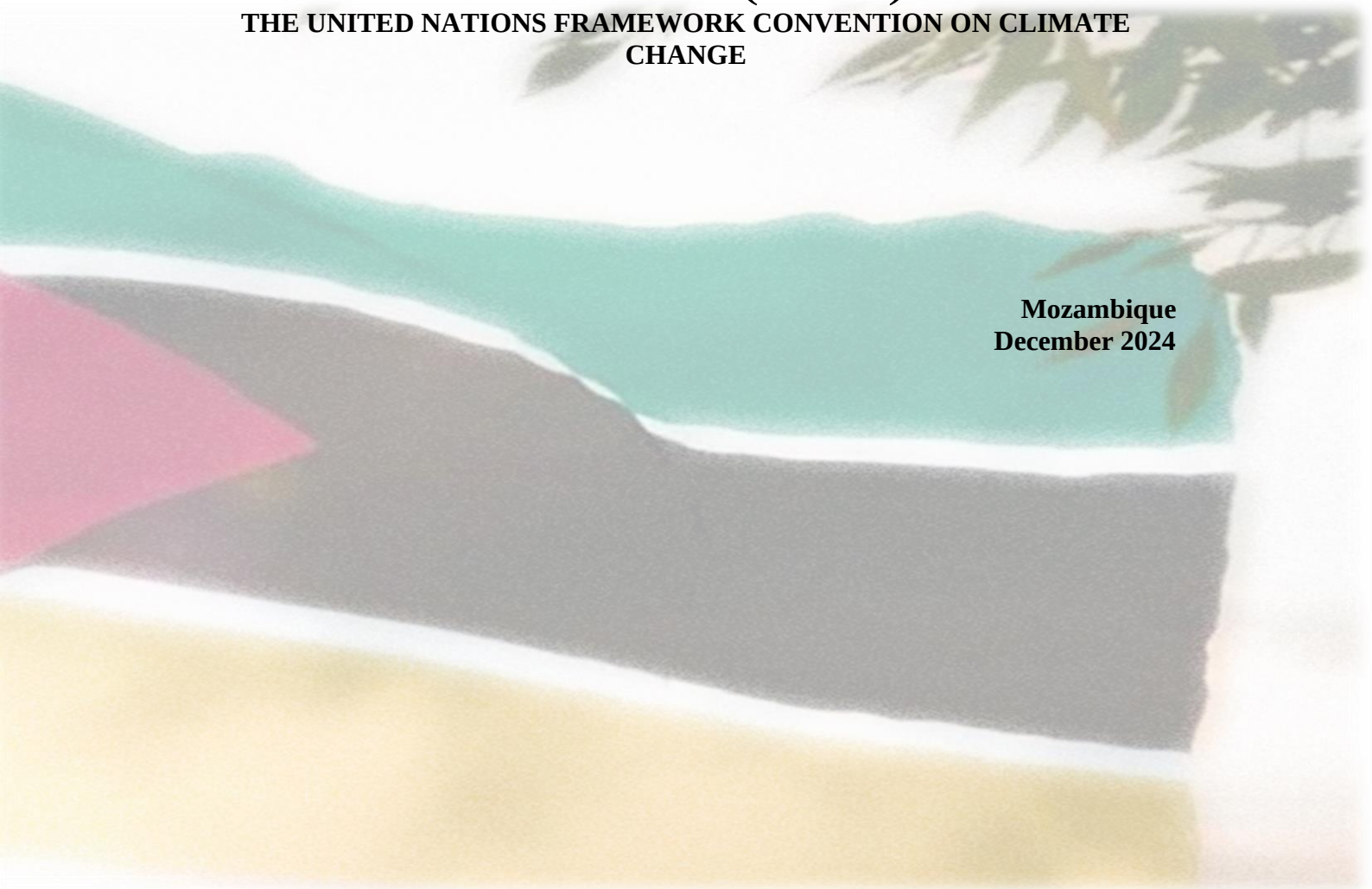
REPUBLIC OF MOZAMBIQUE

MINISTRY OF LAND AND ENVIRONMENT

SECOND BIENNIAL UPDATE REPORT (BUR)

THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE



Mozambique
December 2024

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PREFACE

The impacts of climate change in Mozambique are increasingly evident at national and local levels. Cyclones Idai, Kenneth and Filipo, as well as cyclical droughts and floods, are evidence of the impacts of climate change that several studies have predicted, namely the increase in the frequency and intensity of extreme weather events. The occurrence of these events resulted in several losses, including the destruction of infrastructure, reduction of agricultural income, alteration of river flows, and loss of human life. These negative impacts are felt at all levels, affecting communities in rural and urban areas, ecosystems, and the national economy.

It is in this context that the United Nations Framework Convention on Climate Change, to which Mozambique is a signatory, has urged Parties to report on the observed climate phenomena, the direct and indirect impacts, and on measures taken to mitigate and adapt to climate change. Hence, Parties are required to submit their greenhouse gas inventories and state the measures that are taken to reduce emissions or increase the removal of greenhouse gases from the atmosphere.

I am pleased to submit one more Biennial Update Report of Mozambique. This document is the Second Biennial Update Report of Mozambique (SBURM) that was elaborated following the guidelines for the preparation of the Biennial Update Report of the Parties not included in Annex I of the Convention, established in Annex III of Decision 2/CP.17. The BUR is a report containing updates of national greenhouse gas (GHG) inventories, information on mitigation actions, needs and support received. This document describes the response to the additional requirements of the guidelines for the preparation of the BUR.

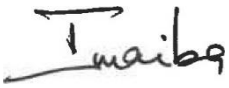
In addition to the information on national circumstances, this SBUR of Mozambique updates the estimate of greenhouse gas emissions and removals presented in the Second National Communication (1990-2016) and estimates the emissions and removals that occurred between 2017 and 2020. This SBUR estimated the emissions of all sectors of the GHG inventory, as per the guidelines of the Intergovernmental Panel on Climate Change (IPCC) Guidelines for Inventory, including Energy (which comprises of production and use in the national sector, industry, transport and agriculture), the use of

industrial products and processes (including the entire manufacturing industry), Agriculture (including crop and livestock production), Land Use, Land Use Change and Forestry (LULUCF), and Waste (embracing solid waste and municipal and industrial wastewater).

On the other hand, Mozambique's SBUR also presents ongoing and planned mitigation actions, including their effects. It describes the National Monitoring and Evaluation System, including the Measurement, Reporting, and Verification System (MRV) for Monitoring and Evaluation of Climate Change actions, as well as the support received and needed. Moreover, it provides information on the constraints and gaps encountered in the implementation of the country's climate policy and the barriers encountered specifically during the preparation of this document, including the proposed actions to improve the upcoming reports.

The exercise of data collection of GHG emissions and removal, as well as the potential for emission reduction and increased removal, have also helped the country and sectors become more aware of the environmental quality situation, as well as the need for systematic recording and information sharing. However, the country recognizes that there is still a long way to go and that there are many points to improve in the next reports to be presented.

Mozambique is aware of the path to transition to the Enhanced Transparency Framework under the Paris Agreement, and has already started discussions internally, as well as with key climate and cooperation partners, to drive this journey, ahead of the first Biennial Transparency Report under the Paris Agreement.



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Briefing Note:

This document constitutes the Second Biennial Update Report (SBUR) of Mozambique. It has been prepared following the guidelines for the Biennial Update Report for Parties not included in Annex I of the Convention, contained in Annex III of decision 2/CP.17.

This report is an update of the information contained in country's Second National Communication and first BUR. To avoid repetition of information, where relevant, references are made to the information included in the Second National Communication, notably when updates are not being presented.

Contents

SECTION 1: NATIONAL CIRCUMSTANCES

1.1 Geographical Profile

Mozambique is located on the southeast coast of the African continent. The country has an area of 801,590 km^2 of dry land and about 13,000 km^2 of inland water surface. It is bathed by the Indian Ocean to the east, separated from Madagascar by the Mozambique Channel, with an extension of coastline of approximately 2,700 km. In its northern part, it is bordered by Tanzania; to the northwest by Zambia, Malawi, Lake Niassa; Zimbabwe to the west; South Africa in the Southeast; and to the south by E-Eswatini (Figure 1.1).

The country is divided into 11 provinces, divided into 154 districts. The districts are divided into 419 local administrative districts, called Administrative Posts. The latter are composed of 1,052 localities, the lowest level of the administrative configuration of the Mozambican state. In addition to the subdivisions reported above, there are 65 municipal authorities, of which 33 were created in 1998, 10 in 2008, 10 in 2013 and 12 more in 2023.

Along the approximately 2,700 km of coastline there are numerous islands, including the Quirimbas archipelago in Cabo Delgado province, the Island of Mozambique and the Goa and Sena islands in Nampula province, the Bazaruto archipelago in Inhambane, the islands of Inhaca, Portugueses and Xefina in Maputo province.

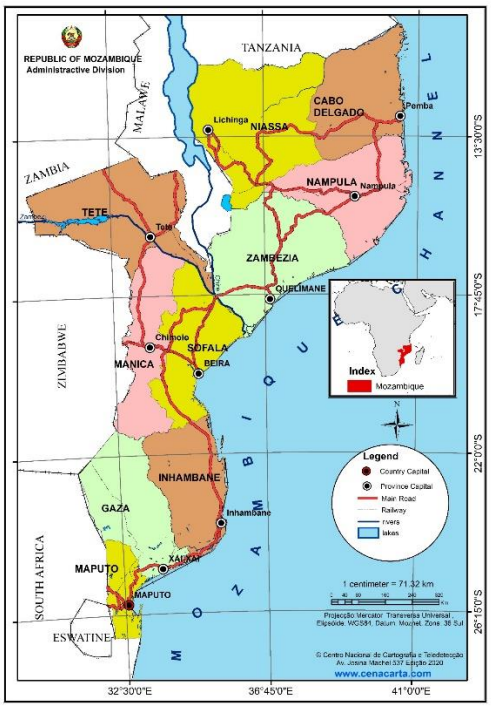

Figure 1.1 Map of geographical location of Mozambique with proper administrative division by provinces

1.2 Demography

Projections made by National Institute of Statistics (INE) of Mozambique, based on the census of 2017 indicates that Mozambican population was about 32.420.000 inhabitants in 2023, (INE 2024), with about 52% women and 48% men, Figure 1.2. About 35% of population live in urban area and the rest in rural area. The distribution by age group is about 45% between 0-14 years, 52% from 15-64 years and 3% for those over 64 years, Figure1.3.

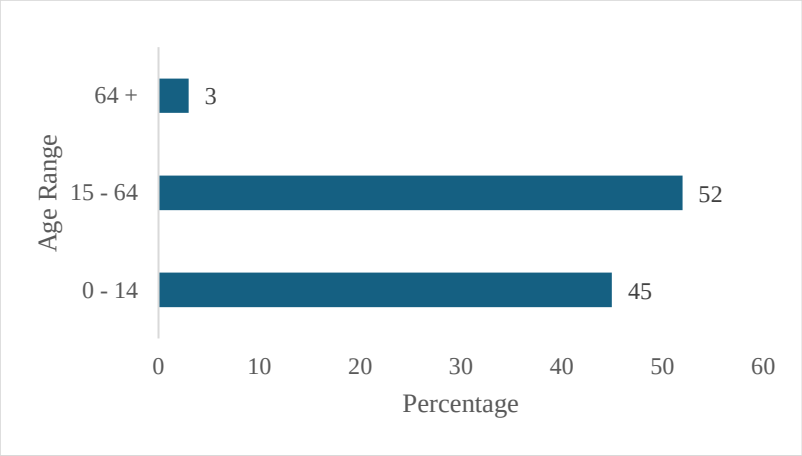

Figure1.2. Age structure of the population (INE, 2017 census)

Mozambique has experienced significant population growth with an average annual rate of 2.4% over the last ten years. Between 2007 and 2017, the year of the last census, there was a growth of 8.4 million inhabitants, compared to 4.4 million between 1997 and 2007. According to projections, the Mozambican population could exceed 50 million inhabitants by 2050. These data show how the demographic issue will play a very important role in planning the socio-economic development of the country and the potential challenges for the management of natural resources that are the main source of income for most of the population.

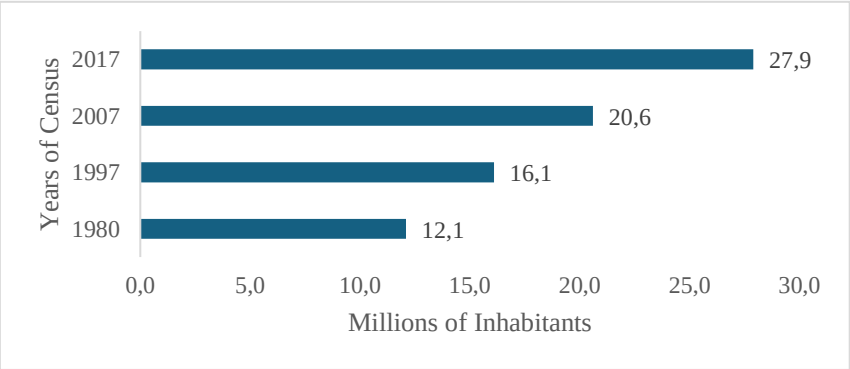

Figure 1.3. Population growth between 1980 – 2017.
(Source:http://www.ine.gov.mz/estatisticas/estatisticas-demograficas-e-indicadores-sociais/populacao)

1.3 Economy

Agriculture sector is the main source of employment and income for most of Mozambican population. Data from the Integrated Agriculture Survey done by the Agriculture Research Institute in 2020, administered by the Ministry of Agriculture and Rural Development (MADER acronym in Portuguese of "Ministério da Agricultura e Desenvolvimento Rural"), indicate that the majority of the population that depend on agriculture, about 97.8%, operate small farms. On the other hand, data from the Household Budget Survey done in 2020 by INE, show that 65.9% of the heads of households are linked to the Agriculture Sector.

The percentage of heads of households engaged in the Agriculture Sector is considerably higher in rural areas than in urban areas (82.3% against 31.6%). In the same period, 90.2% of adult women engaged in agricultural activity compared to 85.4% of adult men. On the other hand, the youth population (18 to 35 years old) grew at a higher annual rate in urban areas (4.0%) than in rural areas (2.5%). This rapid growth of the young population constitutes a great potential for the productive workforce that is required, and the Agriculture Sector is an alternative work in rural areas. The contribution of Agriculture Sector to the total GDP, in the period between 2014 and 2021, 80.6% came from crop production, 6.7% from forestry production, 6.5% from livestock production and 6.2% from fishing production. (PEDSA, 2030)

The Mozambican economy, after several years of growth of around 7% per year, has slowed down since 2016, due to several international and national factors Table 1.1. Additionally, the GDP growth reached -1.2 % in 2021, and there was a good environment for agricultural growth.

Table 1.1 Evolution of Economic Indicators, 1990-2020

Indicator	1990	1995	2000	2005	2010	2015	2020
Real growth of the GDP (%)	1.0	2.1	0.8	6.4	6.7	7.7	-1.2
Inflation (%)	43.7	47.7	12.7	8.4	12.4	3.6	3.1
GDP *per capita* (USD)	271.7	197.7	334.8	432.7	485.0	599.4	456.6

Source: Adapted from IMF World Economic Outlook (WEO)

The national economy has considerable potential in the primary sector, driven by the existence of natural resources, however, the main challenge is the development of industries that allow a sustainable exploitation and transformation of these resources. The diversification of the national economy is also a challenge for more stable, comprehensive and sustainable growth.

1.4 Climate

According to the Köppen-Geiger classification, the climate of Mozambique is generally of the Aw type (tropical wet) and with pockets of BSh (hot semi-arid climate), with two very distinct seasons; one hot and rainy, from October to April, and the other cold and dry, from May to September (Gelcer *et al*. 2018). Other manifestations of climates of the As, Cfa and Cwa types can be found in isolation (Figure 1.4).

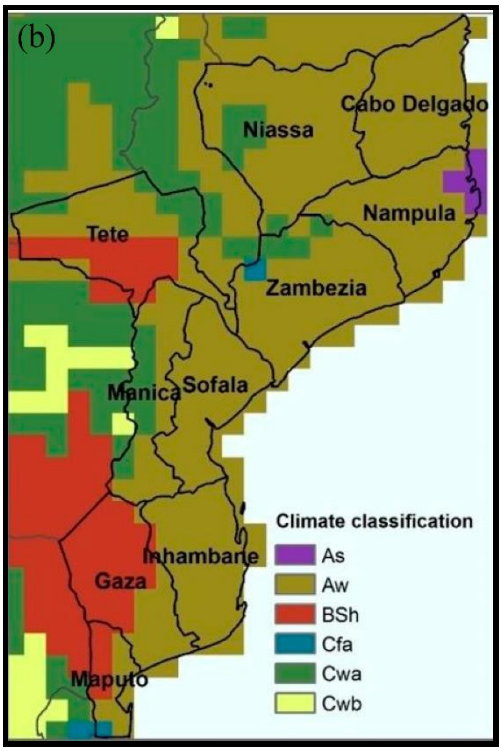

Figure 1.4. Climate of Mozambique, according to the Köppen-Geiger classification. As = rainy tropical climate; Aw = tropical wet climate; BSh = hot semi-arid climate; Cfa = warm and humid temperate climate; Cwa = warm temperate climate with dry winter. Source: Gelcer *et al*. (2018).

