry out more interventions to improve the drainage system based on the prepared plan • **Maintain and rehabilitate regularly damaged drainage channels** **(indicative budget: USD 100,000)**	• Complete the construction of the drainage channels • Set up a monitoring system of the drainage conditions and perform regular maintenance operations • Organise regular awareness raising events for such a purpose
Improving solid waste management	• **Establish well-identified and easy to access waste collection points** • **Carry out awareness raising and training activities for improving waste management and reducing the associated risks** • **Carry out a study on waste collection, disposal and treatment and elaborated an integrated plan at the city level** • **Increase the frequency and coverage of waste collection services** **(indicative budget: USD 300,000)**	• **Acquire equipment for solid waste collection, transport and cleaning of the city** • **Establish waste separation collection points** **(indicative budget: USD 200,000)**	• Institutionalise waste separation mechanisms and recycling • Construct a waste management centre for recycling and production of biogas • Establish a comprehensive cleaning system at the city level
Improving public lighting	• Acquire and install public lighting equipment in neighbourhoods n. 3, n. 4, n. 5 and n. 7, which are poorer • Rehabilitate and maintain existing public lighting equipment	• Expand public lighting in the upgraded urban areas (neighbourhoods n. 3, 4, 5 and 7)	• Maintain and monitor the public lighting network
Developing the urban economy	• Study the potential of the city in terms of green and diversified economy • **Retrofit existing markets**	• Acquire equipment for increasing agriculture productivity in an adapted/sustainable	• Capacity building programmes, looking into climate adaptation, especially targeting the

	to make them more resistant to the negative effects of climate change • Increase vocational and professional training opportunities, taking into account climate change adaptation and the need to promote adequate technologies/economic activities • Identify/plan water retention reservoirs where to develop fish farming activities **(indicative budget: USD 200,000 USD)**	manner • Maximise the potential of the existing agro-processing infrastructure to create green jobs • Increase access to micro-finance opportunities for climate adapted activities	unemployed youth
Improving education and health facilities	• Assess the main needs to reinforce the resistance of education and health facilities to the negative effects of climate change • **Strengthen the capacity of local sub-contractors and concerned institutions to build safer schools/hospitals** • **Raise awareness regarding the importance of maintaining the existing facilities** • Construct a classroom which is adapted/resistant to floods • Carry out simulation exercises on how to use the adapted facility as shelter in case of floods **(indicative budget: USD 200,000)**	• Construct more health/education facilities adapted to the effects of climate change • Enforce building codes that promote climate adaptation • Maintain and rehabilitate damaged facilities	• Institutionalise monitoring and capacity building mechanisms for maintaining and retrofitting education and health facilities

Moroni, Comoros

Priority Issues	Short Term (0-2 years)	Medium Term (3-5 years)	Long Term (6-10 years)
Designing and building a drainage system	• **Conduct a technical study to design a proper drainage system of the city, today inexistent** • **Formulate a project proposal to mobilise the necessary resources for building a basic drainage system** • **Mobilise community**	• **Mobilise heavy machinery and carry out works to build some primary drainage channels** **(indicative budget: USD 500,000)**	• Further improve the drainage system according to the plan and available resources

	members to start digging secondary and tertiary drainage channels **(indicative budget: USD 300,000)**		
Implementing sea erosion control measures	• **Carry out a technical study to identify and implement sea erosion control measures** • **Carry out small-scale interventions by mobilising communities using available funding (tree planting, construction of small dykes, etc.)** **(indicative budget: USD 200,000)**	• Mobilise funds to carry out bigger-scale interventions	• Increase the number of sea erosion control measures
Improving solid waste management	• **Install proper and easy accessible waste collection points in critical neighbourhoods** • **Acquire waste collection equipment and train municipal staff** • **Carry out awareness raising activities at the community level** **(indicative budget: USD 200,000)**	• Design a project proposal to increase the scale of interventions and mobilise resources	• Implement more waste management measures
City planning and informal settlement upgrading	• **Develop the master plan of Moroni, which is non-existent for the past twenty years** • **In parallel, design slum upgrading interventions, such as road opening in critical neighbourhoods, through participatory planning** • **Implement these pilot activities through community mobilisation** **(indicative budget: USD 500,000)**	• **Implement more slum upgrading activities through community mobilisation** • Design a project proposal for further improving urban planning and increasing the level of interventions, especially in terms of road network and public spaces **(indicative budget: USD 300,000)**	• Carry out additional slum upgrading activities and work on slum prevention

Under Component 3, project activities will occur at the national level to create the conditions for scaling up and replicating the CityRAP approach in other urban settlements. Based on the experience of identifying and implementing the priority actions in the targeted cities/towns under Components 1 and 2, the CityRAP Tool will be further refined to make it more adapted to the

different national contexts. Guidelines will be derived from the improved tool, in alignment with existing policies and legislation, for promoting urban climate adaptation. Based on these guidelines, training and institutional capacity development activities of government and municipal officials will be delivered, especially through the organisation of appropriate national workshops. Existing institutions and networks (e.g. associations of municipalities) will be used for such a purpose, and partnerships/synergies established with on-going initiative at the national level. This is a critical component which will ensure greater sustainability and a lasting impact of the project.

Component 4 will focus on: (i) capturing and disseminating the lessons learned and best practices from the implementation of the project activities at the town/city and national level; (ii) discussing and preparing cross-fertilisation activities among the participating countries, and (iii) organising regional workshops for experience sharing among the different countries, and participating to global events.

The regional events will target not just the four countries involved in the project, but also other interested countries in southern Africa. This component, to be managed by the SADC DRR Unit, in cooperation with DiMSUR, highlights the added-value of this regional proposal compared to implementing projects in individual countries separately. Learning from each other lessons and best practices, in a region affected by similar/transboundary threats related to the negative consequences of climate change, and where knowledge and capacity for urban climate adaptation is still much limited, is of essential importance. In addition, the four concerned countries are geographically, morphologically, historically, politically and culturally different from each other, and thus offering a wide range of tailored and diverse solutions.
In this context, the SADC DRR Unit and DiMSUR will play a strong role as they already embody credible institutions in the region with complementary roles of sharing experiences, promoting knowledge and delivering trainings.

The SADC DRR Unit will be an important Executing Entity in this framework by overseeing the technical aspects of the component's regional workshops, which aligns with its mandate of providing technical advice to its member states. Further, the component will open the project beyond the participating countries and include further SADC countries through inter-country cooperation.

DiMSUR will establish its physical presence and recruit the staff secretariat starting from 2017 subsequent to the recent approval of the Host Country Agreement by Cabinet in Mozambique. The Centre is mandated by the four countries to promote inter-country experience sharing and cross-fertilisation. It will work as a repository of the lessons learned and therefore represents the natural framework for knowledge management and sharing regarding project activities.

DiMSUR will also be able, being part of an international network of centres of excellence, to bring in high level expertise from other regions, such as Asia (through the Asian Disaster Preparedness Centre – ADPC) and Latin America..

B. *Describe how the project would promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms.*

Firstly, the project promotes innovative approaches to climate change adaptation in that it involved and strengthens DiMSUR, a new non-profit and autonomous institution which is gradually consolidating in southern Africa and even in the African region. It focuses on themes which still need much development in the African region, and are not yet institutionalised, such as urban risk reduction, urban climate adaptation and resilience. The Centre provides technical

assistance and serves as an exchange platform of good practices, experiences and knowledge between the participating member states[45].

As referred earlier when presenting DiMSUR, several important international documents and resolutions have called for the establishment of such type of a centre and this project will provide a fantastic opportunity to further strengthening DiMSUR's role and outreach.

Secondly, the project promotes the application of the CityRAP Tool as a new and ground breaking climate change adaptation planning approach that targets specifically small and medium-sized African cities with low institutional capacity. The tool uniquely enables local governments to take the lead in the process of understanding the different types of risk affecting their towns/cities, with minimum external support. Based on inter-sectorial self-assessment and participatory planning, the tool allows to coming up with priority climate resilience actions in the short, medium and long-term, including mainstreaming adaptation into existing municipal planning and legal instruments.

This is rather different from existing tools which rely heavily on outside technical expertise, are very technical in nature and data-hungry, which often creates a disincentive to local governments in kick-starting a process of resilience planning. As a result, capacity retention among urban stakeholders, from local governments to communities, tends to remain low with these tools and the produced plans are seldom understood and implemented.

The CityRAP Tool changes this paradigm, as it was observed during the testing phase carried out in 2015 and 2016. It generates enthusiasm in the local authorities and stakeholders, which are actually able to build urban resilience based on their own understanding and existing capacities. Once the city Resilience Action Frameworks are elaborated based on the tool, more detailed studies can then be outsourced. The difference, this time, is that local governments are in full control and have the confidence that the actions being designed and implemented result from their own prioritisation and decision-making.

Importantly, UN-Habitat closely collaborates with other urban resilience initiatives globally (e.g. Rockefeller Foundation, UNISDR, among others). When presenting the tool and its outcomes it international conferences it is regularly recognised by discussants from academia and development practitioners that the tool fills an important gap, especially when considering that existing tools are data-hungry and require a high level of expertise for their use, elements which are often missing in small/intermediate African cities.

For more detailed information on the innovative aspects of the CityRAP tool methodology, kindly refer to Annex 2.

