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Promoting sustainable development;
addressing climate change

Southern African Climate Finance Partnership

Mozambique Country Diagnostic

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Context

Climate context

Mozambique has an area of 799,380km², and 2,700km of coastline on the Indian Ocean. Mozambique is vulnerable to changes in precipitation and temperature patterns, as well as increased intensity and frequency of extreme weather events like floods, droughts, cyclones, and rising sea levels.

Mozambique has an estimated 36 million hectares of arable land, 5 million of which are currently under cultivation. There is abundant water and favourable conditions for production of a range of agricultural goods. 18 million hectares (23% of the country's land area) is protected, and the country is rich in biodiversity, and in both natural and planted forests. There have been substantial recent discoveries of non-renewable resources, including coal and natural gas (MENTION INTEGRITY AND EASE OF BUSINESS HERE). (World Bank Group 2016)

Mozambique is located on Africa's east coast, between the latitudes of 10S and 27S. The climate is tropical with two seasons: the hot and rainy season from October to April, and the cold and dry season from May to September. Annual average rainfall varies by latitude: 800mm to 1200mm in the north; 800mm to 1000mm in the centre and coastline; and below 800mm in the south. Average annual rainfall between highs of 1500mm in the Zambezi and Lichinga Plateaux of the north, as well as the mountains of Gorongosa in the centre; and as lows of 300mm in the Pafuri District in the south (Mozambique Ministry for Coordination of Environmental Affairs 2003).

Socioeconomic context

Mozambique attained independence from Portugal in 1975, and the most recent constitution was adopted in 2004. The most recent Parliamentary elections were held in 2014, and the next are due in 2019. It has a mixed legal system of Portuguese civil law and customary law. The President is Head of State, while the Prime Minister is Head of Government. Laws are passed by the legislature, which is a unicameral Assembly consisting of 250 Members of Parliament (Nachmany et al. 2015).

Over the two decades to 2016, Mozambique maintained economic stability and accelerating GDP growth. Between the end of the civil war in 1993 and 2013, Mozambique moved from the third poorest country in the world to the thirteenth poorest. There has been modest progress in reducing overall poverty and inequality, however these have increased in some regions. Poverty is concentrated in rural areas, particularly in the central and northern regions. Most of the population is engaged in low-productivity subsistence agriculture and household enterprises (sole proprietorships with no paid employees). High fertility rates and declining infant mortality have contributed to a rising youth population. (World Bank Group 2016).

According to the 2007 Census, the population was 20.6 million. At an estimated growth rate of 2.4 per cent per annum, the population is estimated to reach 36 million by 2030. The population is largely dependent on agriculture, which is the main land use, and occupies 80% of the labour force, contributing 40% to GDP (Mozambique Ministry for Coordination of Environmental Affairs 2003).

GHG emissions per capita are 2.06tn CO₂eq. Total national emissions are 0.066% of the global total. Although is a net exporter of electricity, only 20.2% of the local population has electricity access. Excluding the electricity market, the 2011 energy mix was 78% biomass, 13% hydropower, and 7% oil. 99.9% of installed electricity capacity is hydropower, with 0.1% from fossil fuels. However, significant natural gas discoveries were made in 2010, and in 2012 Mozambique became the second-largest coal producer in Africa. Construction of the country's first coal-fired power plant was scheduled for 2015 (Nachmany et al. 2015).

The effects of climate change are expected to reduce Mozambique's national welfare by US\$2-7 billion for the period covering 2003 to 2050. This is equivalent to an annual loss of US\$600 million to US\$1.2 billion per year until 2030. The most substantial causes of these losses are through infrastructure (mainly roads due to floods), and agriculture (being affected by drought) (The World Bank 2010).



Intended Nationally Determined Contribution

The Ministry of Land, Environment and Rural Development (MITADER) submitted Mozambique's Intended Nationally Determined Contribution (INDC) in 2015 (Mozambique Ministerio da Terra Ambiente e Desenvolvimento Rural 2015). As of March 2017, it has not yet been converted to a Nationally Determined Contribution (NDC).