Precipitation

The spatial distribution of precipitation is very variable throughout the country. Rainfall is most abundant in the north of the country, where the annual average varies between 800 and 1200mm, making it exceptionally high, 1700 mm, in the highlands of Zambezia, Niassa and mountainous areas of Gorongosa. The center of the country and the entire coastline receive amounts of rain ranging between 800 and 1000 mm. However, in some regions of Tete province, rainfall values decrease by up to 600 mm. Southern Mozambique is generally drier, with an average rainfall of less than 800 mm, reaching 300 mm in the administrative post of

Pafuri, in Gaza province, Figure 1.5. Spatial distribution of accumulated annual precipitation in Mozambique (Source: Mozambique precipitation atlas, INAM, 2012) .

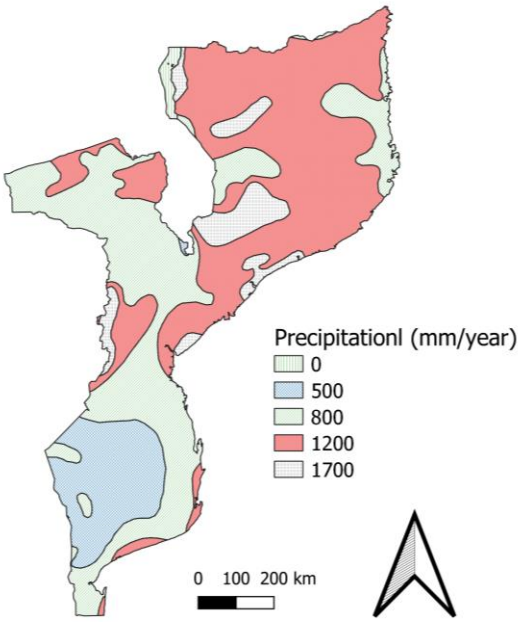

Figure 1.5. Spatial distribution of accumulated annual precipitation in Mozambique (Source: Mozambique precipitation atlas, INAM, 2012)

Average temperature

In general, average temperatures in Mozambique range between 25 – 30°C (average maximum temperatures) and between 15 – 21°C (average minimum temperatures), Figure 1.6.

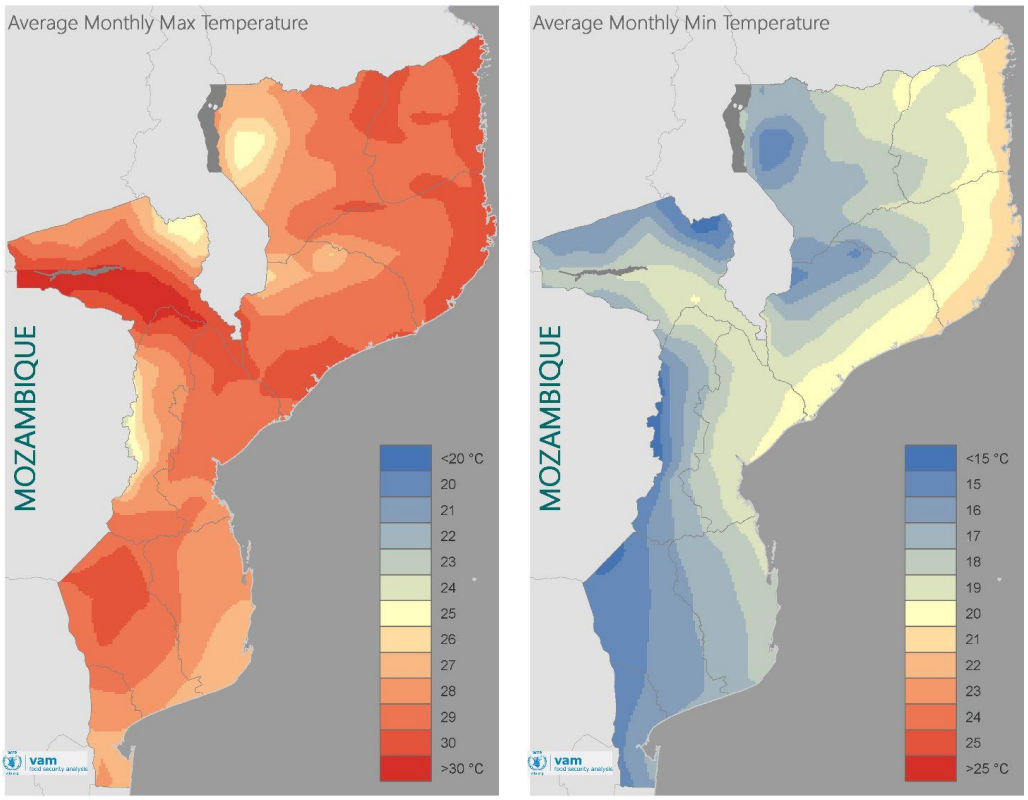

Figure 1.6. Spatial distribution of the average maximum temperature (left) and average minimum temperature in Mozambique, calculated for the period 1982 - 2017. Source: WFP, 2018. Mozambique Climate Analysis.

Historical Temperature and Precipitation Trends

Trends in average temperatures show positive variations (increase in average temperature) in most of the country. Studies indicate that the average annual temperature increased by 0.6°C between 1960 – 2006, at an average rate of 0.13°C per decade for most seasons (INGC, 2009). The study also points to an increase in the frequency of hot days and nights (days with a maximum temperature > 30 ºC and nights with a minimum temperature > 20 ºC, respectively). The average number of "hot" days per year in Mozambique increased by 6.8% of days (~25 days) and the average number of "hot" nights per year increased by 8.4% of nights (~31 nights) during the same period under review (1960 and 2006).

Rainfall trends in Mozambique are not expressively observable, due to the large interannual variability of rainfall in different seasons. However, the analysis of historical data carried out in several studies points to a late start of the rainy season in Mozambique, as well as an increase in the persistence of dry days. The INGC report (2009), analysing data between 1960 and 2006, indicates a delay at the beginning of the rainy season that reaches between 20 and 45 days in

some places, as well as a more pronounced persistence of dry days in the Northeast of the country from March to May and September to November.

Between 1960 and 2006, the average annual rainfall in Mozambique decreased at an average rate of 3.1% per decade for the period under review, Mcsweeney *et al*. (2010). On the other hand, despite the observed decreases in total rainfall, the amount of rain falling during heavy rainfall events increased at an average rate of 2.6% per decade, with these increases being most pronounced in the December-February period (DJF).

SECTION 2: INSTITUTIONAL ARRANGEMENTS

2.1 Structure of Institutional Arrangements

Mozambique has developed several proposals for institutional arrangements and information sharing systems for the preparation of reports on climate change, including the national System for Monitoring and Evaluation of Climate Change, in 2014, and the National Greenhouse Gas Inventory System, in 2013. However, these systems were not implemented effectively, and the climate change reports have been prepared by independent consultants. This situation limits participation of public officials, data providers; thus, not having allowed the proper establishment of a system for data collection, processing and documentation that builds trust among participants, required for continuous improvement of the reports. Whenever a report is drawn up, the consultant uses letters addressed and visits to the institution to collect data and information.

A Roadmap for the Establishment of a National MRV System of Climate Change Actions in Mozambique, developed by the Ministry of Land and Environment with the support of ICAT, pointed to the need for the establishment of a robust institutional arrangement for Mozambique. In 2020 and 2021, Mozambique, through the National Directorate of Climate Change, also with the support of ICAT developed a proposal for (1) Robust Institutional Arrangement and (2) Strengthened Transparency Framework, in separate documents that together constitute the National MRV System to respond to transparency needs under the Paris Agreement, Figures 2.1 and 2.2.

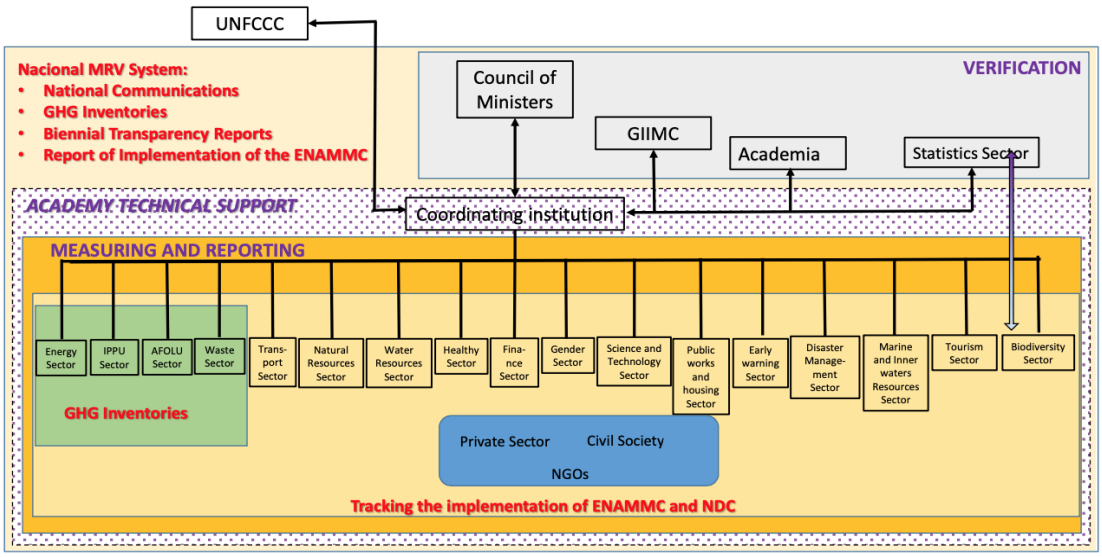

Figure 2.1 Institutional arrangement for Mozambique's national MRV system

2.2 Enhanced transparency Framework for Mozambique

The other tool associated to the MRV System proposed with ICAT Support is the strengthened transparency framework, based institutional arrangement for Mozambique's national MRV system, that defines the reports that Mozambique will prepare in the context of climate change, both to respond to national interests and the Convention, Figure 2-2. Additionally, this framework describes the process for preparation of reports, from the source of information, guidelines used, verification process and publication.

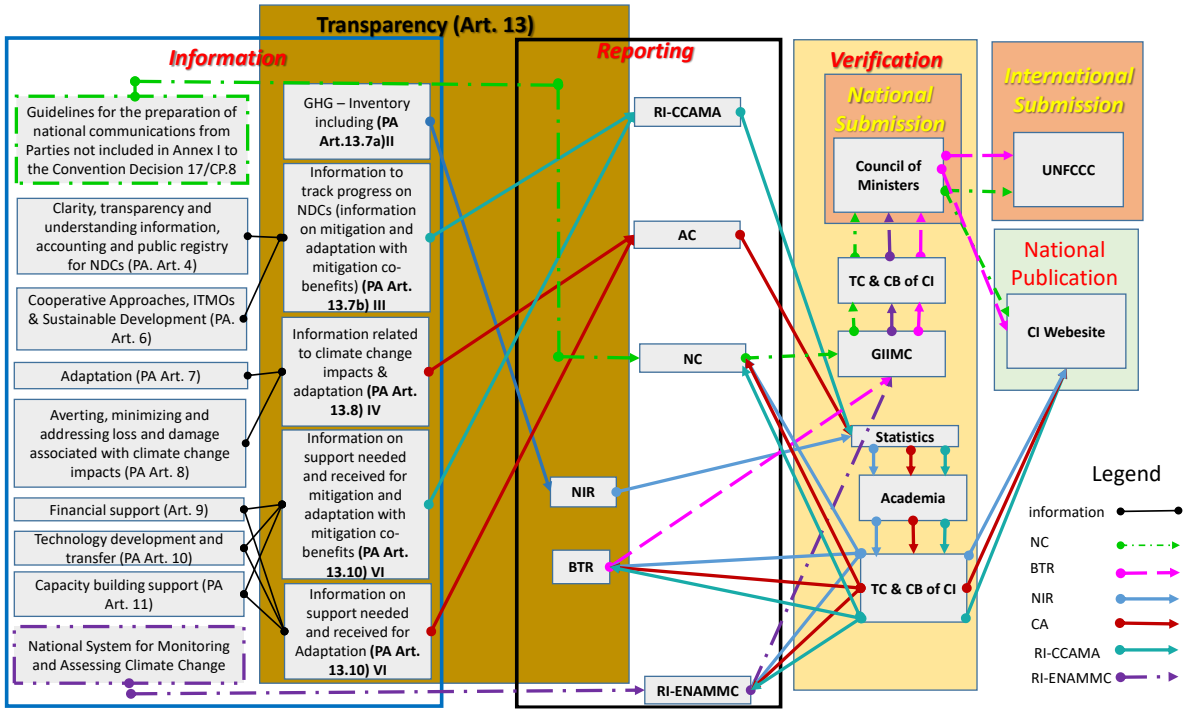

Figure 2.2 Mozambique's Strengthened Transparency Framework

The participation of sectors for preparation of the current BUR was improved. Part of data was collected using letters addressed to the institutions, particularly information on mitigation. However, the National Greenhouse Gas Inventory Report, the information was collected using hybrid system, the letters addressed to the institutions and the channels of the MRV System proposed under ICAT support.

The BUR, including the GHG inventory is prepared under the coordination of the National Directorate of Climate Change, of the Ministry of Land and Environment, as focal point for the UNFCCC. This Directorate has, among others, the responsibility of coordinating the preparation of climate change reports that respond to the national reporting needs and the commitments made when ratifying the Convention.

During the preparation of current BUR, it was possible to identify limitations that need to be observed during the process of effective implementation of the national MRV system, such as the selection of technicians from the national MRV system and the need of allocating resources for data collection in the sectors.

Mozambique's strengthened transparency framework is expected to be tested during preparation of the initial BTR and third National Communication. To ensure itis fully implemented, an Implementation Plan is being prepared that will include timeline, and the resources needed.

SECTION 3: GREENHOUSE GAS INVENTORY

The preparation for the National Inventory of Greenhouse Gas (GHG) Emissions, hereafter referred to as the Inventory, is in accordance with the guidelines for the preparation of National Communications of non-Annex I Parties to the Convention, established by Decision 17/CP.8.

The methodological approaches and guidelines used in the preparation of the National Inventory of GHG Emissions are based on the "2006 IPCC Guidelines for National Greenhouse Gas Inventories", "Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Emission Inventories" - 2000 Good Practice Guidance, and "Good Practice Guidance for Land Use, Land Use Change and Forestry" - 2003 Good Practice Guidance.

A detailed GHG Inventory report is submitted as an annex to the current BUR. However, a general and sectorial summary of GHG emissions and removals are presented as follow.

3.1 Analysis of Greenhouse Gas Emissions Trend by Sector

Estimated total anthropogenic GHG emissions for the last year of inventory (2020) of Mozambique are about 30.600,00 Gg of CO_2eq, excluding LULUCF and 91.300,00 Gg of CO_2eq, including LULUCF. The overall emissions were negative before 2003, however, in 2003 emissions turned positive and grew significantly, Figure 3.1. The reported emissions are explained by increasing deforestation, use of charcoal for energy production, population growth, changes in animal production, and development of domestic industry.

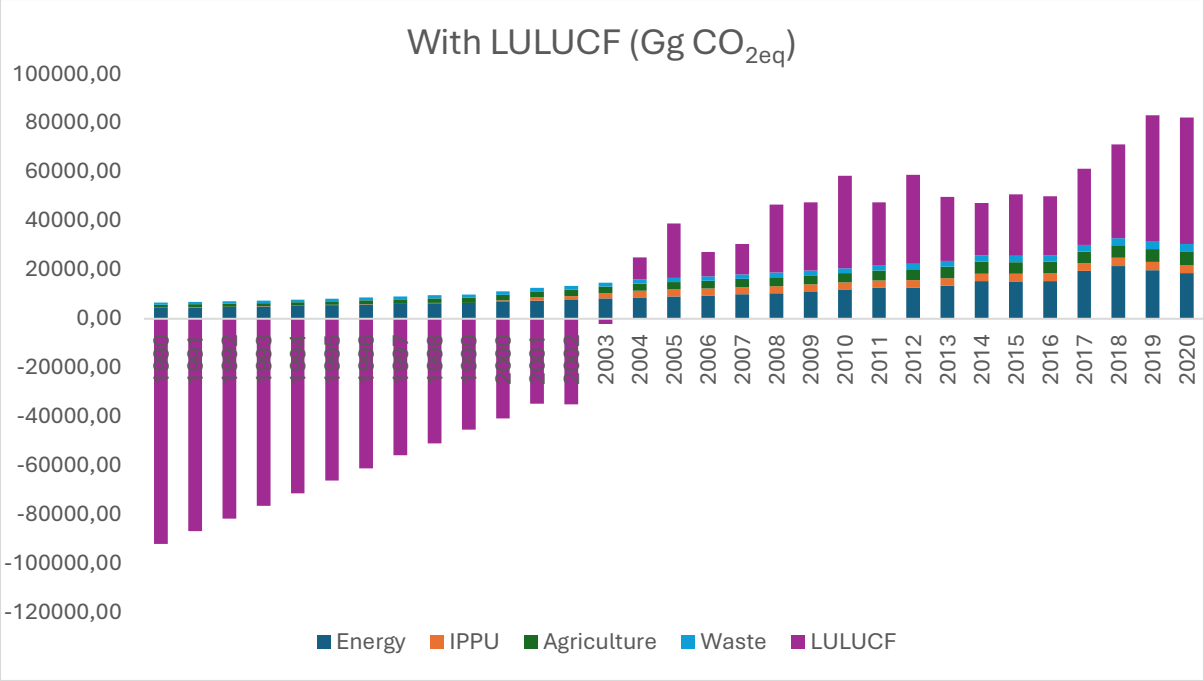

Figure 3.1 Trend of national GHG emissions by sector, including LULUCF

The analysis of national GHG emissions excluding LULUCF indicate that the energy sector is the largest contributor, followed by agriculture sector, and lastly IPPU and waste that have almost similar contribution, Figure 3.2. The IPPU sector had a negligible contribution before the year 2000, however with the establishment of the aluminium plant in 2000, it started to have a significant contribution. Coal mining also contributed to the increasing of emissions of IPPU sector.