Thirdly, the project privileged a bottom-up approach, i.e. local experiences are mainstreamed into guidelines and strategies at the national and regional level. This allows avoiding the prescriptive and somehow "blind" nature typical of top-down initiatives, which define intervention strategies without first duly taking into account local realities and contexts. UN-Habitat's experience in adopting this kind of approach in regional initiatives (e.g. the Global Environment Facility-funded project in the Limpopo River Basin implemented between 2004 and 2007; or the Urban Resilience Project for Lusophone Africa funded through the UN Secretariat Development Account, still on-going) tells that it creates a positive dynamic of participation of the stakeholders at the various level (local, national, regional) for ensuring successful project implementation.[46]

[45] NB: The 10-Years Strategic Plan of DiMSUR approved by the Executive Board can be provided, if requested.

[46] A field visit carried out to the city of Chokwe in September 2016 (one year after the conclusion of the CityRAP exercise) showed that the city had make admirable progress on the implementation of key activities that were previously blocked thanks to the awareness and cooperation of the population that had participated in the planning exercise (e.g. relocation of households that were occupying areas of natural water drainage, cleaning of drainage channels, opening of roads, etc.)

C. *Describe how the project would provide economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project would avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund.*

The priority actions to be implemented under Component 2 in each targeted town/city are meant to increase the capacity to adapt to climate change in urban areas, especially to the benefit of vulnerable communities and groups, mainstreaming gender aspects. Compliance with the Environmental and Social Policy of the Adaptation Fund will be ensured whilst the City Resilience Frameworks for Action are produced, by incorporating the risk and impact assessments' recommendations into the more detailed design of each pilot sub-project, including appropriate mitigation strategies for implementation.

Economic benefits

The impacts of natural hazards on the economic activities of cities is widely recognised and documented. Among the targeted countries in this proposal, where urbanisation is fast-paced and the potential damages to urban economies by hazards are high, reinforcing urban resilience is imperative. Many of the cities in these countries are still heavily dependent on agricultural activities in peri-urban and urban areas, and therefore cyclones and heavy floods can be extremely prejudicial. In Chokwe town, in Mozambique, for instance, agriculture employs around 80% of the active labour force in the district while 40% of irrigation fields of the whole country are concentrated in it[47]. The 2013 floods damaged not only most trade and services activities of the city but also destroyed most of the cultivated land, creating serious damages for the economy of the city. The pilot activities that will be implemented to improve adaptive capacity in Chokwe (drainage improvement, increase infrastructure resilience and demarcation of risk areas) will benefit all vulnerable population that have their livelihoods harmed by the impacts of natural disasters.

Other concrete examples of economic benefits for the population in the target cities are the benefits of coastal protection in Morondava and Moroni, where both the fishing activities and touristic potential represent important parts of the urban economy.

Social benefits

The proposed actions to enhance resilience in urban areas will benefit primarily the socially vulnerable as they tend to be the ones most exposed to risks in the four targeted countries. In Malawi, for example, the World Bank found that the regions most affected by the 2015 flood - which heavily impacted the target city of Zomba - have per capita poverty rates of 75% or more (measured as US$1.25 per day) compared to an average rate in Malawi of around 40%[48]. This trend indicating that people living in flood-prone areas are the poorest is partially explained by the urbanisation dynamics in the country (see above). Similarly, in Comoros, heavy rains in 2012 affected approximately 80,000 people in the Moroni region that suffered with broken water pumps in precarious areas[49]. The pilot actions to be implemented in the target cities/towns will necessarily take into account the most vulnerable, in particular those in informal areas that are often neglected, and increase the access to basic services/infrastructure.

[47] MAE - Ministério da Administração Estatal (2005) Perfil do Distrito de Chokwe
[48] http://blogs.worldbank.org/voices/recent-floods-malawi-hit-poorest-areas-what-implies
[49] http://reliefweb.int/disaster/fl-2012-000066-com

The CityRAP methodology brings additional social benefits to the resilience building process, considering that inclusion and empowerment are parts of its core premise. All minorities and vulnerable population should be heard in the planning processes. This includes illiterate people, which are included in the planning process through participatory risk mapping as part of the CityRAP Tool. Importantly, gender equality is promoted in all stages of the methodology.

Finally, the proposed approach for resilience building in urban areas is comprehensive. It focuses on capacity building and considers resilience as a continuous process that once started can be the beginning of virtuous cycle with long term social benefits for the most vulnerable.

Environmental benefits

Fast paced and unplanned urbanisation in the four targeted countries resulted in the occupation of environmental sensitive areas that damages the environment and puts people at risk, as well as the exploitation of natural resources without any regard to possible negative impacts. The actions proposed involve several activities aiming at reducing the impacts of natural disasters and increasing urban adaptive capacity by improving the way human settlements interact with their territories and environment (e.g risk assessments, coastal protection, identification and demarcation of environmentally sensitive and risk areas, among other).

Compliance with the Environmental and Social Policy of the Adaptation Fund will be ensured in the process of producing the City Resilience Action Frameworks are produced, by incorporating the risk and impact assessments' recommendations into the design of each pilot sub-project, including appropriate mitigation strategies for implementation.

More specifically, the interventions under Component 2 can be divided into six main groups. The following list specifies the expected economic, social or environmental benefits from each group of intervention:

1. Improvement of drainage conditions:

- Economic benefits: high economic costs of flooding caused by damage on infrastructure and assets can be mitigated; labour intensive works will bring temporary jobs for youths and women and reduce unemployment; flood risk reduction increases confidence of investors in the city;
- Social benefits: health benefits can be leveraged (stagnant waters are breeding grounds for mosquitoes and water borne diseases); community involvement brings ownership of the intervention and a higher probability of sustainability;
- Environmental benefits: reduction of soil erosion and land degradation.

2. Coastal protection measures:

- Economic benefits: protection of the city/urban assets and investments from the erosive action of the sea;
- Social benefits: temporary income for the community members involved in the coastal protection works; increased safety;
- Environmental benefits: tree planting and reforestation.

3. *Improvement of waste management*

- Economic benefits: waste management measures will need labour intensive interventions; recycling opens avenues for jobs; a cleaner city becomes more attractive for investments;
- Social benefits: health benefits for the population
- Environmental benefits: proper waste management will have benefits on the environment through reduced flow of leachates, and reduced air, water and soil pollution in general.

4. *Re-/afforestation and provision of different energy sources:*

- Economic benefits: problems of erosion, high rainwater run-off, flooding and landslides are being mitigated, leading to cost savings in the longer term for the city in terms of infrastructure protection and improved livelihoods;
- Social benefits: community involvement brings ownership of the intervention and a higher probability of sustainability; in addition, a greater number of trees improves the quality of life and social welfare/cohesion;
- Environmental benefits: protection from erosion; wind resistant trees can be a strategy to cope with heavy rainstorms and associated high water runoff; reduced land degradation; absorption of carbon dioxide; promotion of solar energy as carbon neutral contribution to climate change mitigation.

5. *Urban planning, enforcement of urban regulations and slum upgrading:*

- Economic benefits: urban areas at risk and land for future city extensions is being demarcated, reducing the risk of economic losses through building in vulnerable areas; thanks to a better road network the connectivity in the city improves, including its overall economic efficiency and attractiveness;
- Social benefits: prevention of settlement in risky areas through zoning as well as enforcement of building codes for resilient housing, which can save lives; capacity building through training of municipal technicians; better road access in poor/informal urban areas allows installation of basic services such as water, sanitation and electricity networks; it also increases social inclusion, as the upgraded informal areas become more accessible; the participation of the residents in the upgrading process increases their self-esteem and their feeling of citizenship;
- Environmental benefits: prevention from land degradation; better public/green spaces, more liveable city.

6. *Construction and/or retrofitting of public facilities as shelters in case of disaster*

- Economic benefits: reduced damage of social/public facilities such as schools, health facilities, markets, public administration buildings, i.e. less reconstruction costs;
- Social benefits: increased security for people refuging in better built public buildings, as they shelter from floods and/or cyclones; these buildings can also be designed so that they harvest rainwater, which can improve the living conditions of the poor in terms of access to water;
- Environmental benefits: the retrofitted buildings can be designed so that they are energy efficient, among other environmental aspects.

D. *Describe or provide an analysis of the cost-effectiveness of the proposed project and explain how the regional approach would support cost-effectiveness.*

The proposed project will allocate the majority of the funds to Component 2 and as such to interventions with focus on the effects of cyclones, rainfall, floods and sea level rise The priority actions will consist of six groups of interventions as outlined in section C: (i) improvement of drainage conditions; (ii) coastal protection measures; (iii) improvement of waste management; (iv) re-/afforestation and provision of different energy sources; (v) urban planning, enforcement of urban regulations and slum upgrading; and (vi) construction and/or retrofitting of public facilities as shelters in case of disaster.

Investment into these areas can be viewed as creating greater capacity to absorb shocks and adapt to impacts. It can further be seen as a prevention of future economic loss as well as the saving of livelihood and lives. As outlined in the project background section, African cities/towns are among the ones with the biggest financing gap for addressing climate vulnerability, and are hence severely challenged by rising economic loss, also due to the fact that most loss is uninsured and governments do not have the financial reserves or access to contingency financing that would allow them to absorb losses, recover and rebuild. This is further complicated by the fact that municipalities are legally autonomous, which limits the needed financial support from central government. This implies that taking no action will lead to incrementally increasing costs in time associated with losses due to storms, floods and landslides as well as lower economic productivity in the affected areas.