Mozambique's Government has put in place a legal and institutional framework to achieve the goals outlined in the National Climate Change Adaptation and Mitigation Strategy (NCCAMS). However, it is necessary to mobilise – at the national and international level – the financial and technological resources needed to strengthen the national technical and institutional capacities.

Based on the policy actions and programmes outlined in the INDC, Mozambique estimates a total reduction of 76.5Mt CO₂eq during 2020-2030. These estimates will be updated from the BUR, to be available in early 2018. The implementation of any proposed reduction is conditional on access to finance, technology, and capacity building from the international community. The presently identified actions relate to:

- Energy: electricity production, transport, residential, commercial, institutional
- Land use, land use change and forestry (REDD+)
- Waste: solid waste disposal and treatment

In addition to those listed above, there are potential actions in other sectors including industry, agriculture, and other energy sub-sectors. Adaptation is included in Mozambique's INDC, to communicate its present and future climate vulnerability, and the effort of Government and its partners to create the national capacity required.



Policy and planning documents

National Communications to the UNFCCC

The Ministry for Coordination of Environmental Affairs submitted Mozambique's Initial National Communication (INC) to the UNFCCC in 2003 (Mozambique Ministry for Coordination of Environmental Affairs 2003). The INC identifies seven sectors vulnerable to climate change: agriculture; forests and pastures; livestock; water resources; coastal areas and resources; infrastructure; and health and fishing. Specific adaptation measures include the following:

- Strengthen socioeconomic development, closely dependent on the integration of environmental issues with development efforts; and
- Implement sustainable management of the country resources, in a multisectoral context, with harmonisation of plans and programmes, and the involvement of all stakeholders implicated in the exploration and utilisation of natural resources.

National Climate Change Adaptation and Mitigation Strategy (NCCAMS)

Mozambique's first NCCAMS was produced in 2012 by the Inter-Institutional Group on Climate Change (GIIMC), representing several sectoral ministries, the private sector, and civil society, under the coordination of the Ministry of Coordination of Environmental Affairs (MICOA). It covers the period 2013-2025, and includes an action plan for 2013-2014. The NCCAMS highlights the following as national priorities (Mozambique Ministério da Coordenação da Acção Ambiental 2012):

- Increased resilience in communities and the national economy, including reduction of climate risks; and
- Promotion of low-carbon development and the green economy through the integration and mitigation in sectoral and local planning.

The NCCAMS has a focus on local adaptation plans, land-use planning, raising public awareness, establishing a climate change knowledge centre and developing climate change indicators for a monitoring and evaluation framework (UNDP 2017).

The following are potential measures identified in the NCCAMS:

- Adaptation and climate risk reduction:
 - Strengthen early warning systems
 - Increase capacity to prepare responses to climate risks
 - Increase capacity to manage water resources
 - Increase access and capacity to capture, store, treat, and distribute water
 - Increase resilience of agriculture and livestock
 - Increase resilience of fisheries
 - Guarantee adequate food security and nutrition
 - Increase adaptive capacity of vulnerable people
 - Reduce human vulnerability to climate change related vector-borne diseases
 - Promote mechanisms for planting trees, and establish forests for local use
 - Develop resilience mechanisms for urban areas and other settlements
 - Reduce climate change impacts through appropriate development of tourist zones and coastal zones
- Mitigation and low-carbon:
 - Improve access to renewable energy
 - Increase energy efficiency
 - Guarantee development of regulations dealing with emissions from extractive industries
 - Promote low-carbon urbanisation
 - Control emissions from industrial processes, including solid waste and wastewater
 - Develop low-carbon agricultural practices
 - Reduce deforestation and wildfire occurrence
 - Plan and manage biodiversity and coastal ecosystems
- Cross-cutting:
 - Align current legal framework with NCCAMS

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- Align current institutional framework with NCCAMS
 - Develop research on climate change
 - Strengthen institutions' systematic data collection on inputs to GHG inventories and NCs
 - Develop knowledge and capacity to act on climate change
 - Promote transfer and adoption of clean and climate change resilient technologies

An evaluation has shown that goals were not achieved by 2014, so the short-term first phase has been pushed back to 2019, and the medium- and long-term goals have been adjusted to 2025 and 2030, respectively. From 2020 to 2050, the country intends to increase resilience at the provincial level and integrate it into provincial planning, and from 2026 to 2030 to do the same at national level. INDC implementation will require operationalising the NCCAMS implementation mechanisms – the Knowledge Management Centre, and National Climate Change Network, and the Financial Mechanism.