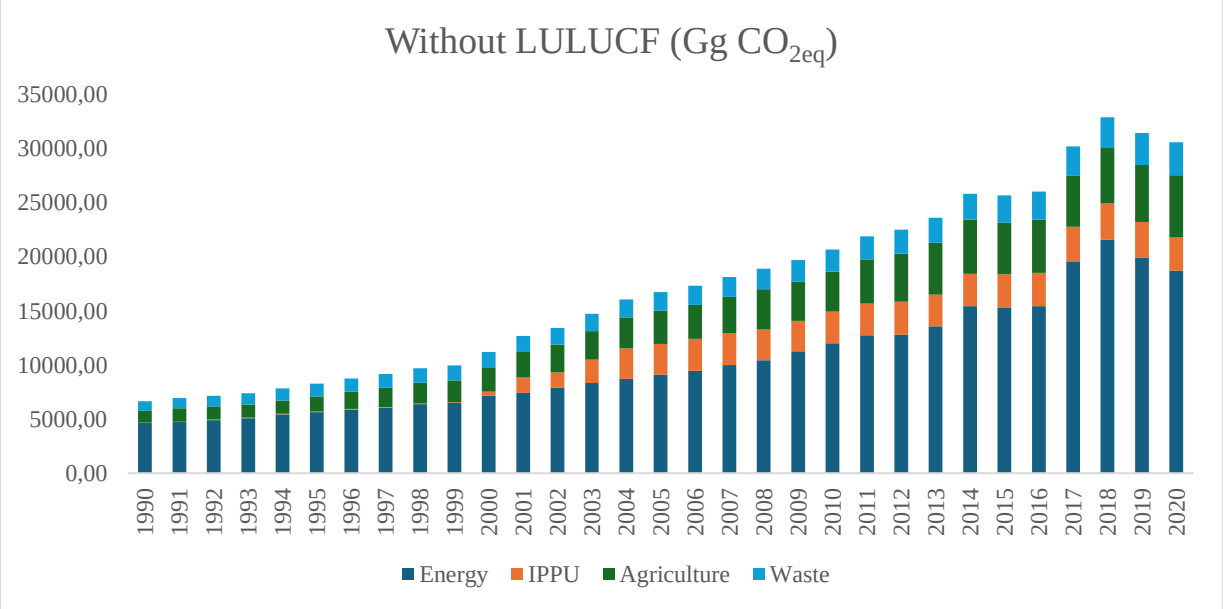

Figure 3.2 Trend of national GHG emissions by sector, excluding LULUCF

3.2 Analysis of Greenhouse Gas Emissions Trend by gas

The Mozambican GHG inventory, including LULUCF shows that carbon dioxide is the largest contributor to national emissions, followed by methane and nitrous oxide, while PFCs, have limited contribution, Figure 3.3. Most carbon dioxide emissions come from the forestry sector and methane from the waste and energy sectors.

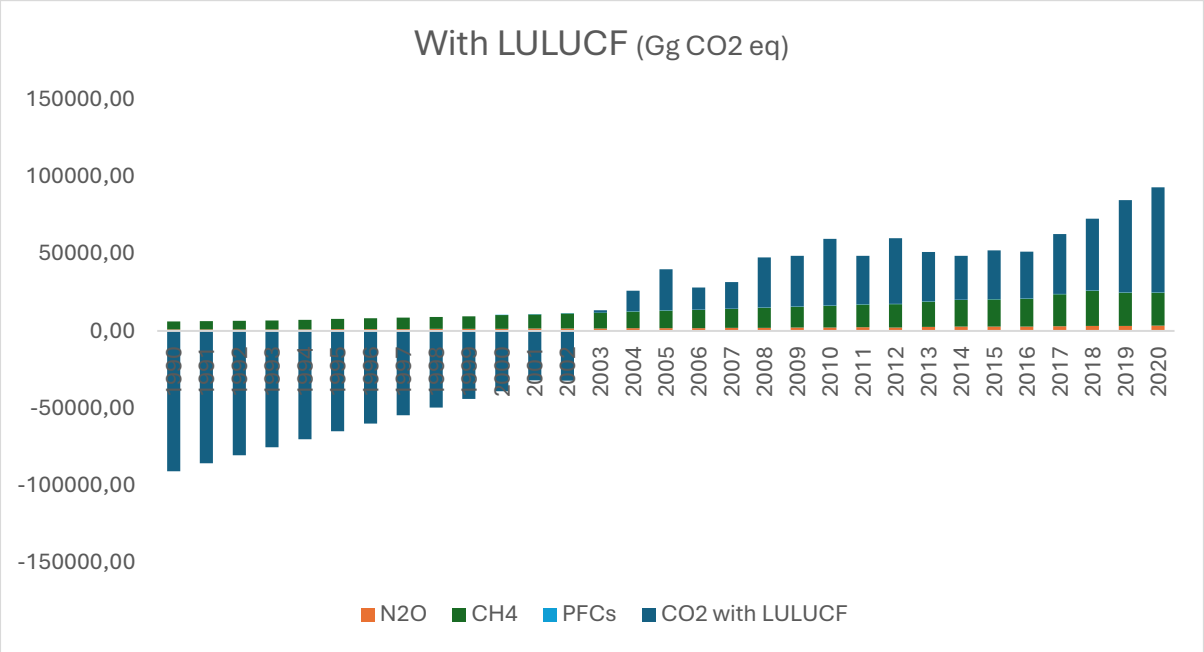

Figure 3.3 Trend of GHG emissions by gas, including LULUCF

The analysis of the trend of GHG emissions per gas, excluding LULUCF shows that the contribution of methane emissions is significant, exhibiting a slight increasing trend that can be explained by population growth, Figure 3.4. Nitrous oxide emissions and PFCs could be slightly higher than estimated due to the uncertainty associated with emissions estimation methods. Mitigation measures for the areas of forests and energy use, which reduce carbon dioxide emissions; and mitigation measures for charcoal production in energy sector, and agriculture and waste sectors that reduce methane emissions can contribute significantly to mitigate GHG emissions in Mozambique.

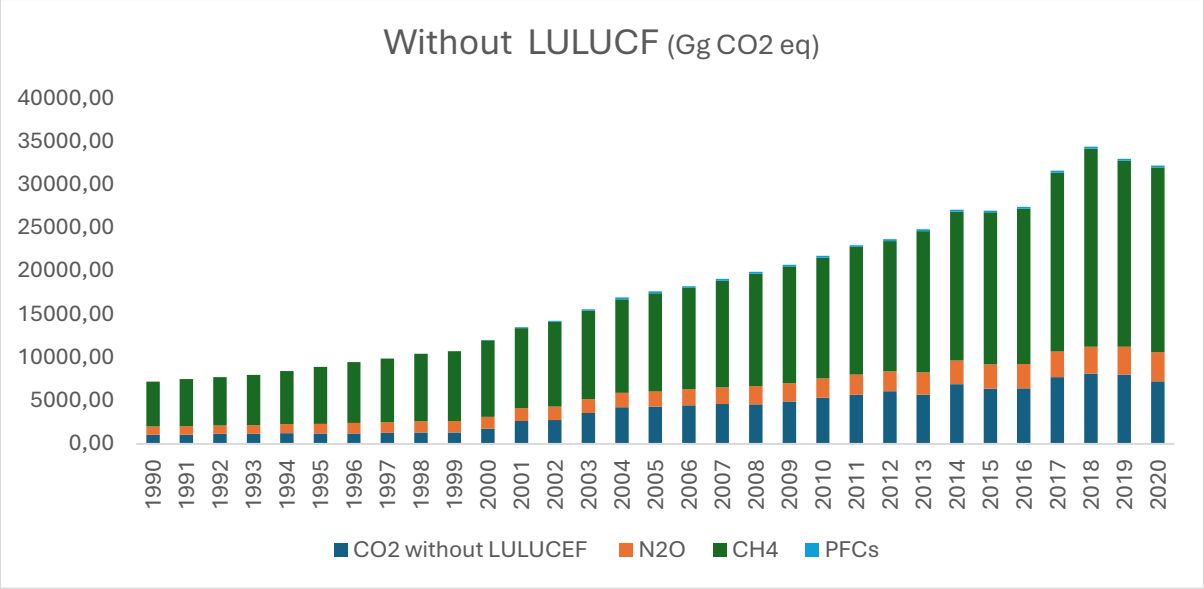

Figure 3.4 Trend of greenhouse emissions per gas, without LULUCF

3.3 Improvements recalculations

The previous GHG Inventories did not include information on activity data, emission factors and parameters, as well as sources of information, that allow to verify the inventory. The main improvement of the current inventory was to create standard GHG Inventory Report that allow for verification of reported emissions. The present report will also allow for continuous improvement of reported emissions.

Emissions were recalculated for all sectors and categories of the GHG Inventory because, as stated above, the previous Inventory did not have information, that include activity data, emission factors and parameters including sources of information, that allowed to reproduce the inventory. Significant differences are observed between the National Greenhouse Gas Inventories used for the First Biennial Updated Report (FBUR) and the Second Biennial Updated Report (SBUR). These differences arise due to inconsistencies presented in table 3.3.1

Although this GHG inventory presents different results from previous inventories, it presents all data, emission factors, emission time series and the results can be verified, if necessary. This inventory report will be used as a reference for the preparation of future inventories under the Enhanced Transparency Framework, thus allowing for continuous improvement.

Table 3.3.1 Difference between the Inventory of the First Biennial Updated Report (FBUR) and the Second Biennial Updated Report (SBUR)

Sector	Year	Emissions (Gg de CO_2eq)		Difference	Categories or subcategories considered by the IPCC		Observations
		FBUR	SBUR		FBUR	SBUR	
Energy	2000	4169	7138	41.60%	1.A.1. (1.A.1.a.i; 1.A.1.c); 1.A.2.; 1.A.3. (1.A.3.a; 1.A.3.c; 1.A.3.d); 1.A.4. (1.A.4.a; 1.A.4.b; 1.A.4.c); 1.B.1. (1.B.1.a)	1.A.1. (1.A.1.a.i; 1.A.1.c); 1.A.2.; 1.A.3. (1.A.3.a; 1.A.3.c; 1.A.3.d); 1.A.4. (1.A.4.a; 1.A.4.b; 1.A.4.c); 1.B.1. (1.B.1.a;1. B.1.c)	**1.** Explanation of differences pre category is provided in table 5.1. **2.** However, all data and emission factors, including sources, are described in the current Inventory Report. **3.** Explanation on the differences for specific categories is presented in each sector.
	2016	15902	15419	-3.13%			
IPPU	2000	1414	395	-258.13%	2.A. (2.A.1; 2.A.2.); 2.C. (2.C.1.; 2.C.3.); 2.H (2.H.1; 2.H.3)	2.A. (2.A.1; 2.A.3; 2.A.4.a); 2.C. (2.C.1.; 2.C.3.); 2.H (2.H.1; 2.H.3)	**1.** No data is available to estimate emissions of category; 2.A.2, the data used to estimate emissions in the FBUR was limestone production ($CaCO_3$) and not lime production (CaO) data (500 Gg CO_{2eq} per year); **2. Data to estimate e**missions of category 2.A.3, glass production is available from 1990 to 1996, when glass production stopped in Mozambique; **3.** Data are available for subcategory 2.A.4.a Ceramics for the period 2013 to 2016 and have been estimated using the GDP data for the entire time series and the emissions results are between (7 to 80 Gg CO_2eq per year); 4. The exclusion of lime production and the difference in aluminium production data explain the difference in emissions in the year 2000. Additional explanation is provided in table 6.1.
	2016	2798	3102	9.79%			
Agriculture	2000	560	2244	75.05%	3.A. (3.A.1; 3.A.2); 3.C. (3.C.1; 3.C.2; 3.C.3; 3.C.4; 3.C.5; 3.C.7); 3.D (3.D.1)	3.A. (3.A.1; 3.A.2); 3.C.(3.C.1;3.C.3;3.C.4;3.C.5; 3.C.6; 3.C.7); 3.D (3.D.1)	In the SBUR, two methods such as Tier 1 and Tier 2 were used, whereas only Tier 1 was employed in the FBUR. Additionally, the activity data for some animals in the SBUR were gathered from FAOSTAT for the entire time series, while in the FBUR, most animals had significant data gaps, which were addressed through extrapolation or interpolation. Furthermore, certain categories, such as 3.C.4, 3.C.5, and 3.C.6, were not estimated in the FBUR. These factors collectively contributed to discrepancies in the total emissions of the agricultural sector between the FBUR and SBUR.
	2016	1882	4905	61.63%			

LULUCF	2000	-24602	-40747	39.62%	3.B. (3.B.1;3.B.2;3.B.3;3.B.4; 3.B.5;3.B.6)	3.B. (3.B.1;3.B.2;3.B.3;3.B.4;3. B.5;3.B.6)	Emissions from biomass burning (3.C1) were not reported in the FBUR but were included in the SBUR. This omission significantly contributed to the higher emissions reported for the LULUCF sector in the SBUR compared to the FBUR. However, in 2016, LULUCF emissions were much higher in the FBUR than in the SBUR. This discrepancy is attributed to revisions and updates made in the SBUR concerning activity data, emission factors and parameters. For instance, the emission factor of Cropland was replaced 10 Mg/ha in the FBUR by 0 in the SBUR, and the carbon coefficient 0.56 in the FBUR replaced by 0.47 in the SBUR. This change has generated a dramatic discrepancies on the emissions between FBUR and SBUR. It's also important to note that the GHG estimate for the LULUCF sector was calculated using an Excel spreadsheet rather than the IPCC software, which is much more prone to typos in the transition matrix and parameters. In the SBUR, we have introduced thorough QC/QA.
	2016	33721	25118	-34.25%			
Waste	2000	162	1425.57	88.63%	4.A (4.A.2); 4.C (4.C.2.); 4.D (4.D.1.; 4.D.2.)	4.A (4.A.2.); 4.C (4.C.1.); 4.D (4.D.1.)	1. Medical waste was considered to be burned in the open (4.C.2) in the previous inventory, while in the current inventory it was considered to be incinerated (4.C.1); 2. Emissions from industrial waste water treatment have not been estimated for the current inventory due to lack of data (4.D.2); 3. Emissions for category 4.A.2 are 15 to 25 % above the previous inventory and this difference cannot be explained as the calculations and parameters were not presented in the previous inventory; 4. Emissions for category 4.A.2 are about 50% higher in the current inventory and the differences cannot be explained as the calculations and parameters were not presented for the previous inventory. Additional explanation is provided in table 9.1
	2016	1194	2606.85	54.20%			
Total National with LULUCF	2000	-18297	-29039	36.99%	Categories indicated by sector above		1. When considering the LULUCF sector, it becomes decisive for the difference in inventories
	2016	6305	11708	46.15%			
Total National	2000	6305	11708	46.15%	Categories indicated by sector above		**1.** Generally, the difference in 2016 emissions in the two inventories is small compared to the difference in 2000 emissions; **2.** This difference is explained by the
	2016	21776	24531	11.23%			

without LULUCF	agriculture and energy sectors. Although the IPPU and Waste sectors show a greater percentage difference, they contribute little to the overall difference in 2000 because their emissions are low.

Improvements are required for future inventories that are presented in table 3.3.2.