Specifically, the following aspects have to be considered in line with the economic benefits outlined in section C:

1. The improvement of drainage conditions is essentially cost effective, since the high economic costs of floods in terms of damages on infrastructure and assets can be avoided.
2. Coastal protection measures vary significantly according to method, objective and location, as does the cost effectiveness of the methods used. The methods envisaged in this project will be small-scale and look locally-adapted and sustainable solutions (e.g. tree planting), especially involving communities and labour-intensive man power. Again, they will allow to protecting assets, infrastructure and investments, hence increasing the cost-effectiveness impact of the project.
3. Improvement of the waste management system is essentially cost-effective as it avoids the costs of a society suffering from diseases as well as potential costs of pollution and release of leachates.
4. Re-/afforestation and provision of different energy sources: this intervention will allow mitigating damages provoked by erosion, high rainwater run-off, flooding and landslides on urban infrastructure, services and livelihoods.
5. Urban planning and enforcement of zoning and building codes reduce the risk of economic losses of building in vulnerable areas. On the other hand, informal settlements upgrading can reduce political and societal tensions, reduce the amount of people living in areas vulnerable to natural hazards and lead to a healthier and more productive society, overall reducing costs for the government in the long run.

6. Construction and/or retrofitting of public facilities as shelters in case of disaster will secure lives and livelihoods, and reduce post-disaster reconstruction costs.

Importantly, as outlined in Part 1 of the concept note, the interventions under Component 2 will be implemented under the leadership of the target municipalities through community involvement (e.g. labour intensive activities) and the support of local civil society organisations. This model of partnership will allow significant cost reduction as concerned municipalities are expected to provide in-kind support. At the same time, the labour intensive physical interventions will provide economic benefits to the communities through temporary job-creation, especially targeting women and youths. Importantly, local capacity will be developed to ensure the management/maintenance of the pilot projects' outcomes in the longer term.

The regional approach is a major aspect of ensuring the cost-effectiveness of the project, through the sharing of experience, knowledge and of other resources. The project will further ensure cost-effectiveness by relying on the SADC DRR Unit in partnership with DiMSUR. These two institutions will take the lead in the regional coordination of activities and making sure that the different actors at the various levels (municipal, sub-national, national and regional) establish platforms of collaboration and dialogue with each other. DiMSUR will enable staff sharing costs and avoid an excessive spread of financial resources to several institutions, as it will work as the umbrella for the different project components.

During further formulation of the project document, a more detailed cost effectiveness analysis will be undertaken, comparing the proposed resource allocation with measurable outcomes to other options, in order to validate costs, benefits and effectiveness of the interventions.

E. *Describe how the project is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist. If applicable, please refer to relevant regional plans and strategies where they exist.*

At the global level, the project aligns with the New Urban Agenda, the Quito Declaration on Sustainable Cities and Human Settlements for All, approved at the United Nations Habitat III conference in October 2016. It specifically refers to the vision outlined in the new Urban Agenda, being cities and human settlements that are participatory and promote civic engagement and foster social cohesion, inclusion and safety in peaceful and pluralistic societies, where the needs of all inhabitants are met, recognizing the specific needs of those in vulnerable situations; and to the vision to adopt and implement disaster risk reduction and management, reduce vulnerability, build resilience and responsiveness to natural and human-made hazards, and foster mitigation of and adaptation to climate change. The project will contribute to the implementation and localisation of the principles and commitments outlined therein, such as to ensure environmental sustainability by building urban resilience, by reducing disaster risks and by mitigating and adapting to climate change.

The project is further consistent with the Paris Agreement adopted under the United Nations Framework Convention on Climate Change, specifically Article 2 (b) with reference to the objective of increasing the ability to adapt to the adverse impacts of climate change. Importantly, it refers to Article 7.5. of the Paris Agreement, where it is outlined that 'Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully

transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate'. The project design adheres to all the outlined principles as further detailed in Part I of this concept note.

Consistency is moreover ensured with the Sendai Framework for Disaster Risk Reduction for the period 2015–2030 and its four priorities for action, being: 1) Understanding disaster risk; 2) Strengthening disaster risk governance to manage disaster risk; 3) Investing in disaster risk reduction for resilience; and 4) Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction.

The project further aligns with the Sustainable Development Goals (SDGs) n.11: "Make cities and human settlements inclusive, safe, resilient and sustainable", notably target 5 ("By 2030, to significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations) and target 9 ("By 2020, to substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all level); as well as SDG target 13.1: "Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries".

At the continental level, the project is consistent with the Agenda 2063- The Africa We Want, in that it strengthens climate resilient communities, as called upon in aspiration 1, item 10. It is further consistent with the Mauritius Declaration on the Implementation of the Sendai Framework in Africa and its Programme of Action (PoA), which replaced the Africa Regional Strategy for Disaster Risk Reduction that expired in 2015. In line with the PoA, the project helps to achieve the set targets of increasing integration of DRR in regional and national sustainable development, and climate change adaptation frameworks, mechanisms and processes; as well as increasing the number of countries with, and periodically testing, risk-informed preparedness plans, and, response, and post-disaster recovery and reconstruction mechanisms.

At the southern Africa level, it takes into account the 10-year Disaster Risk Reduction Strategy of SADC, now concluding[50], which focuses on:

- Strengthening governance, legal and institutional framework at all levels of DRR;
- Facilitating the identification, assessment and monitoring of disaster risks and support enhancement of early warning systems at all levels;
- Promoting usage and management of information & knowledge, innovation & education to build a culture of safety and resilience at all levels in the SADC region;
- Ensuring that DRR becomes a national and local priority with a strong institutional basis for implementation;
- Integrating preparedness and emergency response into disaster risk reduction interventions.

[50] NB: the new 10-year DRR strategy for SADC will have to align with the recently approved DRR PoA for Africa.

With regard to the alignment to national development and climate change adaptation priorities, the project is consistent with the relevant national strategies and policies in each country.

(i) Madagascar:

The project aligns to the National Adaptation Program for Climate Change (NAPA) elaborated in 2006, which aims at strengthening the country's capacity to adapt to the effects of past and present climate variability and future climate change, and empower the country to address some of the causes of its vulnerability. The present project contributes for advancing all three strategic axes established by the NAPA in Madagascar: (1) Capacity reinforcement; (2) Policy reform; and (3) Integration of adaptation in sectorial policies and project activities. More specifically, the NAPA also identifies and rank a number of 15 priority projects for addressing the most urgent needs of adaptation in the country; the present proposal is highly aligned with many of the projects and in particular with the two topics on top of the priority ranking: (1) Rehabilitation/reconstruction of dykes, walls and other water protection infrastructure; and (2) Establishment and promotion of sustainable water management practices and associations. The NAPA is complemented by the implementation of the National Strategy for Risk and Disaster Management (SNGRC), the National Strategy for Climate Change Mitigation (SNACC, currently being finalised), and the National Adaptation Policy (PAN, currently being finalised).

In alignment with the National Strategy of Disaster Risk Management (2016-2020) and its strategic objective 5, the project reduces risks at the local and national level and contributes to vulnerability reduction. The project also contributes to the implementation of the 5th pillar of the National Development Policy that focuses on building resilience to disaster risks, as well as the National Policy for Fighting Climate Change in accordance with the National Environmental Policy. At city level, the project will strengthen the capacity of Morondava in the city's ability to cope with the impacts of climate change and disaster risk, considering its high vulnerability to floods and cyclones as defined in the Resilience Action Plan of Morondava (2016-2026)[51].

(ii) Malawi:

Malawi has prioritised climate change, environment and natural resources management among the priorities within priorities of the Malawi Growth and Development Strategy (MGDS II). The MGDS II recognises that natural resources form a principal source of social well-being and economic development in Malawi and identifies the following issues that need urgent attention: (a) Climate variability; (b) Inadequate institutional capacity for managing climate change; (c) Inadequate mainstreaming of climate change issues; (d) Inadequate enforcement of climate relevant legislation; and (e) Increasing deforestation and unsustainable land use.

Malawi's National Adaptation Programmes of Action (NAPA) has identified the immediate adaptation measures that need to be taken to reduce the risks posed by climate change and the possible impacts of increased severe weather events on Malawi. The NAPA has identified sectors that are affected by climate change and these include agriculture, human health, energy, fisheries, wildlife, water, forestry and gender. The proposed project will especially address the energy, human health, wildlife, water and forestry sectors of the NAPA.

Malawi has recently developed a National Climate Change Management Policy (NCCMP) whose overall goal is to promote climate change adaptation, mitigation, technology transfer and capacity building for sustainable livelihoods through Green Economy measures. With regard to climate change adaptation, the policy aims to:

[51] See Annex 3: City Resilience Action Plan of Morondava (in French), including an Executive Summary in English.

(i) reduce vulnerabilities of populations in Malawi and promote community and ecosystem resilience to the impacts of climate change;

(ii) ensure that women, girls and other vulnerable groups are engaged and involved in planning and implementing climate change adaptation interventions; and

(iii) ensure that communities are able to adapt to climate change by promoting climate change adaptive development in the long term.