The NCCAMS notes that coordination of finance will be undertaken by the National Environment Fund (FUNAB) with funds sourced from the state budget, multilateral environmental agreements, bilateral accords, and other resources mobilised by the private sector and civil society. It notes that the possibility of creating a climate change related common fund, and gathering funds through social corporations and individuals, would be evaluated.

The NCCAMS notes that climate change knowledge would be managed by the Centre for Management of Climate Change Knowledge (CGCMC), to be created in the Ministry of Science and Technology's (MCT's) Academy of Sciences (Mozambique Ministério da Coordenação da Acção Ambiental 2012).

The first NCCAMS (2013-2014) action plan is being updated (2015-2019); in this plan, adaptation will be included as the National Adaptation Plan (NAP). As before, the goal is to increase local resilience, fight poverty, and identify opportunities for adaptation and low-carbon development at community level, through its mainstreaming into district planning and budgeting.

National Adaptation Plan (NAP)

The following strategic actions are to be included in the NAP:

- Reduce climate risks by strengthening the early warning system, and the capacity to prepare for and respond to climate risks;
- Improve the capacity for integrated water resource management, including climate resilient hydraulic infrastructures;
- Increase the effectiveness of land-use and spatial planning (protect areas vulnerable to floods, such as floodplains and coastal areas);
- Increase the resilience of agriculture, livestock, and fisheries to guarantee adequate levels of food security and nutrition;
- Increase the adaptive capacity of the most vulnerable groups;
- Reduce vulnerability to diseases related to climate change;
- Ensure protection of biodiversity;
- Reduced soil degradation, and promote mechanisms to plant trees for local use;
- Develop climate resilience mechanisms for infrastructure, urban areas, and other human settlements;
- Align the legal and institutional framework with the NCCAMS;
- Strengthen research and systematic observation institutions for the collection of data related to vulnerability assessment and adaptation to climate change;
- Develop knowledge and capacity to act on climate change; and
- Promote the transfer and adoption of climate change resilient technologies.



National Adaptation Programme of Action (NAPA)

The Ministry for the Coordination of Environmental Affairs (MICOA) produced Mozambique's NAPA in 2007. The NAPA includes summaries of four initiatives, as listed in the table below (MICOA 2007).

	Priority project title	Indicative cost (US\$)
1	Strengthening of early warning system	2,700,000
2	Strengthening of capacities of agricultural producers to deal with climate change	2,500,000
3	Reduction of the impact of climate change in coastal zones	2,000,000
4	Management of water resources under the framework of climate change	2,000,000

Other documents

Mozambique officially launched its National Adaptation Planning process in December 2016, as part of the preparation to update its NDC. The roadmap builds on national adaptation efforts including work to strengthen early warning systems, building capacity for agricultural producers to cope with climate change, reduce the impacts of climate change on coastal zones, and improve management of water resources (UNDP 2017).

Mozambique is participating in the Second Phase of the Technology Needs Assessment (TNA) Project covering: energy and waste; agriculture; and coastal zones, including infrastructure. This process will be concluded by the end of 2017, and result in a Technological Action Plan identifying financial and capacity building needs in these sectors.

The Initial National Communication (INC) was informed by:

- National Environment Policy
- Energy Policy
- National Environment Management Program
- National Land Policy and its Implementation Strategies
- National Policy and Strategy for Forests and Wild Life
- Environment Law and Framework
- Legislation on Investments
- Mines Law
- Petrol Law
- Transport Law

The NAPA was informed by:

- Summary of information on the Adverse Effects of Climate Change in Mozambique
- Adaptation Measures to Climate Change
- Participative Evaluation Report and other programmes
- Strategies and national and sectoral plans relevant to the NAPA process, such as the government's five-year plan (2005-2009) and the PARPA

Other relevant documents include:

- Studies about climate change elaborated by the Instituto Nacional de Gestao das Calamidades (INGC)
- Energy Strategy (being updated to be approved by 2016)
- Biofuel Policy and Strategy
- New and Renewable Energy Development Strategy (2011 to 2025)
- Conservation and Sustainable Use of the Energy from Biomass Energy Strategy (2014 to 2025)
- Master Plan for Natural Gas (2014 to 2030)
- Renewable Energy Feed-in Tariff Regulation (REFIT)
- Mozambique's Integrated Urban Solid Waste Management Strategy (2013 to 2025)
- National REDD+ Strategy (in preparation to be approved in 2016)
- Renewable Energy Atlas for Mozambique
- Project to build and manage two solid waste landfills with the recovery of methane
- Project of urban mobility in the Municipality of Maputo



Relevant legislation includes (Nachmany et al. 2015):

- Legislative
 - Law 15/2014 Established the Framework for Disaster Management, Including Prevention and Mitigation (2014)
- Executive
 - Decree 70/2013 Regulating Procedures for Project Approval for the Reduction of Emissions from Deforestation and Forest Degradation (REDD+) (2013)
 - 2013-2025 National Strategy for Climate Change (ENMC) (2012)
 - Decree No. 28/2011 Regulating Biofuels and their Mixtures (2011)
 - Presidential Decree No.7/2011 Creating the Inter-ministerial Commission of Biofuels (2011)
 - Strategy for New and Renewable Development (2011-2025)
 - Ministerial Decree 277/2009 Approving the Rules of the National Directorate of New and Renewable Energy (2009)
 - Policy on the Development of New and Renewable Energy (Resolution 62/2009) (2009)
 - Resolution No.10/2009 Approving the New Policy on Energy (2009)
 - National Biofuels Policy and Strategy (2009)
 - National Environmental Policy (1995)



Climate finance stakeholders

Ministry of Energy, Mining, and Environment

The Ministry of Energy, Mining, and Environment is the NDA to the GCF; and Mrs Sonia Jacques Gherson da Silveira is the FP to the GCF.

Ministry of Land, Environment, and Rural Development (MITADER)

MITADER submitted Mozambique's NDC to the UNFCCC. In February 2017, MITADER hosted a three-day training session in Maputo, to connect national stakeholders and build a roadmap for a National Adaptation Plan. 28 participants from the Inter-Institutional Group for Climate Change (GIIMC) participated in the training, representing the sectors of agriculture, economy and finance, forestry, water resources, meteorology, environment, energy, and disaster management (UNDP 2017).

National Climate Change Network

INDC implementation requires an assessment of the capacity needs of the National Climate Change Network. The operationalisation of the Network is an ongoing process, which includes the assessment of existing institutional and technical capacities and their needs for the implementation of the NCCAMS to formulate and implement the Capacity Building Plan.

National System to Monitor and Evaluate Climate Change

The Government has approved this System, which will be used for MRV on adaptation actions. The System includes the National Greenhouse Gases Inventory System (SNIGEE). The System is currently being tested, and will be functioning by 2020.

Internal conflict over 15 years destroyed substantial observation infrastructure, compromising the capacity to systematically observe the parameters of the climate system. Mozambique requires assistance to strengthen observation systems and to develop human and institutional capacity for scientific, technological, and socioeconomic research (Mozambique Ministry for Coordination of Environmental Affairs 2003).

World Bank Group (WBG)

Mozambique is implementing the Climate Investment Funds' (CIFs) PPCR, which supports institutional and policy reform, funding of pilot projects (roads, agriculture, early warning systems, coastal cities, and irrigation), and knowledge management. In addition to the PPCR, the WBG is funding actions in water resource sectors and conservation areas.

Other institutions

Other relevant institutions include: The Knowledge Management Centre, hosted by the Science Academy of Mozambique; Inter-Institutional Group on Climate Change (GIIMC); Technical Council of the National Council for Sustainable Development (CONDES); and Climate Change Unit.

Other sources of climate finance accessed by Mozambique include: Least Developed Countries Fund (LDCF); Programme of Support to the Environmental Sector supported by DANIDA and the European Commission (Ireland) (PASA); African Development Bank (AfDB); JICA; USAID; and Portuguese Carbon Fund.



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