Table 3.3.2. Improvements required for the GHG inventory

Sector	Future improvements
General	Implementation of National System for Evaluation and Monitoring Climate Change, in all its components to improve data collection, consistent reporting and archiving. Strengthen institutional coordination – foster collaboration between government agencies, research institutions, and NGOs involved in monitoring and reporting agricultural emissions to streamline data collection, analysis, and reporting processes. Capacity building and technical support – provide training and technical assistance to stakeholders to improve the quality and reliability of activity data and enhance their capacity for effective, and reporting, and verification. Stakeholder engagement and transparency - engage with diverse stakeholders, including local communities and civil society organizations, to promote transparency and accountability in activity data collection.
Energy	1.A. Energy Industries • Segregation of activity data (Gas/Diesel, motor gasoline and Natural gas) per Subsegment for better estimation of Greenhouses gases. • Collect the missing activity data to estimate emissions for segment 1.A.2. Manufacture industries and construction 1.B. Fugitive emissions from fuel • Estimation of Greenhouses gases from subsegment 1.B.1.a coal mining and handling using tier 2 Improve charcoal activity data collection for estimation of GHG
IPPU	2.C.3 Estimate emission from Aluminium production using tier 2 2.A.1 Improve data collection on Clinker production 2.A.4.a Improve data collection using site specific production data for ceramics production. 2.F.1 Collect data to estimate emissions for the use of refrigerators and air conditioners
Agriculture	Enhance data collection and reporting mechanisms – implement standardized data collection and reporting protocols to improve consistency and transparency in GHG emission reporting from agriculture sector.
LULUCF	1B. Improve GHG emissions by considering the ecological zones
Waste	4.A.1 Estimate emission for category on Managed Solid Waste Disposal), because some waste is recycled 4.C.1 Collect data on waste from laboratories and/or clinics that are incinerated in agriculture 4.D.2 Estimate emission on category on Industrial wastewater Treatment and Discharge

3.4 Energy Sector

The energy sector consists of three (3) categories proposed in the 2006 IPCC Guidelines, Vol. 1, namely: Fuel Combustion Activities (1.A), Fugitive Fuel Emissions (1.B) and Carbon Dioxide Transport and Storage (1.C). No emissions have been estimated for the Carbon Dioxide Transport and Storage (1.C) category due to unavailability of data, however, these categories are expected to contribute less to national emissions.

The category that contributes most to emissions in this sector is the Fuel Combustion Activities (1.A) and the Fugitive Emissions (1.B), Figure 3.5. Emissions from the category of Fugitive combustion emissions (1.B) are significantly high due to emissions from charcoal production. Charcoal production and use are one of the mains sources of emissions for category (1.B).

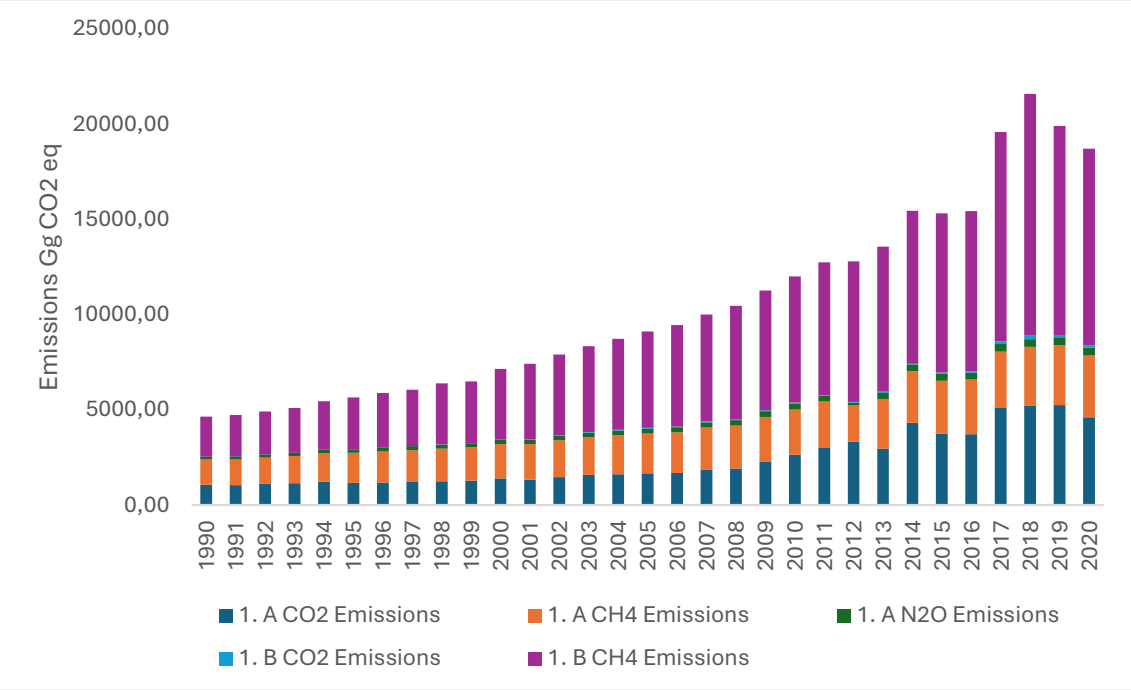

Figure 3.5. Summary of emissions for the Energy sector in CO_2 eq . 1.A- Fuel combustion activities (1.A), 1.B- Fugitive emissions (1.B)

3.4.1 Quality Assurance and Quality Control

Information to validate emissions reported in the previous GHG Inventory was not available. Emissions of GHG for energy sector were recalculated and the results were

compared to the current GHG Inventory, Table 3.4.1 Discrepancies were observed and explanations are provided per category in the table 3.4.1.

Table 3.4.1 Explanation of differences of emissions for 2016 in the inventories of the Fist Biennial Updated Report (FBUR) and current Biennial Updated Report (SBUR)

Categories	FBUR (Gg CO_2eq)	SBUR (Gg CO_2eq)	Explanation
1.A.1 - Energy Industries	4157.6	332.5	1. CO_2 emissions from use residential use of biomass was added to the totals, double counting with LULUCF
1.A.2 - Manufacturing Industries and Construction	2716.1	530	No clear explanation was found for the difference as the data and parameters used were not documented.
1.A.3 - Transport	2724.4	2760	No significant difference
1.A.4 - Other Sectors	4498.8	3318.4	No significant difference
1.B.1 - Solid Fuels	1205.7	8477.2	2. Methane emissions occurring during charcoal production included in the current GHG inventory

Additionally, emissions from the Energy sector were compared with emissions from other developing countries in the region, namely Zimbabwe and Angola. To facilitate the comparison, the per capita emission of the two countries were calculated for the last year of inventory published in the UNFCCC website. Per capita emissions for the energy sector in Zimbabwe (2011) and Angola (2005) calculated from emissions data available on the UNFCCC website and population data extracted from the World Bank website are 0.004 and 0.0008 Gg per person per year, respectively (UNFCCC, 2023; The World Bank, 2023). The per capita emissions estimated for Mozambique range from 0.00073 Gg per person per year in 2018 to 0.00033 Gg per person per year in 1990. The estimated per capita emissions for Mozambique are not very different from the per capita emissions of Angola, but they are different from the emissions from Zimbabwe.

The quality assurance procedure for this sector included presentation of the data, emission factors, parameters used and emission results to the team that was preparing the inventories of all sectors and experts from the Ministry of Land and Environment. In addition, the results presented in this report were analysed at a meeting attended by mainly sectors and data providers, and members of Interinstitutional Group on Climate Change (GIIMC).

3.4.2 Improvements and implementation of recommendations

The previous inventory report had transparency issues, and it was not possible to recalculate the results of the reported emissions. To eliminate this problem, all data, emission factors and parameters used for the preparation of this inventory have been properly described and their sources have been properly referenced. However, there are still aspects that need to be improved, which include: the involvement of sectors in the process of preparing inventories through the implementation of the National System for Monitoring and Evaluation of Climate Change, particularly its subsystem for Measurement, Report and Verification, whose implementation plan is under preparation, the organization of consumption data by subcategories described in the IPCC guidelines, Vol. 2, and the collection of data necessary for the *reference method.*

Studies on specific emission factors for the categories of: Fuel Combustion Activities (1.A) and Fugitive Emissions (1.B) are required, as they contribute significantly for the total national emissions. Additionally, data needs to be collected to estimate emissions Carbon Dioxide for Transport and Storage (1.C).

Finally, nevertheless the QA/QC procedures for climate change reports in Mozambique are described in the recently developed National Subsystem for Measuring Reporting and Verification, which is one of the three subsystems of the National System for Monitoring and Evaluation of Climate Change, the implementation is very limited. Efforts are being done to ensure implementation and documentation QA/QC procedures in climate change reports and this can be observed in the Draft of National Inventory Report that can be shared if required. Additional improvement can be done by creating the QA/AC manual aiming to improve the description and implementation of these procedures during preparation of Climate Change Reports.

3.4.3 Comparison between sectoral emissions and the Reference Approach

The results of the Reference Approach were compared with emissions estimates for the period 2013 to 2020, Figure 3.6. Carbon dioxide (CO_2) emissions calculated using Reference Approach were always higher compared to Sectorial Approach Figure 8. The difference in CO_2 emissions using the Reference Approach and Sectorial Approach were 35% in 2015 and 2016, 23% in 2017, 19% in 2018 and 2019, and 23% in 2020. These differences are explained by data collection and categorization issues that are discussed in detail in the attached GHG Inventory.

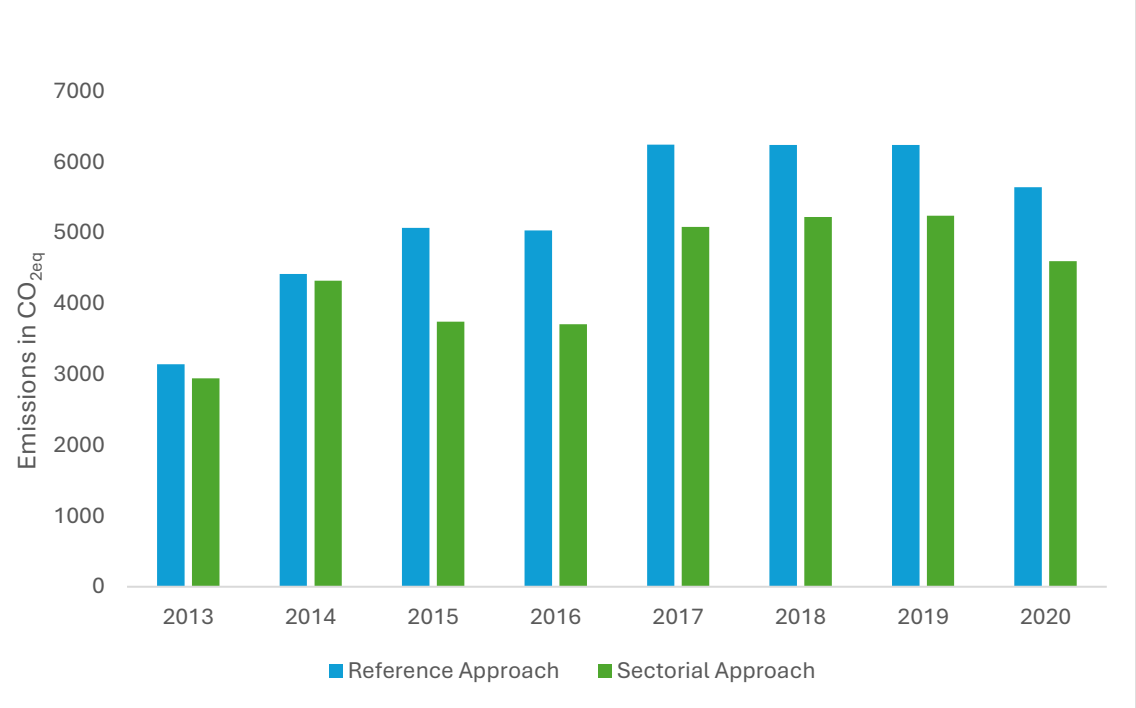

Figure 3.6 Comparison between CO_2 emissions using the Reference approach and sectoral approach. Emissions in Gg of CO_2eq.

3.5 IPPU Sector

Industrial Processes and Product Uses (IPPU) sector consists of eight (8) categories proposed in the 2006 IPCC Guidelines, Vol. 3, namely: Mineral industry (2.A), Chemical industry (2.B), Metallurgical industry (2.C), Non-energy products from the use of fuels and solvents (2.D), Electronics industry (2.E), Uses of products as substitutes for ozone-depleting substances (2.F), Manufacture and use of other products (2.G), and Others (2.H). No emissions were estimated only for the categories of Chemical industry (2.B), Non-energy products from the use of fuels and solvents (2.D), Electronics industry (2.E),

Uses of products as substitutes for ozone-depleting substances (2.F) and Manufacture and use of other products (2.G), due to the unavailability of data and these categories are expected have low contribution to the national emissions because the corresponding activities are limited, Figure 3.7.

The category that contributes the most to emissions in this sector is the Metallurgical Industry (2.C), due to the high production of aluminium (2.C.3), which represents about 80% of the sector's emissions. In addition, clinker production to be used for cement production (2.A.1) also presents significant emissions.

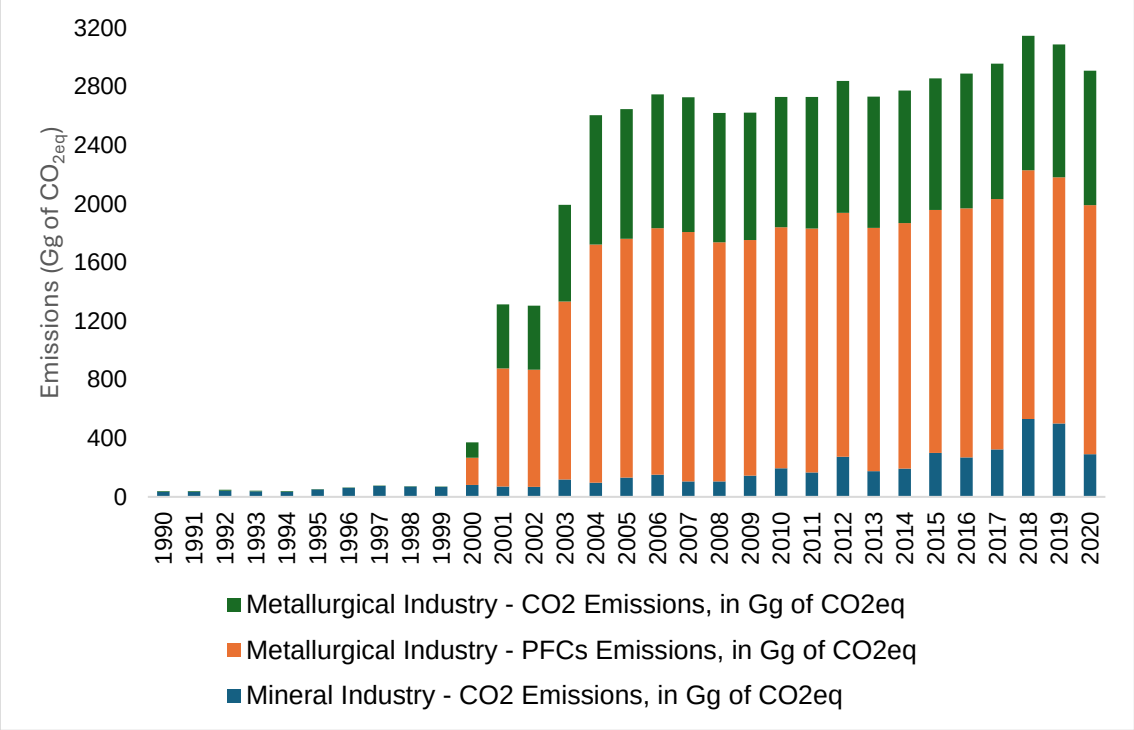

Figure 3.7 Summary of greenhouse gas emissions for the industrial process and product use sector: Mineral Industry (2.A), Metallurgical Industry (2.C)

3.5.1 Quality Assurance and Quality Control (QA/QC)

Information to validate emissions reported in the previous GHG Inventory was not available. Emissions were of GHG for IPPU sector recalculated and the results were compared to the current GHG Inventory, Table 3.5.1. Discrepancies were observed and explanations are provided per category in the table 3.5.1.

Table 3.5.1 Explanation of differences of emissions for 2016 in the inventories of the First Biennial Updated report and current Biennial Updated Report (SBUR)

Categories	FBUR (Gg CO_2eq)	SBUR (Gg CO_2eq)	Explanation
2.A.1. Cement Production	1242	199.86	Cement production was used to estimate emissions for the FBUR, while part of Clinker used for cement production is imported
2.A.2. Lime Production	561	NO	Data of Limestone was used to estimate emissions for the FBUR. Emissions occur only during the Lime Production from limestone.
2.A.4 Ceramics	NE	68.63	It was possible to collect data for 2013 to 2016 and for other year data as estimated.
2.C.1. Iron and Steel Production	NO	3.12	It was possible to collect data to estimate emission for this category in the current inventory.
2.C.1. Aluminium Production	2669	2619.03	No significant difference observed.