The proposed project is aligned to these climate change adaptation objectives of the policy.

The National Disaster Risk Management Policy is aimed at ensuring that disaster risk management (DRM) is mainstreamed in development planning and policies of all sectors in order to reduce the impact of disasters and ensure sustainable development in the country. One of its key objectives is to promote enforcement of buildings and other infrastructure standards which will lead to a reduction in disaster losses. One of the policy priority areas is the reduction of underlying risks and includes the promotion of good land use planning and management and sound construction of infrastructure; the identification and implementation of long lasting solutions to floods and other disasters. The proposed project will support the realisation of these policy outcomes.

In the city of Zomba, the project responds to the identified priority actions developed in the Resilience Action Plan of Zomba (2016-2026)[52] to strengthen the city's coping capacity towards the impacts of climate change.

(iii) Mozambique:

The proposed project will contribute directly to the implementation of the National Strategy for Climate Change Adaptation and Mitigation (2013-2025). In particular, the project will advance the defined strategic action: 'develop mechanisms for resilience in urban areas and other settlements', and its two related indicators: (1) 'number of informal settlements upgraded with sanitation'; and (2) 'number of people benefitting from urban sanitation programmes'. The action will also directly contribute to achieving the following strategic actions:

- Improve adaptive capacity of vulnerable people;
- Improve preparedness and response capacity to climatic risks;
- Improve capacity for managing water resources.

It also contributes to the Government's Five Year Plan (2015-2019), specifically priority five with the strategic objective of reducing risk and adapting to climate change and reducing the vulnerability of communities, economy and infrastructures to climate risks. It further addresses the crosscutting issues outlined in the 20-year National Development Strategy (2015-2035), being enabling capacity-building of municipal technicians and community members.

Chokwe town, located in the lower Limpopo River basin, and being extremely prone to floods and droughts, has made climate adaptation one of its highest municipal development priorities. The project will contribute to the implementation of the Resilience Action Plan of Chokwe (2016-2026)[53].

(iv) Union of Comoros:

As small and highly vulnerable developing island state, the Union of the Comoros has given priority to climate change mitigation and adaptation, natural resource management and sustainable development, biodiversity conservation and enhancement of eco-system services

[52] See Annex 4: City Resilience Action Plan of Zomba.
[53] See Annex 5: City Resilience Action Plan of Chokwe (in Portuguese), including an Executive Summary in English.

as well as disaster risk management in its Strategy for Rapid Growth and Sustainable Development (2015-2019).

In alignment with the Strategy, specifically strategic areas three and four, the project will strengthen local governance, build capacity and reinforce institutional coordination to enhance urban resilience. Further, in line with the overall objective of the strategy, the project will contribute to climate risk reduction and sustainable development by providing appropriate localised solutions.

The National Adaptation Plan of Action (NAPA) provides a framework for the implementation of adaptation measures to reduce the risks posed by climate change and the impacts of increased weather phenomena and sea level rise. It has identified the following sectors as being most affected by climate change: agriculture, cattle breeding, infrastructure, fishing and health. The proposed project will especially address the infrastructure and health sectors of the NAPA, the latter by tackling the inadequate waste management system, which facilitates the development of malaria and present pollution risks to ground water and shores. Regarding the infrastructure sector, the NAPA highlights its vulnerability to flooding and sea level rise, resulting in erosion and damaging of roads, bridges and public infrastructure. The project activities in Moroni related to implementing sea erosion control measures and designing and building a drainage system directly address these issues.

With regard to the Intended National Determined Contribution (INDC) of the Union of Comoros and its National Policy, Strategy and Action Plan for Climate Change (both approved in 2015), the following priority issues will be addressed by the project: land management, including spatial planning, with implications for urbanisation, agriculture and forestry through city planning and informal settlement upgrading in Moroni; waste management; vulnerability reduction of the population located in areas at risk of flooding, cyclones and sea level rise; mainstreaming of climate change adaptation, mitigation and resilience in the legislation and policies; as well as institutional capacity building and community empowerment.

The project further aligns with the National Strategy and Action Plan on Disaster Risk Reduction and its six strategic areas, namely: 1) Establishing a legal and institutional framework and mechanisms for disaster risk reduction; 2) Strengthening national, island and community capacity; 3) Development of knowledge, information, education and communication systems on disaster risk management; 4) Promotion of community resilience activities; 5) Sustainable and flexible funding mechanisms; 6) Promotion of regional and international cooperation and coordination. The strategy aims ultimately to substantially reduce losses and damage and to strengthen the resilience of communities (national and local) to disasters.

Lastly, the project will support Moroni city's aspirations to become more resilient to the impact of climate change. While there is no official city strategy as of yet, the initial consultative process undertaken will be extended to a comprehensive stakeholder consultation, the results of which shall be reflected the project design.

F. *Describe how the project meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund*.

The project will comply with the Environmental and Social Policy of the Adaptation Fund as described in Section L. During preparation of the full proposal, a detailed risk environmental and social risk assessment of the project components and different interventions will be undertaken. If and where necessary, the project components will be adapted to ensure full compliance.

Apart from the Environmental and Social Policy of the Adaptation Fund, the project shall also adhere to UN-Habitat's Environmental and Social Safeguards System (ESSS). The latter outlines that UN-Habitat projects will comply with host country laws and obligations under international law and conventions. It serves as a framework outlining UN-Habitat's commitment, capacity and procedures to assess and manage the environmental and social risks of Projects. The ESSS is fully integrated with the Project Based Management Policy. The objectives of the ESSS are to: (i) identify and evaluate potential environmental and social risks and negative impacts of projects; (ii) apply a mitigation hierarchy to anticipate and avoid or minimize risks, and where impacts remain, compensate for risks and impacts to people, communities, and the environment; (iii) manage environmental and social safeguards throughout the project; (iv) engage the affected community through disclosure of project-related information and consultation on matters that directly affect them; and (v) ensure that grievances and external communications from stakeholders are responded to and managed appropriately. The ESSS is aligned with United Nations and bi/multilateral institutions' environmental and social safeguard policies. It has been prepared while bearing in mind the safeguard management systems of other organizations including the International Finance Corporation (IFC), the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), and the International Union for Conservation of Nature (IUCN).

Further, at project proposal stage, and in line with UN-Habitat's Project Management Cycle and Work Flow policy, the project will further be screened for its adherence to the seven thematic areas of work of UN-Habitat, and its standards for three cross-cutting issues which are: gender, human rights and climate change.

For the implementation of the project, the following national legislation in the respective countries is of relevance:

(i) Madagascar

Environmental impact assessments (EIAs) in Madagascar are carried out on the basis of Decree No. 99-954 of 15 December 1999, as amended by Decree No. 2004-167 of 03 February 2004 published on 10 July 2000 and 24 May 2004. The integration of EIAs in the project cycle is essential for providing environmental information at key stages. Early results of an EIA may indicate practical design changes that would avoid or reduce adverse environmental impacts or better benefit from environmental benefits. A screening procedure is to be carried out by the National Office of the Environment and determines if the project must be subject to an EIA or not.

Sub-project activities in Morondava related to coastal protection through the restoration of mangroves would be implemented following the forestry law of the country and more particularly the following legislation:

- Law No. 2015-003 updating the Malagasy Environment Charter;
- Law No. 2015-005 revising the Code of Management of Protected Areas;
- Law No. 97-017 of 16 July 1997 regarding forest management;
- Law No. 96-025, which transfers natural resources management responsibilities to local grassroots communities.

Sub-project activities in Morondava related to coastal protection through establishing a system of dykes would refer to the Malagasy Standards for the Construction of Hydro Agricultural

Infrastructure Against Floods; Cyclone-resistant construction works would be done according to the related guidelines and Decree No. 2010-243 of 21 April 2010.

Sub-project activities in Morondava related to the rehabilitation of drainage channels and improving waste management would be conducted in line with the regulations related to sanitation adopted in accordance with Decree No. 2008-1057 of 10 November 2008 and also taking into consideration the National Directive for Climate Resistant Infrastructure - Drinking Water Supply.

All sub-project activities in Morondava, specifically on city planning, would further align with regulations related to land management:

- Law No. 2006-031 defining the legal regime for private non-titled land ownership;
- Law No. 2008-014 on the private domain of the State, Decentralised Communities and Public Entities;
- Law No. 2005-019 on the status of land tenure.

(ii) Malawi

The conduct of EIA in Malawi is guided by the 'Guidelines for Environmental Impact Assessment' of the Government of Malawi published in December 1997. Malawi's EIA process is specifically designed to integrate EIA requirements within the project cycle. This integration is essential for an EIA study to provide timely environmental information at key stages in the project cycle. Thus early results from an EIA may indicate practical design changes which would avoid or reduce negative environmental impacts, or better capture environmental benefits. As prescribed under Section 24(1) of the Environmental Management Act, Malawi has a prescribed list of projects for which an EIA is mandatory (List A) and another list (List B) of projects for which an EIA may be necessary. The sub-projects for Zomba City will have to be applied to the lists to determine if an EIA is mandatory, may be necessary or not all.

Sub-project activities on improving the drainage system would be designed and implemented based on 'Standard Specification for Road and Bridge Works' of the Malawi Government (1978) with specific reference to drainage and under Series 2000: Drainage of the SATTC 'Standard Specifications for Road and Bridge Works' of 1998.