Additionally, emissions from the Industrial Processes and Product Use sector were compared with emissions from other developing countries in the region, namely Kenya, Tanzania, Zimbabwe and Angola. To facilitate comparison, the per capita emission for the three countries were calculated for the last year of inventory published on the UNFCCC website. Per capita emissions for the industrial processes and product use sector in Tanzania (1994), Angola (2005), Zimbabwe (2006) and Kenya (2010) calculated from the emissions data available on the UNFCCC website and population extracted from the World Bank website are 12.46, 18.06, 74.22 and 52.95 kg CO_2eq per person per year, respectively (UNFCCC, 2023; The World Bank, 2023). Per capita emissions for IPPU in Mozambique range from 2.97 to 93.3 kg CO_2eq per person per year. With 2.97 kg CO_2eq per person per year in 1990, 20.92 kg CO_2eq per person per year in 2000, and 93.3 kg CO_2eq per person per year in 2020. The estimated per capita emissions for IPPU in Mozambique for 2020 are higher compared to per capita emissions for the countries in the region, solely due to the contribution of emissions from Aluminium Production (2.C.3) which represents more than 80% of the sector emissions for Mozambique. Per capita emissions in this sector, however slightly lower, are comparable with Paraguay (136 kg CO_2eq per person per year in 2017) and Togo (143 kg CO_2eq per person per year 2018), countries that have local product industries that contribute to economic stability.

The quality assurance procedure for this sector included presentation of the data, emission factors, parameters used and emissions results to the team that was preparing the inventories of all sectors and experts from the Ministry of Land and Environment. In addition, the results contained in this report were analysed at a meeting during five days attended by mainly sectors and data providers, and the Interinstitutional Group on Climate Change (GIIMC).

3.5.2 Improvements and implementation of recommendations

The previous inventory report had transparency issues, and it was not possible to replicate the results of the reported emissions. To eliminate this problem, all data, emission factors and parameters used for the preparation of this inventory have been properly described and their sources have been properly referenced. However, there are still aspects that need to be improved, which include: the involvement of the sectors in the process of preparing inventories through the implementation of the National System of Monitoring and Evaluation including Measurement, Report and Verification Sub-system, whose implementation plan is under preparation.

Studies aiming to estimate national specific emission factors for the subcategory of Aluminium Production (2.C.3) are required. Emissions estimation for the use of refrigerators and air conditioners must be estimated as it is expected to be a key category.

3.6 Agricultura

The total GHG emissions from the agriculture sector are illustrated in Figure 3.8. Emissions are reported in Gg CO_2eq across the following categories: Livestock (3.A), Aggregated Sources and Non-CO_2 Emissions Sources on Land (3.C), and Other (3.D). Livestock emissions were the highest throughout the entire time series, showing a linear increase from 1990 to 2014, stabilizing from 2015 to 2017, and then rising again from 2018 onwards. The largest contributor to Livestock emissions was enteric fermentation (3.A.1). The trend in emissions for livestock is similar that of Aggregated Sources and Non-CO_2 Emissions Sources on Land (3.C), with the category of Direct N_2O Emissions from Managed Soils (3.C.4) accounting for 72% of the total emissions in the 3.C sector for 2020. In contrast, emissions from the Other (3.D) sector were positive values (removals) throughout the time series, though they remained negligible from 1990 to

2011. From 2012 onwards, this sector generated significant removals, suggesting that the consumption of Harvested Wood Products has increased in Mozambique since 2012.

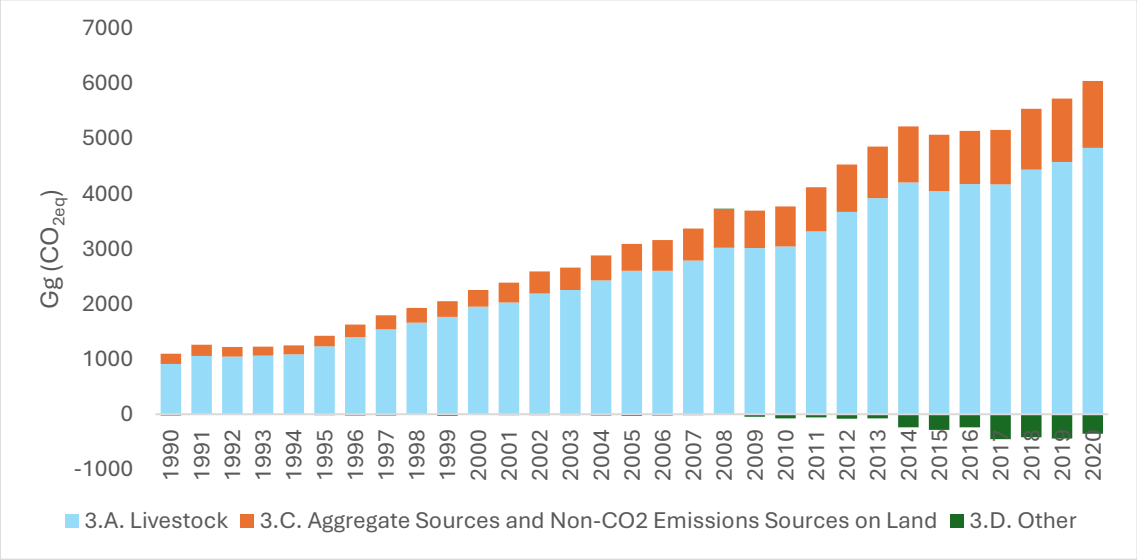

Figure 3.8 Summary of emissions for Agriculture sector

3.6.1 Quality Assurance and Quality Control

For the assessment of GHG emissions and removals, most of the default emission factors (EFs) given in the 2006 IPCC Guidelines and associated software (Tier 1) were assumed. Where there was a choice, the sector expert used his experience to make the best choice for the conditions in Mozambique and validated it through an external review. In the sectors or categories for which national EF information was available, this was used (Tier 2) to improve the estimation of emissions and removals. The results of the inventory were therefore a combination of Tier 1 and Tier 2.

- Part of this inventory was compiled using MSExcel. Excel spreadsheet and the part for non-cattle from the categories Livestock (3.A) and Aggregated Emissions Sources and Non-CO_2 Emissions Sources on Lad (3.C) was compiled in the IPCC 2006 software. Quality control included the following activities: Checking that the Equations programmed into the spreadsheet were entered correctly
- Checking that the entries for the totals were taken from the correct fields
- Checking that all data sources were fully documented
- Checking that the figures in the inventory report have been correctly transcribed
- Reformulation of Calculus versus results
- Confirmation of the specific emission factors

Similarly to other sectors, the quality assurance procedure for this sector included presentation of the data, emission factors, parameters used and emissions results to the team that was preparing the inventories of all sectors and experts from the Ministry of Land and Environment. In addition, the results contained in this report were analysed at a meeting during five days attended by mainly sectors and data providers and the Interinstitutional Group on Climate Change (GIIMC).

3.6.2 Improvements and implementation of recommendations

The main source of emissions is category 3.A, indicating that the country should focus its efforts on improving the collection of activity data for this sector as well. The estimates of GHG emissions and removals and the estimates of the potential to reduce emissions and increase removals presented in this report reflect the current state of knowledge and may be adjusted as better knowledge is gained.

Involving stakeholders (data provider) in data collection can improve the accuracy and completeness of activity data. Capacity building initiatives to train and empower stakeholders (in different level) on data collection methods and reporting requirements can also improve data quality, especially in the livestock (3.A) and aggregated emission sources and non-CO_2 emission sources on land (3.C) categories, for which most data come from FAOSTATs.

Continuous improvement and feedback mechanisms: Establishing mechanisms for continuous improvement and feedback from data collectors and users can help identify areas for refinement and optimization of data collection processes. Regular (annual) review and updating of emission factors based on new research and data can also improve the accuracy of emission estimates. This is the first time the country has used Tier 2 to estimate GHG emissions from the cattle subcategory of the livestock category. However, there are challenges and opportunities for improvement in data collection, consistency and institutional arrangements.

- *Cattle performance data*: the Agricultural Research Institute of Mozambique, through the Directorate of Animal Science under the GHG inventory and for all livestock development programs and implementation, is highly requested to undertake priority studies to make available the productive and reproductive performance data of cattle in Mozambique.

- In the line of cattle performance data, the Universities with animal science-related field and research institutions should work together to assess the productive and reproductive characteristics of cattle in Mozambique
- *Data consistency*: The National Directorate of Livestock Development should continue to be defined as the source of livestock data in the country, however, a more accurate census, either annually or biannually, should be established toward livestock development in the country to support the government with the appropriate tools for decision making.
- *Institutional arrangement (IA):* It is important that apart from the GHG IA as whole a sub-institutional arranged is made for livestock that will be engaged on research of the related factors and feed with the updated data to other IA.
- The currently work team on livestock should at least be meeting twice a year.

3.7 LULUCF

The total emissions of LULUCF sector are summarized in Figure 3.9. All emissions are reported in $GgCO_2eq$ for the category of Land (3.B). The Land category (3.B) was displayed fluctuating emissions, indicating variations in land use activities such as deforestation, reforestation, and wood removals. Notably, the net emissions of the land category initially reported negative values, indicating carbon removals from the atmosphere. However, a shift occurred in 2003, with the net emissions turning positive, signifying that the land has transitioned into a source of emissions rather than a sink.

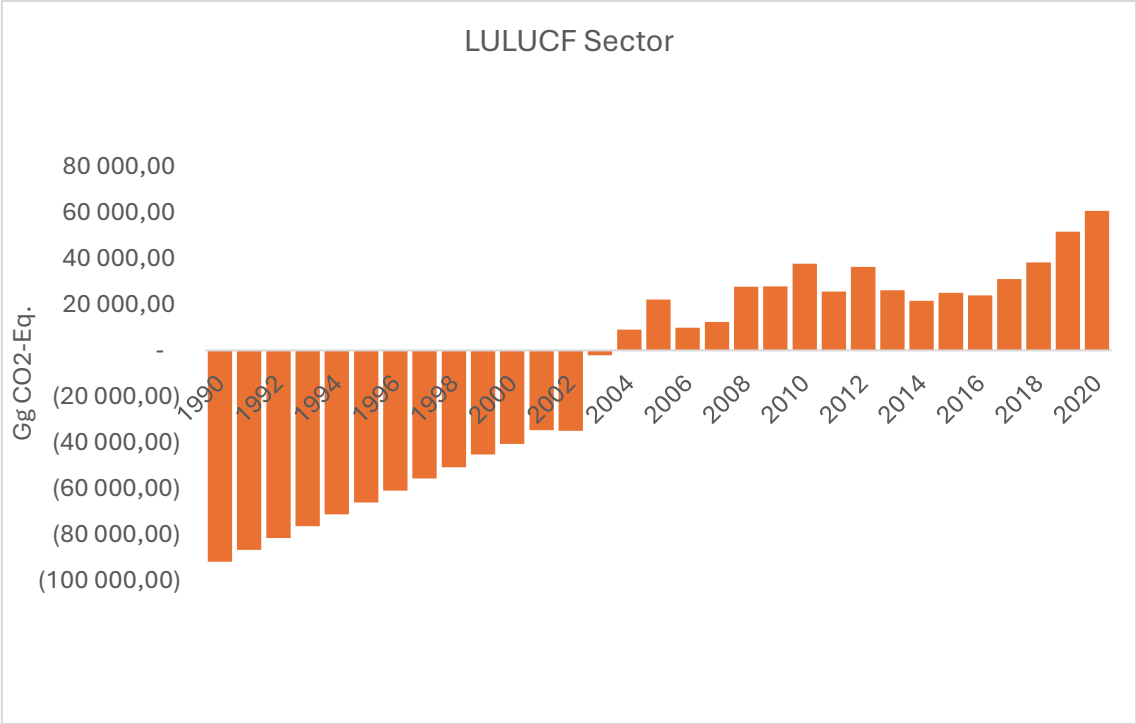

Figure 3.9 Summary of emissions for LULUCF

3.7.1 Quality Assurance and Quality Control

Part of this inventory, the land category (3.B), was compiled in an Excel spreadsheet. The quality control process included the verification of the following:

- Equations in spreadsheet were entered correctly
- The raw entry data
- The metadata
- Subscription of the figures in the inventory report
- Reformulation of calculus versus results
- Confirmation of the specific emission factors

Similarly to other sectors, the quality assurance procedure for this sector included presentation of the data, emission factors, parameters used and emissions results to the team that was preparing the inventories of all sectors and experts from the Ministry of Land and Environment. In addition, the results contained in this report were presented at a meeting attended by the data providers and the Interinstitutional Group on Climate Change (GIIMC).

Table 3.7.1 Explanation of differences of emissions for 2016 in the inventories of the First Biennial Updated report and current Biennial Updated Report (SBUR) in LULUCF sector

Categories	FBUR (Gg CO_2eq)	SBUR (Gg CO_2eq)	Explanation
3.A.1 - Enteric fermentation	1,733	3,335	The increase in emissions for this category in the SBUR is attributed to the use of the Tier 2 method for calculating cow emissions and the incorporation of FAOSTAT activity data for certain animals.
3.A.2 –Manure Management	21	847	The increase in emissions for this category in the SBUR is attributed to the use of the Tier 2 method for calculating cow emissions, along with FAOSTAT activity data for certain animals.
3.B.1 – Forest Land	45,101	46,516	The change in the conversion factor from 0.56 in the FBUR to 0.47 in the SBUR has contributed to the discrepancies in emissions between the two BURs. However, not significant difference was observed.
3.B.2 – Cropland	5,712,884	7,814.48	Emissions in Cropland were primarily driven by the conversion of forest land and grassland to cropland. The conversion from forest to cropland resulted in emissions, while the conversion from grassland to cropland led to removals, as the emission factor for cropland (10 Mg/ha) was higher than that for grassland (2.30 Mg/ha) in the FBUR. In the SBUR, the emission factor for cropland was set to zero, accounting only for emissions from the conversion of forest to cropland. Additionally, the conversion factor of 0.56 in the

			FBUR and 0.47 in the SBUR significantly influenced the discrepancies of the emissions between the two BURs.
3.B.3 – Grassland	1,261	1,261	No changes.
3.B.4 – Wetlands	NE	NE	
3.B.5 – Settlements	97,922	NO	In the FBUR, the conversion from cropland to settlement resulted in emissions, attributed to an emission factor of 10 Mg/ha for cropland. However, due to lack of information the emission of this category were assumed significant low, thus setting the emission factor to zero in the SBUR.
3.B.6 – Other land	30,630	NO	In the FBUR, the conversion from cropland to other lands resulted in emissions due to an emission factor of 10 Mg/ha for cropland. In the SBUR, due to lack of information, the emission of this category were assumed significant low, thus setting the emission factor to zero in the SBUR.
3.C.1 – Emissions from Biomass Burning	NE	3.15	There is no clear reason why it was not estimated in the FBUR, as the activity data were available.
3.C.2 – Liming	2	NO	Data of limestone was used to estimate emissions for the FBUR. Emissions occur only during the Lime Production from limestone.

3.C.3 – Urea Application	12	11.8	No changes.
3.C.4– Direct N2O Emission from Managed Soils	NE	763	The quantities of NPK fertilizer were collected from FAOSTAT for the SBUR.
3.C.5 – Indirect N2O Emission from Manged Soils	NE	82	The emissions for this category are derived from cows, calculated using the Tier 2 method. No other types of animals were included in this category.
3.C.6 – Indirect N2O Emission from Manure Management	NE	101	The emissions for this category are derived from cows, calculated using the Tier 2 method. No other types of animals were included in this category.
3.C.7 – Rice Cultivation	67	0.41	Extrapolated data for the annual harvested area of rice in 2016 were used to estimate emissions for the FBUR. The national data exhibited numerous gaps throughout the time series, so to avoid the need for extrapolation or interpolation, FAOSTAT data were adopted for the entire period.
3.C.8 - Other	NE		NE
3.D.1 – Harvested Wood Products		-238.322	The activity data of several hardested wood products were

	NE		collected from FAOSTAT for the SBUR.
3.D.2 – Other	NE	NE	

3.7.2 Improvements and implementation of recommendations

The country has established robust monitoring and reporting systems for key activities in the LULUCF sector, such as land use change, which provide consistent and reliable data over time. The estimates of GHG emissions and removals and the estimates of the potential to reduce emissions and increase removals presented in this report reflect the current state of knowledge and may be adjusted as better knowledge is gained. Continuous improvement and feedback mechanisms: Establishing mechanisms for continuous improvement and feedback from data collectors and users can help identify areas for refinement and optimization of data collection processes. Regular review and updating of emission factors based on new research and data can also improve the accuracy of emission estimates.

3.8 Waste Sector

The waste sector consists of five (5) categories proposed in the 2006 IPCC guidelines, Vol. 5, namely: Solid Waste Disposal (4.A), Biological Treatment of Solid Waste (4.B) Incineration and Open Burning of Waste (4.C), Wastewater Treatment and Discharge (4.D) and Others (4.E). It was possible to estimate emissions for the categories of Solid Waste Disposal (4.A), Incineration and Open Burning of Waste (4.C) and Wastewater Treatment and Discharge (4.D). No emissions have been estimated for the categories of Biological Treatment of Solid Waste (4.B) and Other (4.E) due to the unavailability of data and these categories are expected to contribute less to national emissions because the corresponding activities are limited.

The categories that contribute most to emissions of this sector are the Solid Waste Disposal category (4.A) and the Wastewater Treatment and Discharge category (4.D), Figure 3.10. Emissions in the category of Incineration and Open Burning of Waste are the lowest. However, emissions from this sector only considered incineration and it is expected that if emissions from Open Burning are considered, emissions from this category will increase significantly, however so far data is not available.

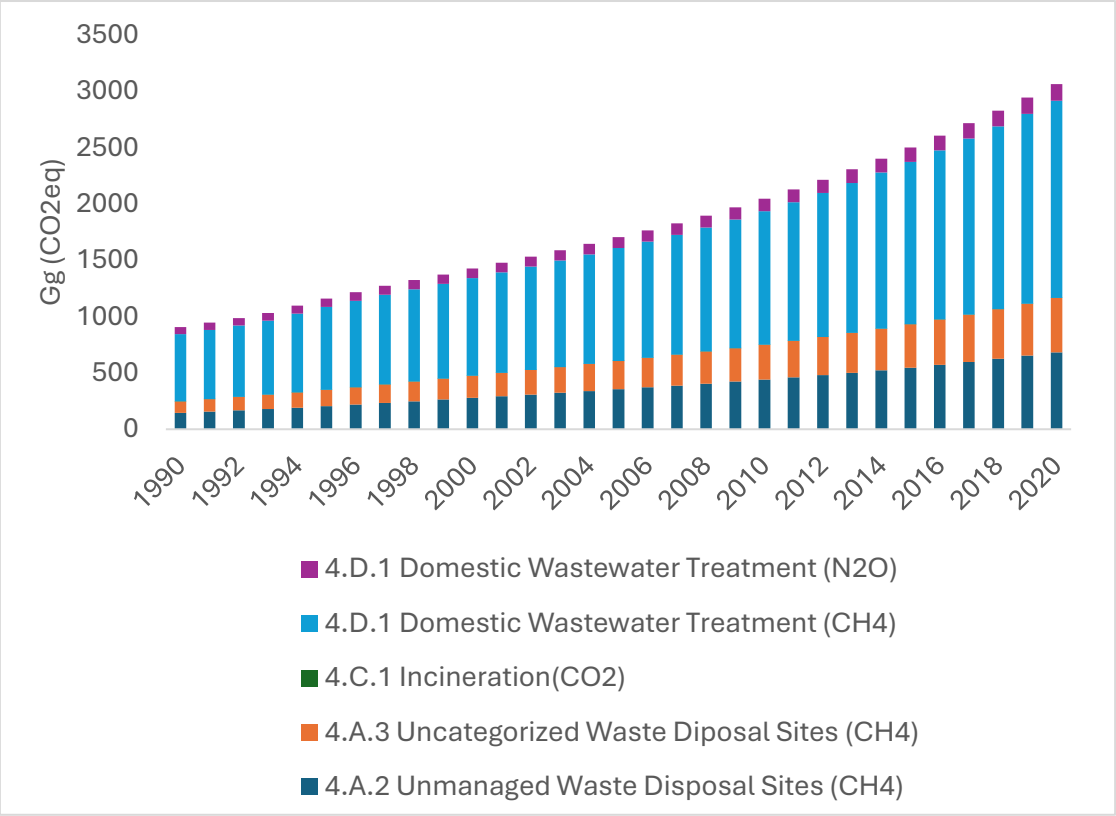

Figure 3.10 Summary of emissions for the solid waste sector. RS = Solid Waste (4.A), AR = Wastewater (4.D) and I&Q = Incineration and burning (4.C)

3.8.1 Quality Control and Quality Assurance

Information to validate emissions reported in the previous GHG Inventory was not available. Emissions were of GHG for Waste sector recalculated and the results were compared to the current GHG Inventory, Table 3.8.1. Discrepancies were observed and explanations are provided per category in the table 3.8.1.

Table 3.8.1 Explanation of differences of emissions for 2016 in the inventories of the Fist Biennial Updated report and current Biennial Updated Report (SBUR)

Waste	FBUR (Gg CO_2eq)	SBUR (Gg CO_2eq)	Explanation
4.A.2 Unmanaged solid waste disposal sites	859.96	571.4	Significant difference but no clear explanation is available. However, data and parameters used for the current inventories are documented

4.A.3 Uncategorized waste disposal Sites	NE	403.4	This category was not estimated in the previous inventory
4.C.1 Incineration	NE	0.01	Data of hospital waste was used to estimate emissions from Open burning, while this waste is incinerated
4.C.2 Open burning of waste	0.33	NE	Data on open burning is not available
4.D.1 Domestic wastewater and discharges	473.56	2738.71	Significant difference but no clear explanation is available. However, data and parameters used for the current inventories are documented
4.D.2 Industrial wastewater and discharges	0.04	NE	It was not possible to collect data to estimate emissions from Industrial wastewater. Data used to estimate emissions from this category is not well documented in the previous inventory.

Emissions from the solid waste sector were compared with emissions from other developing countries in the region, namely Kenya, Tanzania and Angola. To facilitate comparison, the per capita emission for the three countries was calculated for the last year of inventory published on the UNFCCC website. Per capita emissions for the waste sector in Tanzania (1994), Angola (2005), and Kenya (2010) calculated from the emissions data available on the UNFCCC website and population extracted from the World Bank website are 69.06, 47.75 and 45.21 kg per person per year, respectively (UNFCCC, 2023; The World Bank, 2023). Waste per capita emissions for Mozambique range from 63 kg per person per year in 1990 to 93 kg per person per year in 2020. The estimated per capita emissions for Mozambique are higher than capita emissions of countries in the region. This rises a question of improving data and parameters used to estimate the emissions to avoid overestimation.

The quality assurance procedure for this sector included presentation of the data, emission factors, parameters used and emission results to the team that was preparing the

inventories of all sectors and experts from the Ministry of Land and Environment. In addition, the results presented in this report were presented at a meeting attended by the data providers and Interinstitutional Group on Climate Change (GIIMC).

3.8.9 Improvements and implementation of recommendations

The previous inventory report had transparency issues, and it was not possible to recalculate the results of the reported emissions. To eliminate this problem, all data, emission factors and parameters used for the preparation of this inventory have been properly described and their sources have been properly referenced. However, there are still aspects that need to be improved, which include: the involvement of the sectors in the process of preparing inventories through the implementation of the National System of Measurement, Report and Verification, whose implementation plan is under discussion.

It needs to consider studies on specific emission factors for the categories of: Solid Waste Disposal (4.A), and Wastewater Treatment and Discharge (4.D), as they are key categories and the category of Incineration and Open Burning (4.C) because significant emissions are expected for Open Burning and data is not available.

SECTION 4: MITIGATION

4.1 Introduction

The information on Mitigation Actions presented in this chapter of the Second Biennial Update Report (2017-2020), pursuant to Article 41 (f) of Decision 2/CP.17, is an update of the information submitted in the first BUR (2000-2016), considering the questions from the Team of Technical Experts (TTE) received during the International Consultation and Analysis, and taking into consideration the country's capacity to address such questions in the short period elapsing between the submission of both reports.

Mozambique as part to the Convention, has committed to formulate, implement, publish and regularly update national and, where possible, regional programs containing measures to mitigate climate change, considering emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol.

Mozambique approved in 2012 the National Strategy for Climate Change Adaptation and Mitigation (ENAMMC, acronym in Portuguese of "Estratégia Nacional de Adaptação e Mitigação as Mudanças Climáticas") which integrates the mitigation and low emissions development pillar, whose objective is to identify and implement opportunities to reduce GHG emissions that contribute to the sustainable use of natural resources and access to financial resources, affordable technology, reduction of pollution and environmental degradation, promoting low carbon development.

The Strategy has been guiding Mozambique's climate action and has been the basis for the provision of support by our development partners. The Intended Nationally Determined Contribution of Mozambique (2015) and the Updated NDC (2021) were based on actions included in the strategy.

With the negotiations of the Paris Agreement, the country formulated and submitted its Intended Nationally Determined Contribution, covering the period of 2020 – 2030. This document was updated in 2018 to become the Mozambique's Nationally Determined Contribution 2020 - 2025 which was further revised in 2021 to the First Updated Mozambique Nationally Determined Contribution (2020 – 2025).

The mitigation component of Mozambique's NDC 2020 - 2025 represents the effort that the country will make to participate in achieving the goals of the Paris Agreement. Thus, with the implementation of this contribution, Mozambique expects to reduce a cumulative 40 $MtCO_2eq$ in the period between 2020 and 2025. The emission reductions proposed in the mitigation contribution of Mozambique would represent a mitigation effort of about 1.2 tCO_2eq per capita by 2025, a very relevant figure when compared to the total GHG emissions per capita of Mozambique, which were respectively 0.5 tCO_2eq in 1990 and about 1.0 tCO_2eq in 2020 total emissions without LULUCF, or -6.4 tCO_2eq in 1990 and about 2.9 tCO_2eq in 2020 total emissions with LULUCF (MTA, 2021).

Also under the Paris Agreement, the country made a commitment to formulate and submit to the Convention the Long-Term Development Strategy for Low Emissions. It should be noted that Mozambique indicates in its NDC that the achievement of the proposed goal is conditional on the availability of financial, technological and capacity-building support from the international community. From the total cost of the NDC (USD 7.586 billion), 25% it is committed to the mitigation component, It should also be noted that, the Government approved, on November 02, 2016, the National Strategy for Reducing Emissions from Deforestation and Forest Degradation, Forest Conservation and Increasing Carbon Reserves through Forests (REDD+) 2016-2030 and which the country has set the goal of having reduced emissions from deforestation and forest degradation, improved conservation of forest ecosystems and increased forest carbon reserves, thus avoiding the emission of 170 $MtCO_2$/year by 2030.

In this context, a REDD+ Technical Annex was submitted together with the 1st BUR and was subject to review by the team of experts. The review resulted in the estimated of results achieved being accurate, despite the opportunity for some improvements.

"The LULUCF experts consider the data and information provided in the technical annex to be mostly transparent, fully consistent, mostly complete and mostly accurate."[1]

Mozambique's FREL is based on its annual average historical CO_2 emissions associated with reducing emissions from deforestation for the historical reference period 2003–2013. Mozambique reported the results of implementing the activity for 2014–2020, calculated

[1] Technical report on the technical analysis of the technical annex to the first biennial update report of Mozambique submitted

against the FREL, which amount to emission reductions of 78,809,278 t CO_2 eq for 2014-2016, comprising 22,360,120 t CO_2eq in 2014, 25,738,689 t CO_2eq in 2015 and 30,710,470 t CO_2eq in 2016.[2]

In accordance with the technical annex to this report, results of implementing the activity for 2017–2020, calculated against the FREL, amount to emission reductions of 84,233,409 t CO_2eq, comprising 27,896,145 t CO_2eq in 2017, 25,107,678 t CO_2eq in 2018, 16,986,151 t CO_2eq in 2019 and 14,243,434 t CO_2eq in 2020.

4.2 Potential emission reductions and carbon credits issued in the context of international carbon market projects

As reported in the FBUR, in the period from 2010 to 2016, eight carbon projects were registered in the country: four projects were registered under the UNFCCC Clean Development Mechanism, three projects under the Gold Standard, and one project was registered under both mechanisms. In the registration process, the projects estimated that they would generate more than 8 million carbon credits over their lifetime, equivalent to an emission reduction of more than 8 MtCO_2eq. For the period 2016 to 2018 the estimated emissions reduction corresponded to about 6.1 MtCO_2eq. Mozambique is also preparing national regulation for the country's participation in the carbon markets.

Table 1: Carbon projects registered in the period 2010-2020

Mechanism	Project Title	Registration Date	Sector	Estimated carbon credits (2010-2020)	Carbon credits issued (up to 2020)
CDM	New Natural Gas Power Plant in Ressano Garcia	16/11/2016	Grid-connected power	-[3]	-
CDM	Reforestation Project of Niassa	14/01/2014	Forest	78,391	-
CDM - POA	Off-grid renewable energy for rural electrification in Mozambique (managed by FUNAE)	5/5/2016	Energy not connected to the grid	4,857	-
GS	Improved stoves in Chamanculo C, Maputo (Mozambique)	23/02/2015	Improved stoves / Biomass	28,368	19,404
GS	Improved stoves in Chamanculo C, Maputo (Mozambique), Phase II	29/03/2016		24,367	16,464
GS	Improved stoves at Chamanculo C, Maputo (Mozambique), Phase II	29/03/2016		22,584	13,798
GS+CDM	Cleanstar Mozambique - Ethanol Stoves in Maputo Project 1	5/4/2013		721,808	-
Total				1,139,530	49,666

[3] As planned, this project will only issue credits starting in 2017.

4.3 Status of implementation of mitigation measures

As was the situation at the time of submission of FBUR, Mozambique is still not able to provide detailed information in tabular format on each of the mitigation measures planned and/or implementation. Over the last year several efforts were made to set up and implement a system to monitor the implementation of climate (mitigation) action, which has so far nor produced the planned results.

One of these efforts, implemented with the support of ICAT, resulted in the finding that for most measures included in the strategy (as well as in the NDC) data on base year and indicators to track the implementation of mitigation years is available for the most recent years and categorized for the First Biennial Transparency Report (FBTR), that will be prepared and submitted soon.

This is the case for GHG emissions specific indicators, but also for other indicators such as energy produced, investment or jobs created. The result of this effort is going to be the base for tracking progress in the implementation of the NDC for the purpose of the preparation of NDC3.0 as well as for the preparation of the 1st BTR. In this context and for mitigation action up to 2020, Mozambique is not able to enhance the completeness, and the transparency of the information provided in the FBUR. We note that, this was a key issue communicated to the country during the technical analysis week (at the moment of preparation of this SBUR, the report of the technical analysis of the 1st BUR is not yet available).

The FBTR will focus on the post-2020 implementation of measures included in the NDC. In the table below, for some measures, some updates, collected in October 2023, in a non-systematic, empirical manner are reflected.

Table 2: NSCCAM measures and their potential readjustment for the post-2020 period

Sector	Action	Measure at NSCCAM	Measure under analysis for the post-2020 period	UPDATES 2023
Energy	**Improve access to renewable energy**	Promote the electrification of rural communities using renewable energy		Delays in implementation are expected, among others due to civil unrest in the north of the country and extreme weather events that disproportionally hit rural communities.
		Promote the use of renewable energy sources (biogas, biomass, solar, wind, thermal, wave and geothermal))	Promoting the use of renewable energy sources - hydro	Under implementation
			Technology Action Plan for Regular Hydro Turbine Technology	Under implementation
			Promotion of the use of renewable energy sources - wind	Under implementation
			Promotion of the use of renewable energy sources - photovoltaic	Under implementation
			Implementation of the Technological Action Plan for Regular Scale Photovoltaic Plants - TNA	Under implementation
		Promote the expansion of the national grid or the creation of energy distribution micro-grids	Expansion of the urban grid, making new connections; promoting 100% coverage in the connection of domestic consumers in suburban areas,	Programa ProEnergia is reported to have reached 250 000 new consumers by 2023.

			in the districts and interconnected to the national grid (SILE)	
		Promote and disseminate techniques and technologies for sustainable production and use of biomass energy		The so-called charcoal NAMA was not implemented as such. Other measures and projects are known to be on the ground, including through (voluntary) carbon market projects.
		Assess mitigation mechanisms in electricity generation and transmission infrastructures		There are no technical studies on grid losses. Electricidade de Moçambique has a Department that seems to focus on commercial losses rather than technical.
	Increase energy efficiency	Ensure availability and access to low-carbon fossil fuels		Under implementation
		Promote initiatives to replace high carbon and non-renewable fuels with low carbon or renewable fuels in the transport and production process sectors		Under implementation
		Ensure the implementation of regulatory instruments, programs and low-carbon projects for the transport sector such as production of biodiesel for use in transport fleets that generate new sources of		Under implementation

		income and diversification of the economy in rural areas;		
		Develop projects and programs for microgeneration of energy in commercial and residential buildings	Installation of 50,000 photovoltaic or wind turbine lighting systems	Under implementation
			Installation of 5000 solar PV systems for pumping water for domestic, community or public use in isolated (SIE) or mixed (SILE/SIE) areas, including agricultural irrigation and livestock watering	Completed
		Promote the use of efficient household appliances	Powering of 5000 glaciers for domestic use, through photovoltaic technology or with wind turbines, in homes in areas isolated from the national grid (SIE)	Completed
			Productive use of energy - construction of 8 centers for fish conservation	Under implementation
		Use of “clean coal” technologies in coal-fired power plants (including the use of cogeneration, where applicable)		Completed
		Reduce emissions associated with thermal power plants	Construction of 450 MW thermal power plant based on natural gas: Technological	Under construction– TEMANE (combined cycle)