Sub-project activities on afforestation, as measure for land erosion control, related to city priority 'promoting sustainable forest management', would be implemented following the country's Forestry Act and specifically the 'Standards and Guidelines for Participatory Forestry in Malawi' of the Government of Malawi published in 2005. The standards and guidelines promote community participation, management and ownership of forests and forest resources.

Sub-project activities related to buildings would refer to the 'Safer House Construction Guidelines: Technical Manual', developed in 2010 and revised in 2014 to support households, communities and the Government and other partners in adaptive architecture to reduce exposure to disasters through sound construction. The city's planning standards and building bylaws also apply within the city jurisdiction.

(iii) Mozambique

In Mozambique, the Environmental Law defines the legal basis for the use and management of the environment as a means of guaranteeing the country's sustainable development. According to this law, the EIA is an instrument that supports decision making on the allocation of an environmental license. Environmental licensing shall precede any other legally required license in all public and private activities that may be directly or indirectly affected by the environment. The process of EIA is regulated by Decree No. 45/2004, while environmental auditing and environmental inspection are regulated, respectively, by Decree No. 32/2003 and 11/2006.

The EIA Process Rules define all stages of the EIA process - screening, definition of scope, content of studies, public participation process, review and approval by the environmental authority. The screening defines the type and level of detail of the environmental and social assessment study. The EIA Mozambican Regulation considers three categories to identify the appropriate level of environmental impact assessment: Category A (a full Environmental Impact Assessment - EIA, with Environmental Management Plan Category B (requires a Simplified Environmental Study - EAS, with specific Environmental Management Plan) and Category C (exempt from an EIA).

Under Component 2, the sub-project concerning Chokwe will include construction/retrofitting of public education and health facilities (cyclone/flood shelter). The risks associated with this kind of infrastructure are generally low, hence the project is likely to be assigned to environmental category B. An EIA will be done for all sub-projects to be implemented in Chokwe. Specific Environmental Management Plans (EMP) need to be prepared as necessary once the exact locations of those facilities have been identified. The EIA is then be submitted for the Government review and publicly disclosed in the affected communities prior to appraisal.

Moreover, the sub-project activities regarding building/retrofitting of public facilities shall refer to the 'National Guidelines and Norms for Safe Constructions of Public Buildings', developed in 2015 under the Safer School Project (2012-2015) endorsed by the Government in 2016, which is currently being applied by the Ministry of Public Works and Water Resources and the Ministry of Education and Human Development. These guidelines are being disseminated to all public sectors in Mozambique through on-the-job trainings and with technical assistance from UN-Habitat.

The project will adhere to drainage system laws, such as the ones established by the decree 15/2004 on water distribution and drainage systems for buildings. It regulates the nature and quality of the materials used, the disposition of the pipes, the separations between the drainage and the rainwater collection systems, as well as between the drainage and the water supply systems, the responsibilities of users and of the managing entity, the cases in which the service might be interrupted or restricted, the frequency of inspections, among others. It will also abide by the decree 18/2009, which approved the delegation of the management of the drainage system to the private sector, as was done in 1998 for the water supply system, and the decree 19/2009, which created the Administration of Water and Sewage Infrastructure and established it as the entity responsible for the public drainage system.

For the activities related to informal settlements upgrading, the relevant national standards are mostly specified in decree 23/2008, which approves the regulation of the Territorial Planning Law. This law establishes the essential planning instruments and their frameworks for managing territory and urban systems at various levels:

- National level (National Land Use Plan, Special Land Use Plans);
- Provincial (Provincial Land Use Plans)
- District (District Land Use Plan)
- Municipal (City Master Plan, Partial Urban Plan, Detailed Urban Plan)

The decree also defines standards for land qualification and classification, for the National Land Cadastre, environmental, social and economic inventory, zoning, as well as public participation for land management.

The project will also adhere to solid waste management legislation, especially the decree 94/2014, which introduced new laws regarding solid waste, such as establishing that all public and private entities that undertake solid waste management-related activities should produce and implement every 5 years a plan for the integrated management of waste according to defined guidelines. It also indicated MITADER and the Municipal Councils and District Governments as the entities responsible in their respective jurisdictions, outlining their roles in the solid waste management flow. For instance, Municipal Councils and District Governments are held responsible for approving local standards and charging for waste collection, transport and treatment, while MITADER is responsible for inspecting waste storage facilities and the fulfillment of such legislation. It established guidelines for the selective collection of waste, saying that its implementation can be carried out by either Municipal Councils and District Governments or private entities, including recycling cooperatives. Finally, it outlines the responsibilities of those who produce, operate and transport solid waste towards contributing to its proper and safe handling.

Other relevant aspects of the Mozambique Environmental and Social Framework include legislation on: air emission standards, air quality and noise, water resources, water quality, pesticides, coastal management, land ownership, protected areas and conservation areas, as well as involuntary resettlement.

The project shall also adhere to the Disaster Law (No.15/2014), which defines the parameters to classify the country in high, medium and low risk areas, with specific actions identified for each risk class. For example, as concerns flood risk, prevention or restricted zoning is a measure required for high risk areas, while for medium and low risk areas public infrastructure and drainage system are expected to be constructed. Thus, the pre-identified activities for Chokwe sub-projects respond adequately to the requirements of this major legal instrument.

(iv) Union of Comoros

In Comoros, the project complies with the Environmental Law No. 94-018, which aims in Article 2 to: a) preserve the diversity and integrity of the environment of the Republic of the Comoros, as an integral part of the universal heritage, which is particularly vulnerable associated with insularity; b) create the conditions for a sustainable quantitative and qualitative use of natural resources for present and future generations; c) ensure an environmentally sound and balanced living environment for all citizens.

The environmental impact assessment (EIA) process is governed by decree No. 01 - 52 / EC. The EIA of proposed works and activities must involve a) an analysis of the condition of the site and its environment; b) an assessment of the foreseeable consequences of the implementation of the project on the natural and human environment; c) a presentation of measures to reduce

or eliminate harmful effects on the environment and others non-selected options for the implementation of the project.

In accordance with Article 14 of the Framework Law on the Environment, the Union of the Comoros has a prescribed list of projects for which an EIA is compulsory. The activities identified for the city of Moroni, i.e. the designing and building a drainage system, implementing sea erosion control measures, improving solid waste management and city planning and informal settlement upgrading, will have to be compared with this list to determine whether an EIA is mandatory and may or may not be necessary. Where necessary, an EIA will be carried out and specific environmental management plans prepared. The EIA will then be submitted to the government for review and published to the city's residents.

Implementation of protection measures for the control of land and/or sea erosion (including afforestation measures) for the city of Moroni will be carried out in compliance with decree No. 12-001 / AU on forest management in the Union of Comoros, which regulates all forests in the public domain as well as in the domain of individuals. In addition, the activities of the project will also have to comply with the texts and decrees relating to disaster risk management and the national climate change adaptation plan in force in the country, for example with regard to risks of flooding or rising sea levels.

Further of relevance to the project components in Comoros are the Accelerated Growth and Sustainable Development Strategy (SACADD), as well as the Urban Development Code and Communal Development Plans. The project further follows the objectives of the National Environmental Policy and the Environmental Action Plan.

Concerning the protection of natural habitats, the project will be implemented in the municipality of Moroni. It will not result in unjustified conversion or degradation of critical natural habitats, including those that are: a) legally protected; b) officially recommended for protection; c) recognized by authoritative sources for their high conservation value, including as essential habitat; or d) recognised as protected by traditional or indigenous local communities.

G. *Describe if there is duplication of project with other funding sources, if any.*

Despite of the existence of initiatives in the four targeted countries for climate change adaptation and/or mitigation and disaster risk reduction (e.g. by the World Bank, DFID, USAID, UNDP, UNEP, among others), to UN-Habitat's knowledge, and based on a desk review, none is focusing solely on urban climate adaptation, concern the four cities/towns targeted by this project and is adopting the proposed bottom-up approach, from the local level to the national and regional level, thus mainstreaming participation in each implementation step.
A more detailed analysis of recent and current adaptation related projects is outlined below per each country.

(i) Madagascar

Based on a mapping of the most recent initiatives related to climate change adaptation in Madagascar it has been noted that most interventions focus on rural areas. The following broad issues can be listed, which are related to the proposed activities in this project:

a. Disaster risk management: installation of meteorological stations, the improvement of early warning systems, reinforcement of building codes, as well as modelling of future climate-related risks (CPGU with Tany Meva Foundation);

b. Basic services provision: a project concerning the improvement of access to drinking water (Tany Meva Foundation);

c. Forest protection: elaboration of a long term vision for the forestal policy (Voary Gasy Alliance) and reforestation initiatives (CMP Tandavanala Pro-Poor Carbon Market initiative); e) Research in bio-technology and innovation: exploitation of organic waste for energy production (Troiska Meva);

d. Spatial development: integration of climate change impacts in national and regional planning (CPGU).

Lessons learnt from these initiatives could be potentially leveraged from the processes and results of projects related to modelling of future climate risks, improvement of access to drinking water, and projects on forest protection, and integration of climate change impact in national and regional planning. These aspects will be examined in detail during the full project proposal development.