			Action Plan for Natural Gas Combined Cycle Technology	In operation: Kuvaninga and Maputo (combined cycle) and Ressano Garcia (without heat recovery).
	Ensure compliance with regulated standards for emissions from extractive industry activities	Recover methane during the mineral and hydrocarbon extraction process		Under implementation
		Evaluate the possibilities of carbon capture and storage		Being considered in the context of energy transition, but no specific activity currently. Study commissioned by the Community of Portuguese Speaking Countries (2015) shows Mozambique has the required geological conditions to undergo CCS activities.
	Promote low carbon urbanization	Develop and implement policies and measures to integrate the component of energy efficiency and the use of renewable energy sources into the directives for the construction of infrastructure such as buildings, communication routes and related structures		Under implementation
		Promote, through building codes and production norms, energy efficiency practices and the use of equipment that makes use of		Under implementation

		renewable energy sources and decentralized energy production		
		Increase Energy Efficiency in Travel	Expansion of Metrobus to the country's main capitals	Delayed Implementation
		Encourage the use of solar thermal systems in large commercial and industrial buildings, public buildings, and residential buildings		Under implementation
		Encourage the replacement of incandescent light bulbs for low consumption ones	Substitution of 2,500,000 incandescent light bulbs for efficient light bulbs in all domestic consumers in the country	Under implementation
		Promote the massification of the use of gas for domestic, industrial, and public and private transportation as an alternative to less clean energy sources	LPG Massification - Increasing the number of people with access to cooking gas to about 309.02% compared to today	Under implementation
			Massification of the Use of Natural Gas: o Construction of ten (10) Compressed Natural Gas filling stations, - Importation of one hundred and fifty (150) CNG Buses - Importation of one thousand (1000) kits and respective conversion Cylinders for Natural Gas.	Under implementation

			- Conversion of One Thousand (1000) Cars to NG	
			Repair of 150 NG-fuelled buses for public transport	Under implementation
Industrial processes and product use	**Control emissions from industrial processes including waste and associated effluents**	Develop policies and measures of inspection and regulation of industrial activity in order to control compliance with national legislation and international conventions		Environmental licensing is a key instrument. New regulatory framework adopted in 2015.
		Encourage investors to evaluate potential GHG emissions in investment projects when considering clean technologies and energy sources		Industrial Policy and Strategy (2015-2025) encourages. Plan to develop environmental awareness to specific industrial sectors (iron, steel, cement, aluminium). CTA (private sector association) has an environmental committee – liaison between government and private sector.
		Promote projects and programs of microgeneration of energy in the industrial sector		
Agriculture, forestry and other land uses - AFOLU	**Developing low-carbon agricultural practices**	Encourage conservation agriculture		Agriculture Climate Change Adaptation Action Plan (2015-2020), includes a set of relevant measures, such as

				intensification of technical support through farmer-to-farmer extension services. Social and Environmental Safeguards Office created at the Ministry of Agriculture (2020), tasked with awareness raising of farmers. An environmental farming good practices handbook has been published.
		Promote agricultural practices that reduce GHG emissions (particularly in sugarcane harvesting)		Measure for larger producers. Awareness raising (burning of agriculture waste in field).
		Use energy efficient water pumping systems for crop irrigation		Under implementation.
		Reduction of methane from agricultural activities in intensive farming systems (in particular in rice paddies)		Draft Agriculture NAMA (2018), includes an action aimed at associating fish and rice production, thus reducing methane emissions associated with both activities.
		Promote the collection of and biodigestion of animal and vegetable waste to use methane for energy generation		

	Reduce the rate of deforestation and uncontrolled burning	Explore, in a sustainable way, forests in order to maximize their potential for carbon capture and sequestration		Programa de Acção Social Produtiva (PAPS) (start date 2012) – social program with (120 000 beneficiaries) focused in providing income to vulnerable populations, by engaging them in public efforts regarding reforestation and mangrove management. Climate change /environment focus of the program is recent (last two years). Financed by state budget and World Bank (current project 2022-2027).
		Promote mechanisms that lead to the natural regeneration of forests		Under implementation
		Create mechanisms to prevent the spread of wildfires.		Under implementation
	Plan and manage biodiversity and coastal ecosystems	Develop programs for sustainable exploitation, regeneration and protection of mangroves, seaweed and seagrass associated with the potential for carbon capture and sequestration (Blue Carbon).		See PAPS social program above.
Waste	**Manage and valorise waste**	Promote the reduction, reuse, and recycling of waste	Promotion of Sustainable Waste Management in Mozambique (NAMA Waste)	Pilot projects in Maputo province, in Boane and Manhiça. Municipalities in

			Implementation of the Technological Action Plan and Project Ideas for the Management and Treatment of Municipal Solid Waste	Cooperation with GEF-UNIDO. 6 out of 53 Programas Municipais de Gestão de Resíduos (Municipal Waste Management Plans) updated, based on the new methodological guidance elaborated with the support of cooperation partners (World Bank). Wastewater treatment plant in the Maputo area under construction. Project in 10 provinces for water supply and sanitation. Água Segura projects in Zambezia and Nampula (22 districts). Program “Industrializar Moçambique” includes plans for the construction of 3 plastic recycling facilities

				(USD15M) – Maputo, Nampula e Manica.
		Encourage the establishment of sanitary landfills with recovery and consequent use of methane		Feasibility and impact assessment studies performed for 6 of the 10 provinces. Waste NAMA in the planning stage.
		Promote the generation of energy from waste using anaerobic digestion processes, thermal or mechanical treatment		

4.4 Information on national arrangements for monitoring, reporting, and verification

See chapter on institutional arrangements in the GHG emissions inventory chapter.

SECTION 5: CONSTRAINTS AND GAPS AND RELATED FINANCIAL, TECHNICAL AND CAPACITY BUILDING NEEDS

5.1 Constraints and gaps

Mozambique is a the Least Developed Country, extremely vulnerable to the impacts of climate change. Although public and private institutions, particularly at the central level (such as Ministries and Universities), enjoy some stability, the country has faced major difficulties in both implementing and monitoring climate policy, including mitigation and adaptation.

The country has received important financial and capacity building support that has been reflected in a significant strengthening of our climate policy planning capacity, examples of which are the NSCCAM and the NDC. However, this planning capacity is not yet matched by implementation and monitoring capacity. For this reason, the country has decided to include in this report detailed information about the constraints and gaps and related financial, technical and capacity building needs. Even so, throughout this chapter we make several references to additional information contained in the Second National Communication, which we avoid repeating here, but which should be read in conjunction with this report.

Mozambique has implemented initiatives that have identified existing constraints and gaps both for the preparation of national communications, biennial transparency reports and NDCs and for resource mobilization, formulation and implementation of adaptation and mitigation actions, including cross-cutting actions. These initiatives also present the training needs required to overcome the identified gaps and constraints.

The Second National Communication presents, in a tabular format, the constraints and gaps identified in the context of the following initiatives: National Capacity Self-Assessment (NCSA) - NCSA - Thematic Report, National Adaptation Action Programs, Nationally Determined Contributions (NDCs) and their respective Implementation Plan that includes the needs presented by the country to the NDC Partnership ((NDC Partnership Plan 2018 - 2021),

in the process of drafting the SCN and the first BUR. In the process of identifying gaps and needs, the information produced in the following ongoing initiatives was considered:

- **The Second National Communication** (SCN, funded by GEF and implemented with assistance from UNEP)

- **Mozambique's First Biennial Update Report (**PBURM, GEF funded and implemented with assistance from UNEP and UNDP, namely through the Lusophone Cluster on Transparency)

- **Mozambique's Long Term Low Emissions Development Strategy 2020 - 2025** (formulated with support from the NDCP (NDC Partnership) - these two documents contributed to updating the chapter on national GHG inventories and the chapter on mitigation: and,

- **Technology Needs Assessment (TNA),** an initiative implemented with support from UNEP-DTU that resulted in project ideas reported in this document, including capacity building needs.

With the approval of the NSCCAM in 2012, the foundations were created for the implementation of adaptation and climate risk reduction measures, in some sectors, namely agriculture, social protection, fisheries and health, having formulated their plans that integrate climate change adaptation measures. In parallel, the Government, with the support of cooperation partners, has started the process of formulating and implementing the Local Adaptation Plans (PLAs), a process that promotes the participation of communities in assessing their vulnerabilities, identifying and prioritizing measures that, when implemented, will help build the capacity to cope with climate change. The Implementation Review of the NSCCAM done in 2019 by the Government with the support of UNDP identifies the following weaknesses in the implementation of the Strategy:

1. The institutional framework designed in the NSCCAM is outdated and has not worked as a guide.
2. The SNMAMC is not being implemented and this weakens the NSCCAM because the scopes are not documented
3. Lack of Provincial Adaptation Plans that should culminate in a National Adaptation Plan

4. Poor implementation of PLAs due to limited funds.
5. Frequent mobility of technicians between different sectors
6. Weak involvement/participation of the private sector
7. Poor implementation of legal instruments
8. Weak human resource capacity in sectors to monitor compliance with CC-related legislation
9. Deficit of technicians for the CC area
10. Dependence on partners to fund the implementation of PLAs
11. Centralization of inventories at the MTA level
12. Weak capacity to implement National Strategy for Climate Change Adaptation and Mitigation actions
13. Change of ministries and sectors dealing with climate change in the country
14. Lack of legal instrument for GIIMMC (weak inter-institutional coordination)
15. No implementation of the Climate Change Network
16. Lack of legal instrument creating the Centre of Knowledge Management on Climate Change, acronym in Portuguese of "Centro de Gestão de Conhecimento sobre as Mudanças Climáticas (CGCMC)

Although the institutional framework designed in the NSCCAM is outdated and does not work as a guide, its implementation resulted in the following strengths:

i. NSCCAM is a widely recognized and accepted reference document for climate change in Mozambique
ii. Building local resilience was identified as a priority for the first period and provided the basis for preparing PLAs
iii. The NDC action plan was prepared using the NSCCAM framework and thus provided continuity and a strong link between the two instruments.
iv. The preparation of PLAs and their ownership in some districts.
v. The existence of a facilitative working environment between the technical teams at district, provincial and national levels (GIIMC)
vi. The availability of legal instruments in the environmental sector
vii. The integration of MC themes in courses implemented in national universities
viii. The approval of the National REDD+ Strategy
ix. The NSCCAM's strategic vision

5.2 Specific gaps regarding the preparation of this report

In Mozambique, data collection on climate is still a work under development, given that there is a need to create a national mechanism that can cover the different sectors using a common and standardized methodology for this purpose, as there is currently no alignment in the methodologies and sources of information that each sector of the Government has for collecting climate data. The Government of Mozambique is implementing measures and actions to improve coordination between different initiatives related to climate change. Therefore, it is expected to create a national mechanism that can align the different sectors and activities related to climate change.

The preparation of the information related to financial support received in Mozambique in this document is the result of work combining two sources of information, namely: the OECD (Organization for Economic Cooperation and Development) database and the International Climate Funds database of the Ministry of Economy and Finance (MEF). It was decided to use the OECD database as it analyses financing for climate development, through different sources of financing, from the perspective of both the providers of the funds and the beneficiary countries.

The information contained in this document is based on data collected from the perspective of the funders, hence it is necessary to interpret the data cautiously as they are susceptible to classification and aggregation errors, since the country does not have a mechanism for mapping and validating the funding received through the different beneficiary sectors, it becomes difficult to determine the support that was actually received effectively.

Two main gaps can be identified in the preparation of this BUR: monitoring of the implementation of mitigation action and tracking of financial support received.

Compared to the FBUR, there were no significant improvements in the capacity to collect the relevant data, which is, for both chapters, effectively non-existent. As described in the respective chapter, support has been received to overcome these barriers, in particular in relation to monitoring the implementation of mitigation action, but still systems to the effect are yet to be established. Mozambique is confident that, with the current efforts to regularly prepare and submit reports (FBUR, SBUR and the upcoming FBTR), as well as the efforts to prepare the NDC3.0, these barriers will be overcome.

Mozambique developed an updated National System For Monitoring and Evaluation of Climate Change that includes three Subsystems (SNMAMC), (1) the National Subsystem for Monitoring and Verification (SSNMRV), (2) the National Subsystem for Monitoring and Vulnerability and Climate Risk (SSNMVRC), (3) the National Subsystem Management of Climate Information (SSNGIC). However, procedures and tools for this system are not well developed and this may limit its implementation. Challenges for tracking the implementation of mitigation actions also include availability of human and financial resources within the government institutions.

Despite the barriers and gaps mentioned above regarding the preparation of this BUR, the country has made important progress related to the technical capacity for the preparation of the GHG inventory. The current GHG inventory included in this report presents many improvements compared to the previous which will greatly contribute to the transition to the ETF.

5.3 Financial, technical and capacity building support needed and received

5.3.1 Financial support needed

In order to fulfil the obligations of the Climate Change Convention, the country needs substantial financial support from cooperation partners. For this to happen, there is a need for the existence and alignment of sectoral strategies with the national development agenda, particularly national plans, such as the Government's Five Year Plans, National Territorial Development Plan (NNDP), National Adaptation Plan (NAP) and Local Adaptation Plans (PLAs), with the different climate finance mechanisms established under the UNFCCC, such as NAMAs, NDCs and other existing multilateral mechanisms and bilateral partnerships. As a complement to the existence of these instruments, it is important that the country also has competent staff capable of preparing funding proposals acceptable to donors in terms of quality and alignment with the proposed development plans.

With the preparation and submission of the NDC and other instruments, Mozambique has already taken an important step towards meeting the requirements of the Convention. According to the submitted NDC, the country expects to reduce GHG emissions by about 40 $MtCO_2eq$, between the period between 2020 and 2025. To achieve the proposed target, domestic and international support estimated at around USD7.5 billion will be required. However, it should be noted that this figure does not reflect all the financial needs required in

the different sectors since the IPPU, for example, has not received all the required attention due to lack of data. In order to fill this gap, an additional effort to determine the cost of all the measures inherent in the different sectors will be made under the CBIT initiative.

5.3.2 Technological support needed

With regard to technology needs, the country has already made an effort to determine them in the agriculture, waste, electricity generation, and coastal areas sectors in an exhaustive stakeholder consultation process at the provincial and national levels. The Technology Needs Assessment for Mozambique was conducted between 2014 and 2018. The objective of this work was to identify and prioritize technologies capable of contributing to the achievement of the adaptation and mitigation targets of non-Annex II parties, while meeting their national priorities and targets for their sustainable development.

To carry out this work, the country was supported by the Global Environment Facility (GEF) and implemented by the United Nations Environment Programme (UNEP) in partnership with UNEP DTU (UDP) and in collaboration with the Regional Energy Research Centre at the University of Cape Town.

As a result of the technology needs assessment for the country, specifically in the area of agriculture, the following adaptation measures were identified as priorities: (i) Seed production and conservation, and promotion of low-cost seed and grain storage systems, (II) conservation agriculture, and (III) rainwater harvesting and conservation (GoM, 2018). For the coastal zone, adaptation priorities include: (I) flood warning system, (II) beach feedback, and (III) mangrove restoration (GoM, 2016).

As for mitigation, the priority technologies in energy production comprised: (I) regular-scale solar photovoltaic systems, (II) conventional combined cycle for gas, and (III) regular hydraulic turbines. In turn, for the area of municipal waste management, the priority technologies included: (I) Landfills with biogas production, (II) biogas production in landfill bioreactor and (III) pyrolysis (GoM, 2017).

5.3.3 Capacity Building Needs

Through the capacity needs self-assessment initiative in 2008, Mozambique developed the National Capacity Building Plan (NCCP) for the effective implementation of the three Rio

Conventions (UNFCCC, CBD and UNCCD). Among various attributes, this plan was designed to address the country's need to build capacity at all levels to translate the provisions of these international agreements for the promotion of sustainable development into its own instruments by integrating them into national development policies and strategies. In Mozambique, climate change is seen as one of the areas that require capacity development at all levels.

Capacity building needs for the elaboration of the BUR

Despite the efforts made through the PNFC and other initiatives, there is still little information on which institutions and individuals are involved in climate change activities, let alone their potential in the country. A national level survey could help Mozambique to capture this dimension and assess the actual existing capacity and harness it, in the effective implementation of the various climate change programs that increasingly require more qualified human resources. The roadmap on capacity development needs described below is based on the findings obtained through the components of this communication, namely national GHG inventories, mitigation measures, adaptation measures and other relevant information (technology transfer, research and systematic observations).

This survey is oriented to have a concrete idea of the institutional technical capacity and to introduce the necessary improvements, in order to implement the activities foreseen in the various components of the national communication, more effectively, to achieve the objectives of the Convention. On the other hand, the NDC 2018-2021 partnership plan contains the needs (financial, technological and technical) identified by the sectors with actions and/or responsibilities in the NDC for its implementation in the context of climate action.