Importantly, the World Bank is planning to support the city of Antananarivo in Madagascar by funding major flood reduction infrastructure projects, mainly related to drainage conditions. During the full project proposal development it will be analysed how the project can establish synergies with the same.

(ii) Mozambique

The initiatives in Mozambique on climate change adaptation which are relevant to this project are:

a) Water resource management: sewage and water systems promotion in villages, as part of the "AGUASANI - Water, Sanitation and Hygiene" initiative (Government of Mozambique, European Union and UNICEF) or as small scale water supply system establishment by UNICEF; the European Union has also recently announced an investment of 740 million dollars in the government's budget in the next 5 years to finance projects of water supply, among others.

b) Disaster risk management and broader climate change adaptation:

- the Cities and Climate Change Project (concluded) and the Pilot Program for Climate Resilience of Mozambique (led by the World Bank);
- the Coastal Cities Adaptation Project (led by USAID and partly implemented by UN-Habitat);
- Enhancing the Planning Capacities of Cities in the Nacala Corridor - Nampula, Tete and Nacala (led by UN-Habitat and financed by Cities Alliance) - concluded;
- Participatory Slum Upgrading Programme implemented in a poor neighbourhood of Nampula city, with interventions ranging from road opening/rehabilitation, drainage works and water supply (funded by the European Union and implemented by UN-Habitat/City Council);

- Supporting the Mozambique Climate Change and Development Country Programme (CDKN and UNEP, in collaboration with Regional Climate Change Programme and DFID);
- Coping with Droughts and Adaptation to Climate Change (led by UNDP and financed by GEF, Samaritan's Purse and the Government of Mozambique) – concluded;
- Environment Mainstreaming and Adaptation to Climate Change (led by UNDP and FAO and financed by the Spain MDGs Achievement Fund) – concluded;
- Adaptation to Climate Change in Mozambique: Early Warning and Education (led and financed by GIZ) – concluded;
- African Adaptation Programme: Climate change actions and mainstreaming in Mozambique" (led by INGC, MICOA and UNDP and financed by the Government of Japan) – concluded;
- Increasing Resilience to Climate Change in Mozambique (led by Save the Children and financed by DFID);
- The sustainable development of the Govuro coastal zone through adaptation to climate change using a community-based integrated coastal zone management approach (led by CC DARE and financed by the Danish Ministry of Foreign Affairs) – concluded;
- Establishment of hydrological models for flood forecast (FEWS Net Mind) – concluded;
- Cities in Climate Change Initiative (Phases I, II and III) – Maputo, Vilankulos and Beira (led by UN-Habitat and financed by Norway and BASF) - concluded.

The existence of a vast portfolio of projects on climate change adaptation, especially in rural areas, is justified by the fact that environmental challenges arising as a result of climate change are constant in the country. Fast paced urbanisation progressively shifts challenges to cities and towns, but this growing demand for urban adaptation is still not adequately met. The present proposal will fill this gap in Mozambique by targeting one city but scaling up the experience, methodologies and policy implications to national and regional level, taking note of the initiatives and lessons learned from the past and the ones currently being carried out.

(iii) *Malawi*

Similarly to Madagascar and Mozambique, most climate change adaptation related interventions in Malawi have focused on rural areas and especially in the fields of agriculture, forestry and fisheries. However, climate change adaptation attention is also now beginning to focus on urban areas due to the rapid urbanisation and the increasing frequency and intensity of disasters in urban areas in recent years.

Recent and current projects can be summarised under basic urban revises provision, slum upgrading, and disaster risk management as outlined below. During the full project proposal development it will be analysed how the project can establish synergies with the same.

Several projects are meant to increase access to basic urban services, which is critical not only to fulfilling the human rights of urban communities but also to building resilience in the face of climate change.

Poor waste management is a critical issue in all cities in Malawi. Traditional ways of managing waste cannot cope with increased waste generation in the context of a dwindling resource

envelope. The Lilongwe Waste Management project dubbed 'waste for wealth' was implemented in Lilongwe between 2010 and 2012 (by UNDP and UN-Habitat) and sought to harness public private partnerships and community engagement in the management of waste including in those slum settlements which do not receive any waste management service. The project demonstrated the value of public private partnerships in urban basic services delivery, created waste entrepreneurs (mostly women) who produce commercial compost from waste and has led to cleaner living environments in those communities it is implemented. The initiative has been replicated in other settlements in Lilongwe and in settlements in the cities of Mzuzu and Blantyre.

Access to water and sanitation in urban areas is a critical issue and the National Water Development Programme II has supported the cities of Blantyre and Lilongwe to enable up to 700,000 low income residents in these cities access water. A WASH Project is under implementation in the cities of Mzuzu and Karonga (funded by the European Union and implemented by UN-Habitat) and by 2017 will have provided safe water 50,000 low income people and a similar number will have access to improved sanitation. Cities in Malawi used to have annual cholera epidemics but these interventions have significantly reduced the occurrence of these epidemics in urban areas.

The Participatory Slum Upgrading Programme (PSUP), funded by funded by the European Union and implemented by UN-Habitat, has been implemented in a low income community in the city of Mzuzu addressing waste management, drainage, household sanitation and capacity building for community development structures. It is expected to be scaled up to other communities and other cities in the country.

For cities to effectively address climate change and disaster risk, it is important to support the institutional capacity and frameworks in this area. Disaster risk management plans are being developed for the cities of Lilongwe and Mzuzu wit UNDP support, in addition to the City Resilience Action Plan for Zomba supported by UN-Habitat/DiMSUR.

(iv) Union of Comoros

Most climate change adaptation related interventions in the Union of Comoros have focused on rural areas. However, a project with which synergies could be created is currently under development by UNDP through the Global Environment Facility (GEF), with a concept approved in March 2016, titled "Strengthening Comoros Resilience Against Climate Change and Variability Related Disaster".[54] Specifically, collaboration could be established regarding objective 1 of the GEF proposal: "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". Even if no specific project activities are planned for the city of Moroni, joint training activities could be organised at the national level under Component 3 of the current proposal. This will be discussed with the UNDP country team during the development of the full project proposal.

[54]https://www.thegef.org/sites/default/files/project_documents/ID6912_Council_NoNotificati_Letter1.pdf

H. *If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.*

The project has a dedicated component related to knowledge management (Component 4: Inter-country experience sharing, cross-fertilisation and dissemination of lessons learnt at the regional level).

The component focuses on systematically keeping track of experiences gained from the project both to enrich the local, national and global knowledge on climate change adaptation and to accelerate understanding about what kinds of interventions and processes can be seen as best practices for potential replication in the region. Knowledge exchange between the four countries affected by similar climate-related threats is at the core of the project. Regional workshops will be organised with a view to disseminating and capture lessons learnt from the sub-projects. In this context, DiMSUR will work as the framework for knowledge management and sharing, in line with its Charter's objective to "Enable DRR, CCA and urban resilience knowledge, information and exchanges between Member States" (see Annex 1, Article 3.4 (d) of the DiMSUR Charter). DiMSUR aims at compiling and disseminating technical knowledge, functioning as a service provider and performing as a partnership hub for the benefit of its member countries in its core areas.

A relevant tool for capturing the lessons learnt will further be the SADC webportal for sharing the DRR experiences in the region.

DiMSUR also has existing mechanisms for information sharing on progress, lessons, plans, milestones through its website which is frequently being visited (www.dimsur.org)[55] and social media (Facebook and Twitter) but also a regular newsletter that is being distributed to a wide audience. These will be leveraged for disseminating lessons learnt throughout the project.
The project further includes systematic bottom-up dissemination of lessons learnt from local to national level under Component 3, whereby lessons learnt from the local level will be presented at the national level and translated into useful training guidelines and recommendations for evidence-based policy making.

The development of the full proposal would include a comprehensive media outreach strategy for further inclusion of local communities in project design and implementation.

I. *Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund.*

As outlined in the project background, UN-Habitat has carried out preliminary work through the CityRAP Tool in the target countries. In Madagascar, Malawi and Mozambique, the identification of priority actions for building urban resilience has been a highly participatory and comprehensive process through the implementation of the CityRAP Tool. A team of municipal technicians was trained and conducted the process of data collection and analysis, prioritisation and drafting of a preliminary city resilience action plan under the lead of the municipality, with UN-Habitat and DiMSUR providing support and strategic advice. The consultations involved

[55] In the second half of 2016, the website showed a total of 225,646 visitors, with monthly visitors of up to 56,000 people, highlighting the demand and interest in the region.

local authorities, municipal technical staff and communities most affected by risks and climate change, as well as civil society organizations. The relevant validated plans at city level cited in section E can be shared if required.

The priorities set by key stakeholders consulted in each city have formed the basis of the physical interventions outlined in the pre-concept as well as the concept note. These physical interventions have been chosen as they are deemed to be the most effective for raising the adaptive capacity of the respective city/town.

As for the Union of Comoros, a training of trainers of the CityRAP Tool has taken place, but no city resilience action planning processes as of yet. Hence, a separate consultation process on the concept note's content has been undertaken as outlined below.

The consultative process for each country took place as described below. Further comprehensive consultation in all four countries will be undertaken during the development of the full project proposal.

(i) Madagascar

In Morondava, the consultation process involved local authorities (regional, district, municipal, neighbourhood level), municipal technical staff, communities most affected by risks and climate change and civil society organisations.

Overall, 124 persons have directly participated in the data collection and identification of priority actions contributing to the elaboration and adoption of the City Resilience Action Plan of Morondava. For the elaboration and adoption of the Plan two workshops were organised:

- 15 March 2016: prioritisation workshop during which the ten priority issues in the short, medium and long term have been selected with the participation of 26 representatives of local stakeholders, including communities and municipal staff;
- 15-17 March 2016: validation workshop, during which 23 participants validated priority issues and activities identified in the City Resilience Action Plan of Morondava prepared by the team of municipal focal points with the support of UN-Habitat and DiMSUR.

An assessment of the proposed project activities of the concept note in Morondava took place in stakeholder consultations on 6 December 2016 with 20 representatives from the Menabe Region, the Urban Municipality of Morondava and the fokontany (neighbourhood) level (fokontanys Ampasy, Avaradrova, Sans fil and Tanambao), the technical services of the Ministry and NGOs/CSOs among others Morondava Women and Youth Association, journalists and development and risk management committees in the neighbourhoods. The associations involved in the field of the environment were represented by the Deputy Mayor of Morondava. The participants approved the proposed activities to be carried out in the project. As important points validated are the consideration of gender and disaster risks and the participation of young people. It was further proposed that journalists should be involved in activities for transparency, and that existing studies within the municipality on environmental aspects should be taken into account. The activities foreseen in the concept note were also approved at the level of fokontany chiefs. It was found that the activities would improve the current living conditions (more decent and safe, thus offering alternative solutions to all forms of housing relocation). It was found that a further priority of Morondava would be reforestation actions with fast-growing and drought-resistant species to meet the growing need for energy.

(ii) Malawi

In Zomba, the consultation process involved the national (Department of Disaster Management Affairs, DoDMA), city (Zomba City Council) as well as the neighbourhood level (neighbourhoods Chambo, Likangala, Mbedza and Mtiya). Overall, 200 persons, among them municipal technical staff, community representatives, civil society organizations and the Zomba Polytechnic have directly participated in the data collection, risk mapping exercises and identification of priority actions.

For the elaboration and adoption of the City Resilience Action Plan of Zomba, the following workshops were organised:

- 22-24 November 2015: Data analysis workshop with the municipal focal points and the support of the UN-Habitat/DiMSUR team.
- 25 November 2015: Prioritisation workshop with representatives from the local communities of Chambo, Likangala, Mbedza and Mtiya and municipal technicians. As result, the City of Zomba came out with five priority actions for its Resilience Action Plan.
- 27 November 2015: Validation workshop with representatives from the Zomba City Council, municipal technicians and community representatives. The plan was approved and referred to the city council for further detailing of priority actions and the related budget.

Further consultations have been made with the Zomba City Council to validate the indicative provisions in the pre-concept note. Zomba City Council management and council have studied the pre-concept in December 2016 and positively commented on the planned activities targeting the city of Zomba under component 2, and transmitted that it would be appreciated if environmental enhancement projects such as tree planting and management, as well as land conservation would be reinforced under Component 2. With regard to Component 4, community exchange on the national level has been suggested in addition to the regional workshops planned. The latter could actually be integrated under Component 3.

(iii) Mozambique

The consultation process in Chokwe involved key stakeholders in the spheres of urban governance and development including city councillors, management and technical staff, as well as communities and the civil society. Overall, 116 persons have directly participated in the data collection and identification of priority actions contributing to the elaboration and adoption of the City Resilience Action Plan of Chokwe. For the elaboration and adoption of the Plan two workshops were organised:

- 1 September 2015: prioritisation workshop during which the six priority issues have been selected with the participation of around 30 representatives of local stakeholders, including communities and municipal staff;
- 3 September 2015: validation workshop, during which 40 participants validated priority issues and activities identified in the City Resilience Action Plan of Chokwe prepared by the team of municipal focal points with the support of UN-Habitat and DiMSUR.

During the consultative process, all municipal sectors were involved and two local communities were consulted.

(iv) Union of Comoros

During the concept note formulation phase, a preliminary stakeholder consultation was held on 9 December 2016 with several stakeholders concerned, including representatives from government institutions, academia and civil society, in order to elicit views and opinions on the concept note.

The participants involved representatives from the Directorate General of Civil Security, the Karthala Volcanological Observatory, the NGO Ulanga Ngazidja, the National Network for Women and Development, the Comorian Red Crescent Society, the Comoros University, the National Agency for Civil Aviation and Meteorology, the Association of Mayors. The participants appreciated the relevance of the project and especially that it will be a first in the country to choose the capital for a project of this type. There was no contradictory point of view.

J. *Provide justification for funding requested, focusing on the full cost of adaptation reasoning.*

The proposed project components, outcomes and outputs fully align with national and local government/institutional priorities/gaps identified, with identified community and vulnerable groups needs and, as described in the project objectives, with the Adaptation Fund outcomes as stated in the Adaptation Fund Results Framework.

The project targets four countries over four years for a total project cost of almost US$12.5 million. Specifically, four cities/towns have been targeted for climate adaptation planning and will benefit from the implementation of pilot projects under Component 2. This concrete adaptation component will be allocated with almost two thirds of the project funds.

Funding allocation for the other, softer, components is required for preparatory purposes (Component 1), as well as producing of tools, guidelines and national scaling up (Component 3) and regional knowledge exchange and replication.

The table below provides a justification for funding requested, focusing on the full cost of adaptation reasoning, by showing the impact of AF funding compared to no funding (baseline) related to expected project outcomes.

Table 2: Overview of impact of AF funding compared to no funding (baseline) related to expected project outcomes

Outcomes under Components 1-4	Baseline (without AF)	Additional (with AF)	Comment / Alternative adaptation scenario
1. Municipal staff, communities and local stakeholders understand climate change induced risks pertaining to their city/town and have identified priority actions for climate change adaptation	Municipal staff, communities and local stakeholders have limited understanding of climate change induced risks pertaining to their city/town and have not identified concrete strategies for adaptation planning, leaving them vulnerable to future	Municipal staff, communities and local stakeholders have used the CityRAP Tool to identify climate change vulnerabilities and disaster risks and developed Resilience Frameworks for Action to address these in their respective city/town.	Without local data/information on vulnerabilities and disaster risks, as well as public participation in the planning process, adaptation measures can be implemented but would not be as effective and/or appropriate without proper

	negative impacts.		consultation and participation.
2. Municipal staff, communities and local stakeholders have implemented the identified priority actions and have acquired the capacity to manage and maintain these	Target cities/towns and their municipal staff, communities and local stakeholders are not implementing strategic physical interventions for climate change adaptation with focus on the effects of cyclones, rainfall, floods and sea level rise.	Target cities/towns have implemented strategic physical interventions for climate change adaptation, and have built the capacity to manage and maintain these, thereby increased the resilience to overall climate change vulnerability and disaster risks.	Training the local authorities and stakeholders on how to manage and maintain the physical interventions is a crucial aspect for the sustainability of the project.
3. National governments have created enabling conditions for scaling up and replicating the same approach in other urban settlements	Most municipalities in the four target countries and concerned national institutions have limited knowledge, capacity and practice for planning towards urban resilience and climate change adaptation.	The majority of the municipalities in the four countries and concerned national institutions have increased knowledge, capacity and practice for planning towards urban resilience and climate change adaptation.	Concrete experiences from local level implementation allow improving and delivering national training guidelines, thus creating the conditions for scaling up in other cities/towns.
4. Local and national governments of the four countries have learned from each other good urban climate adaptation practices and are better prepared to face common transboundary climate-related natural hazards	Throughout the region, common transboundary-related hazards exist and there is lack of strategies, capacity and practice for planning towards urban resilience and climate change adaptation.	Regional knowledge exchange on the best practices and cross-fertilisation has been facilitated, strengthening the inter-country strategies, capacity and practice for planning towards urban resilience and climate change adaptation.	Regional knowledge exchange and cross-fertilization activities constitute effective mechanisms to increase inter-country cooperation for adapting to common climate-related hazards.

K. *Describe how the sustainability of the project outcomes has been taken into account when designing the project.*

The sustainability of the project is inherently embedded in its design. The project is following the principle of sustainability mainly through the aspects of capacity building, bottom-up and participatory approach, knowledge sharing, national and regional replication and scaling up.

As mentioned in Part 1 under Project Background and Context, local governments in the target countries lack the financial and institutional capacity to effectively plan for climate change hazards. The project's capacity building efforts (see project Component 3 as described in Part 1) will strengthen the municipalities' management mechanisms to reduce their fragility in the face of climate impacts and natural hazards, hence per se have a sustainable influence on the future urban resilience of the target countries. Involvement of the respective countries' local governments and academic or training institutions in the implementation is thereby an important

element of national capacity building and critical towards the sustainability of the project's outcomes. Importantly, local capacity will also be developed to ensure the management/ maintenance of the projects' outcomes in the longer term (see project Component 2 as described in the Part 1).

As outlined in Part 1 of the concept note, project activities under Component 3 will occur at the national level to create the conditions for scaling up and replicating the CityRAP approach in other urban settlements. The CityRAP Tool will be refined and respective guidelines will serve as basis for training workshops for government and municipal officials for replication of the tool deployment in other cities/towns in the four target countries. Existing national institutions and networks (e.g. associations of municipalities) will be involved in organising and conducting the training workshops, and partnerships/synergies established with on-going initiatives at the national level. This is a critical component which will ensure greater sustainability and a lasting impact of the project.

Furthermore, the project is designed in order to achieve enhanced communication and information exchange between cities and towns in each country and across the four countries to strengthen risk reduction and resilience practices (see project Component 4 as described in Part 1). A multiplier effect and cross fertilization at the regional level is thus embedded in the project's design that caters for sustainable future exchange on urban risk reduction tools, information, strategies and best practices. Hereby the sustainability is directly linked to the institutional level and the involvement of DiMSUR as an established organisation.

Lastly, the physical interventions and capacity building components of the project will lead to long term economic, social and environmental benefits as outlined in Sections C and D in Part 2.

The overall sustainability will be further analysed during the preparation of the full project proposal.

L. *Provide an overview of the environmental and social impacts and risks identified as being relevant to the project.*

The proposed project seeks to fully align with the Adaptation Fund's Environmental and Social Policy (ESP). Outlined below is a brief description of the screening process that has been carried out to evaluate environmental and social impacts of the project, and areas where steps will be taken and where further assessment is needed during the development of the full project proposal, when the proposed activities are detailed out further.

Activities under Component 1 (Climate change adaptation planning at the town/city level), Component 3 (Tools and guidelines development and training delivery at the national level) and Component 4 (Inter-country experience sharing, cross-fertilisation and dissemination of lessons learned at the regional level) are 'soft' components of which the screening process has concluded that no environmental and social negative impacts would result.

Activities under Component 2 (Assistance with implementation and management of priority investments at the town/city level) are 'hard' activities in the sense that they relate to physical implementation. As such, some activities have the potential, without an environmental and social safeguarding system, including mitigation measures, to create negative environmental

and social impacts. The results of the screening process for activities proposed **under Component 2 solely** are outlined in the table below.

Overall, as outcome of the assessment, the 'hard' project activities falls under Category B of the Adaptation Fund's impact classification, because the potential adverse impacts that are limited and can be mitigated through a precautionary approach and a mitigation management system, after undertaking further detailed ESP studies in the course of developing the full project proposal.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	X	
Access and Equity		X
Marginalised and Vulnerable Groups		X
Human Rights	X	
Gender Equity and Women's Empowerment	X	
Core Labour Rights	X	
Indigenous Peoples	X	
Involuntary Resettlement	X	
Protection of Natural Habitats		X
Conservation of Biological Diversity		X
Climate Change	X	
Pollution Prevention and Resource Efficiency		X
Public Health	X	
Physical and Cultural Heritage		X
Lands and Soil Conservation		X

Compliance with the Law:

The final project design will be compliant with all relevant regional and national laws, especially those cited under Section F of Part 2. To ensure this, during the development of the full project proposal, relevant authorities in the four countries will be consulted to ensure that no legal issues arise and that all relevant legal requirements are met.

Access and Equity:

The project design will ensure that project activities will not reduce or prevent communities at project sites from accessing basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions and land rights. The project will respect all land rights and does not envisage to disposes anyone of their land. Where it may be necessary to do so (people living in frequently flooded areas, for example), due process will be followed in accordance with the national laws and guided by international conventions.

While it is considered unlikely at this stage, there is a possibility that the physical demarcation of areas at risk for limiting urban development, and/or the implementation of protective measures for land/sea erosion control might result in decreased access for marginalised and vulnerable groups. This aspect will be further examined through the environmental and social impact assessment. This aspect also refers to the principle outlined below.

Marginalised and vulnerable groups:

Marginalised and vulnerable groups in the four target cities/towns fall in the categories of women, female-headed households, children, youth, child-headed households, orphans, the elderly, the disabled, people living with HIV, and communities living in disaster-prone areas. The design and implementation of the sub-projects in the different cities/towns will seek to minimise the imposition of disproportionate adverse impacts on these groups and will instead seek to optimize the positive impacts to these groups.

While it is considered unlikely at this stage, there is a possibility that the physical demarcation of areas at risk for limiting urban development, and/or the implementation of protective measures for land/sea erosion control might result in decreased access for marginalised and vulnerable groups. This aspect will be further examined through the environmental and social impact assessment.

Human Rights:

As explained in section F of the concept note, at project proposal stage, and in line with UN-Habitat's Project Management Cycle and Work Flow policy, the project will further be screened for its adherence to three cross-cutting issues which are: gender, human rights and climate change. The Human Rights Officer of UN-Habitat will ensure that the project is designed to respect and adhere to the requirements of all relevant conventions on human rights.

Gender Equity and Women's Empowerment:

The project design will ensure that gender considerations are included in all project interventions, with a specific focus on activities on the ground (Components 1 and 2) as well as capacity building on the national level (Component 3). During the development of the full project proposal, the Gender Officer of UN-Habitat will be consulted to ensure that the project follows best-practice guidelines (see above on UN-Habitat's Project Management Cycle and Work Flow policy).

For instance, at the community level, the project will create employment that can contribute to women's empowerment. Gender-differentiated vulnerability analysis, focused capacity building activities of the project and participatory design of products, and gender-sensitive adoption strategies will ensure that gender equality principles are adhered to in practice during project implementation.

Core Labour Rights:

The activities under Component 2 will create employment enabling some marginalised and vulnerable groups including unemployed youth and women to access employment. The relevant national labour laws guided by the ILO labour standards will be followed throughout project implementation.

Indigenous Peoples:

As Component 2 will be implemented in cities/towns with no particular incidence to any particular indigenous group living there or in surrounding areas, this particular aspect does not seem to be of relevance in terms of further assessment for ESP compliance.

Involuntary Resettlement:

Tenure security is part of UN-Habitat's core mandate. No involuntary resettlement is foreseen. However, in the event that resettlement is necessary to protect life in case of an urban area in high risk, the due process as laid out in national and international laws will be followed. UN-Habitat has a long experience in participatory planning in high risk area in the South-East Africa sub-region, avoiding systematically involuntary resettlement.

Protection of Natural Habitats and Conservation of Biological Diversity:

While damage to natural habitats and threats to biological diversity are unlikely, there is a possibility that construction work undertaken or reforestation measures may adversely impact on local biodiversity and should be investigated during the environmental impact assessment at full proposal stage.

Climate Change:

This project is inherently an adaptation project and as such no maladaptation is foreseen. The project will not provide or install infrastructure or appliances that result in increased emissions

Pollution Prevention and Resource Efficiency:

As the project involves construction of protective measures for land/sea erosion control, an environmental and social impact assessment will have to validate whether any potential risk of pollution or wasteful use of natural resources may occur.

Public Health

No public health issues are foreseen, and improving public health is a secondary impact area of this project.

Physical and Cultural Heritage

No physical or cultural heritage impacts are foreseen, however this will have to be reviewed when the activities are being developed in more detail at full proposal stage.

Lands and Soil Conservation

The physical demarcation of areas at risk for limiting urban development (zoning) will seek to protect risk areas and critical natural habitats from urban development. Soil conservation will be enhanced through afforestation components as protective measures for land erosion control.

PART III: IMPLEMENTATION ARRANGEMENTS

A. *Describe the arrangements for project management at the regional and national level, including coordination arrangements within countries and among them. Describe how the*

potential to partner with national institutions, and when possible, national implementing entities (NIEs), has been considered, and included in the management arrangements.

B. *Describe the measures for financial and project risk management.*

C. *Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.*

D. *Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.*

E. *Include a results framework for the project proposal, including milestones, targets and indicators.*

F. *Demonstrate how the project aligns with the Results Framework of the Adaptation Fund*

Project Objective(s)[56]	**Project Objective Indicator(s)**	**Fund Outcome**	**Fund Outcome Indicator**	**Grant Amount (USD)**
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**

G. *Include a detailed budget with budget notes, broken down by country as applicable, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.*

H. *Include a disbursement schedule with time-bound milestones.*

[56] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government

Government of Malawi: Mr. Peter K. Simbani Director, Debt & Aid Management Division, Ministry of Finance	Date*: 6 January 2017*
Government of Madagascar: Ms. Jane Alice Laurette Razanamiharisoa Chef du Service Adaptation au Changement Climatique, Direction du Changement Climatique	Date*: 13 December 2016*
Government of Mozambique: Mrs. Sheila Santana Afonso Permanent Secretary Ministry of Land, Environment and Rural Development	Date*: 5 December 2016*
Government of the Union of Comoros: Colonel Ismael Mogne Daho Directeur Général de la Sécurité Civile	Date: *14 December 2016*

B. Implementing Entity certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans of Madagascar, Malawi, Mozambique and the Union of Comoros and subject to the approval by the Adaptation Fund Board, commit to implementing the project in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Rafael Tuts, Director Programme Division, UN-Habitat *Implementing Entity Coordinator*	
Date: 9 January 2017	Tel.nr: +254-20-7623726 email: rafael.tuts@unhabitat.org
Project Contact Person: *Mathias Spaliviero, Senior Human Settlements Officer, Regional Office for Africa, UN-Habitat*	
Tel. nr: + 254-20-7624716 Email: mathias.spaliviero@unhabitat.org	