Although the country has prepared its first BUR, the need for capacity building of national staff for the improvement of the next reports remains pressing. There are many aspects that still need to be improved, both in the collection of activity data and the design of the surveys or instruments used for this purpose, and also in their analysis, including the emission factors that are used for GHG estimation. In order that the next reports reflect the reality of the country, it is imperative that the emission factors used are calculated locally.

The other aspect to take into account in the harmonization of data collection is the institutional arrangement. The one currently in force only allows for the collection of basic data. However, the identification and formalization of an institution that will take care of this desideratum, not

only for the future BURs but also for the national communications, among other GHG-related reports, is pertinent.

In the energy sector, it is pertinent to train national staff in the compilation of national statistics for the sector, both by sector and by sub-sector of activity, and by type of fuel, as well as the calculation of national energy balances with a certain periodicity and categorization required by the IPCC, in addition to the determination of emission factors specific to this sector.

Being the most complex of all the sectors involved in GHG inventories, the AFOLU sector needs special attention. At the level of this sector, there is a need for capacity building in the collection, quantification and storage of activity data from biomass burning processes, organic processes resulting from soil organic matter reduction as well as soil drainage, animal population throughout the country and their characterization by types, use of animal waste in agriculture or for other purposes, use of chemical fertilizers, water pumping based on different energy sources (electric, solar, liquid fuels, among others), rice cultivation, among others, according to IPCC categories. The other areas of the AFOLU sub-sector that also need special attention are biophysical processes, particularly land cover changes due to net annual biomass growth and removals from existing forest and non-forest plantation areas, and possible regrowth of biomass in abandoned areas. The latter areas need to be assessed on a regular basis because of the effect they have on GHG estimates.

In IPPU, it is necessary to demystify the secrecy that industries raise when seeking to know the technology they use in the different manufacturing processes of their products. This secrecy makes it somewhat difficult to design mitigation measures to stop emissions resulting from the use of obsolete technology. The other aspect to take into account in this sector is the characterization of the industrial waste resulting from the different sub-sectors of the sector and the treatment that is given to it.

For the waste sector, capacity building will have to be done at various levels, from hospitals, industry, municipalities, among other sectors, in terms of characterization, quantification and data storage of the waste that is generated in each of them. It is only with this type of information that one can determine national emission factors that can allow for the elaboration of BURs that are close to the reality of the country.

Capacity-building needs to conduct greenhouse gas inventories

Overall, in the national GHG inventories component, three main constraints related to the GHG inventory preparation and updating process were identified: poor sectoral statistics, lack of specific emission factor sectors, and poor knowledge of GHG inventory techniques. On the other hand, lack of knowledge and skills in inventory techniques suggests that it is the most limiting factor of all. Table 6.1 presents in more detail the main constraints and capacity development needs, including target institutions in the sectors of energy; industrial processes and product use; agriculture, forestry and other land use; and waste.

Capacity building needs for climate change adaptation

In the climate change adaptation component, several constraints and capacity development needs were also identified. The most common constraints related to the eight adaptation sectors covered include lack of data from different sectors; and lack of knowledge about climate change, its impacts and other associated issues. In this context, it is suggested that there be a comprehensive training/qualification program for national technicians in formulating and managing projects that contribute to the mobilization of climate and other funds, including institutional capacity building, particularly in developing a data infrastructure to support adaptation activities. It is also suggested that there should be training and capacity building programs on more sector-specific aspects and needs. Table 6.2 presents in more detail the main constraints and needs for training and capacity development, including target institutions in the sectors of energy; infrastructure; coastal areas; agriculture; livestock and pasture; forestry; fisheries; biodiversity and waste.

Capacity building needs for climate change mitigation

Overall, the climate change mitigation component, identified several constraints and capacity development needs. The most common constraint related to all four mitigation sectors is the "weak capacity to design projects to access climate funds." No less important is also the "lack of databases/statistics". In this context, it is suggested that there should be a comprehensive training/capacity building program for national technicians in formulating and managing projects to help mobilize climate and other funds, including institutional capacity building, particularly in developing a data infrastructure to support mitigation activities. It is also suggested that there should be training and capacity building programs on more specific aspects of each sector's needs. Table 6.3 presents in more detail the main capacity building constraints,

including target institutions in the energy; industrial processes; agriculture, forestry and other land uses; and waste sectors.

Capacity building needs for technology transfer

In the context of technology transfer, several constraints and capacity development needs were also identified as follows:

(i) in the infrastructure and coastal zones sector (flood early warning system; beach resurfacing and mangrove restoration), as described in the TAP Infrastructure and Coastal Zones (ICZ) report (2018). Technology options in this sector highlight the lack of trained technicians at the national level to implement technology; limited institutional and organizational capacity for technology implementation, as the most common constraints encountered in technology implementation. Table 6.4 presents in more detail the main constraints and capacity development needs, including the target institutions identified in the ICZ sector;

(ii) In the electricity generation subsectors (solar PV systems; conventional gas combined cycle; and regular scale hydro/hydro turbines); and solid waste management and treatment (landfill with biogas production; bioreactor landfill for biogas production; and pyrolysis), as described in the TAP Energy & Waste report (2018). Technology options in the electricity generation and solid waste management and treatment subsectors highlight the shortage of specialists and the difficulty in hiring skilled labour as the most common constraints encountered in implementing technologies in the electricity generation and solid waste management and treatment subsectors. Table 6.5 (electricity generation) and Table 6.6 (waste) present in more detail the main constraints and capacity development needs including the target institutions identified in these sectors;

(iii) In the agriculture sector (seed production and conservation and promotion of low-cost seed and grain storage systems; conservation agriculture and rainwater harvesting and conservation), as described in the TAP Agriculture report (2018). The technology options in the agricultural sector highlight the lack of experts, lack of practices and technical weakness; lack of integration of agricultural content and specialized techniques in the courses offered by most agricultural training institutions, as the most common constraints encountered in the implementation of technologies. Table 6.7 presents in more detail the main constraints and capacity development needs, including the target institutions identified in this sector.

Capacity building needs for research and systematic observation

Both observations and research present as main constraints the low level of funding for these areas and the lack of qualified human resources. It is necessary to rethink the vast dimension and complexity of environmental problems in the country and the doubled gains that can result from investment in the massive training of qualified human resources in the areas of research and observation, particularly those institutions that are data providers or users of meteorological, hydro meteorological, hydrographic, agrometeorological, and public health observations, including equipment for processing and analysis of the observed data.

As an example, an early warning system to be effective and able to adequately inform requires an observation network with good coverage, in addition to adequate infrastructure and platforms capable of transmitting data in real time. Despite its geographical location prone to extreme destructive events, Mozambique still relies heavily on external support to make its forecasts. There is also a lack of climate, hydrological, and weather forecast models that include skilled human resources to work with these platforms. In most cases, this working environment and facilities require enormous financial resources and adequate international assistance, which will require mobilization support.

The tables in Mozambique's Second National Communication, of which this report is a summary, which are listed below, present more information: Table 6.8 shows the main constraints and capacity development needs in the targeted institutions, namely INAM, DNGRH, IIAM, IIP, INAHINA and ONS; Tables 6. Tables 6.9 - 6.10 show the actions undertaken at the ministerial and sectoral levels; and Table 6.11, the list of projects to be developed and financed and to be included in the implementation of Mozambique's Nationally Determined Contribution (NDC).

5.3.4 SUPPORT RECEIVED

Capacity building, technological and technical support received

During the period 2017-2020, Mozambique received support from several partners through more than 200 projects, B – Appendix 2. A key support received by Mozambique during this period was **LoCAL - Local Climate Adaptive Living Facility**, which helps local government authorities in least developed countries and other developing countries access the climate finance, capacity-building and technical support they need to respond and adapt to climate

change. A standard, internationally recognized mechanism designed and hosted by the UN Capital Development Fund (UNCDF), LoCAL promotes climate-change-resilient communities and local economies. LoCAL is owned by participating countries, most of which are LDCs.

LoCAL supports LDCs in reviewing and implementing Nationally Determined Contributions and National Adaptation Plans as well as securing direct access to international finance from the Adaptation Fund and Green Climate Fund for further deployment of the mechanism.

LoCAL, originally designed by the UN Capital Development Fund, is strongly supported with funding from the European Union and Member States, in particular Sweden.

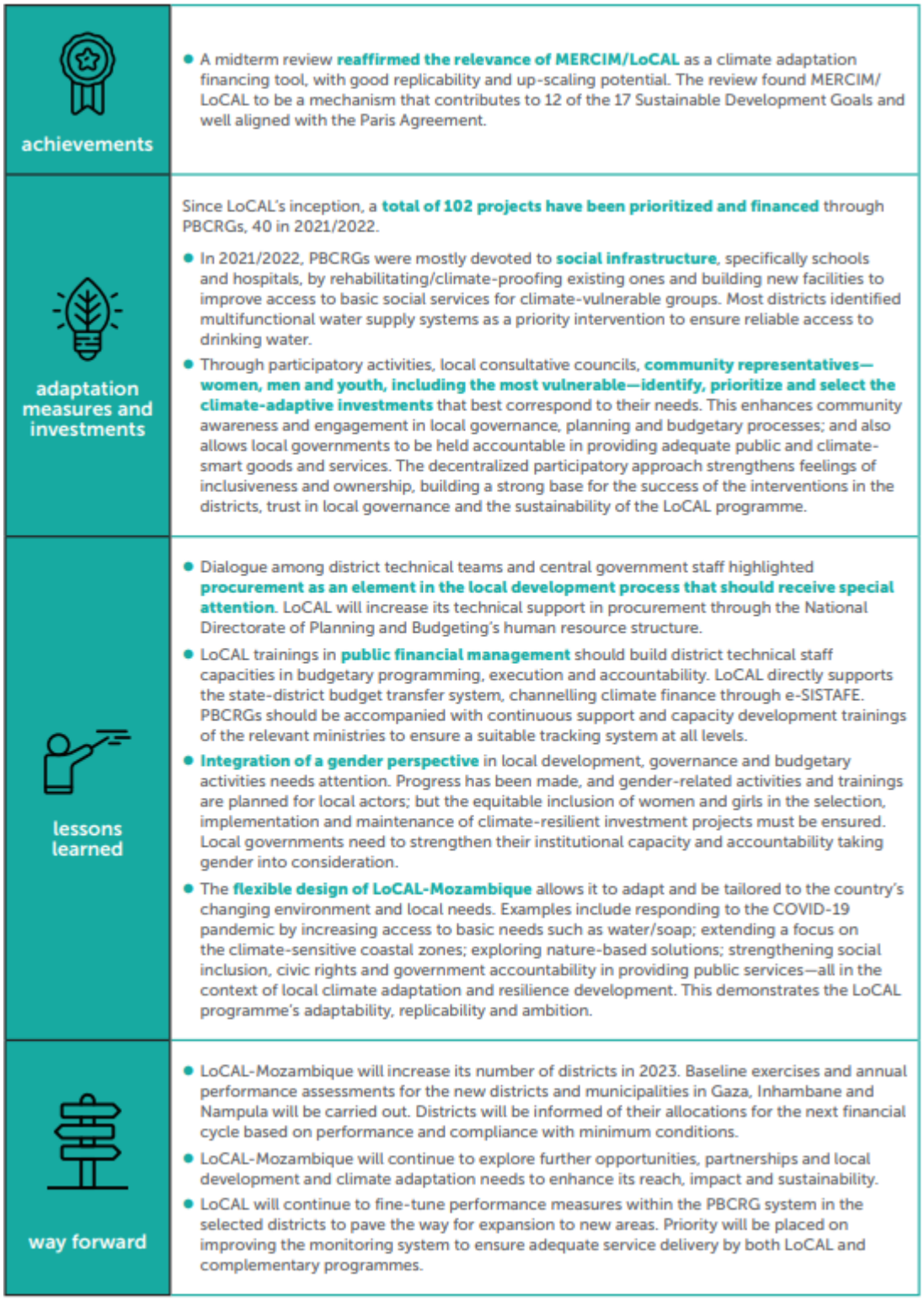

Figure 5.1 – Mozambique country profile in the LoCAL final report on second period of global expansion 2019–2022[4]

[4] https://www.uncdf.org/article/8328/local-report-2019-2022

Financial support received between 2017 and 2020

Financial and capacity building support received for the preparation of the BUR

This report was prepared with national resources, with the financial and technical support provided by the UNDP's Climate Promise, including by the Lusophone Cluster on Transparency (UNDP, PATPA and CBIT-GSP), with funding provided by the Belgium Government.

The financial support was used to hire consultants for the preparation of the GHG inventory and for hosting of the team retreats.

The technical support consisted in the review of GHG emissions estimates, identification of areas of improvement and recommendation on best ways to address barriers and gaps.

Technical support was also key in determining feasible options in relation to monitoring implementation of mitigation action as well as with regards to tracking financial support received.

The Lusophone Cluster on Transparency also provided technical assistance in the compilation of the BUR, prior to the BUR team retreat for the preparation of the final draft and in the review of the final draft.

The REDD+ technical annex was prepared with the support of GIZ.

A- Appendix 1: TECHNICAL ANNEX OF REDD+

(Add appendix)

B- Appendix 1. Support received (2017-2021)

Nr.	Funding source	Project Name	Total Financing (USD)	Sector	Financial Instrument	Climate Use	Year
1	Bezos Earth Fund	ACCELERATING RESTORATION IN KENYA, MADAGASCAR, AND MOZAMBIQUE	1,741,528	Biodiversity	Grant	Mitigation	2020
2	Margaret A. Cargill Foundation	SUPPORT THE WASH PROGRAM AND FOOD SECURITY RECOVERY IN NORTHERN MOZAMBIQUE	1,058,554	Water	Grant	Adaptation	2019
3	William & Flora Hewlett Foundation	UNITED NATIONS ENVIRONMENT PROGRAMME	98,084	Transport	Grant	Mitigation	2017
4	AfDB	AGRICULTURAL VALUE CHAIN AND YOUTH EMPOWERMENT PROJECT – (AVACYEP)	6,651,760	Agriculture	Grant	Cross-cutting	2018
5	AfDB	DROUGHT RECOVERY AND AGRICULTURE RESILIENCE PROJECT (DRARP)	15,220,373	Agriculture	Grant	Cross-cutting	2018
6	AfDB	MAPUTO FLOOD RISK MANAGEMENT	2,176,953	Water	Grant	Cross-cutting	2017
7	AfDB	MASSINGIR DAM EMERG REHAB PROJECT SLII	7,469,240	Agriculture	Grant	Cross-cutting	2018
8	AfDB	MOSAMBIQUE ELEQTRA NAMAACHA WIND	1,109,060	Energy	Grant	Cross-cutting	2017
9	AfDB	UPGRADING OF ROMA-NAMBUNGALE (35 KM)	5,127,061	Transport	Grant	Cross-cutting	2020

10	EIB	MOZAMBIQUE CLIMATE RESILIENT FL	100,205,177	Water	Debt instrument	Cross-cutting	2020
11	EIB	PSI INVESTMENT LOAN	6,656,854	Energy	Debt instrument	Cross-cutting	2019
12	IsDB	ISBD EMERGENCY SUPPORT TO MOZAMBIQUE IN RESPONSE TO THE TROPICAL CYCLONE IDAI	328,445	Emergency Response	Grant	Cross-cutting	2019
13	IsDB	TEMANE TRANSMISSION PROJECT -TTP	8,853,408	Energy	Debt instrument	Cross-cutting	2019
14	WB	MAPUTO URBAN TRANSFORMATION PROJECT	56,057,034	Cross-cutting	Grant	Cross-cutting	2020
15	WB	MOZAMBIQUE - MALAWI REG. INTERCONNECTOR	6,897,352	Cross-cutting	Grant	Cross-cutting	2019
16	WB	MOZAMBIQUE CONSERVATION AREAS FOR BIODIVERSITY AND DEVELOPMENT - PHASE 2	26,588,663	Cross-cutting	Grant	Cross-cutting	2018
17	WB	MOZAMBIQUE DISASTER RISK MANAGEMENT AND RESILIENCE PROGRAM	98,533,602	Cross-cutting	Grant	Cross-cutting	2019
18	WB	MOZAMBIQUE FOREST INVESTMENT PROJECT	16,803,942	Cross-cutting	Debt instrument	Cross-cutting	2017
19	WB	MOZAMBIQUE LAND ADMINISTRATION PROJECT (TERRA SEGURA)	20,257,722	Cross-cutting	Grant	Cross-cutting	2018
20	WB	MOZAMBIQUE URBAN DEVELOPMENT AND DECENTRALIZATION PROJECT	38,565,794	Governmen t	Grant	Cross-cutting	2020
21	WB	MOZAMBIQUE URBAN SANITATION PROJECT	70,071,818	Cross-cutting	Grant	Cross-cutting	2019
22	WB	MOZAMBIQUE: CYCLONE IDAI & KENNETH EMERGENCY RECOVERY AND RESILIENCE PROJECT	51,361,726	Cross-cutting	Grant	Cross-cutting	2020
23	WB	MZ - EMERGENCY RESILIENT RECOVERY PROJECT	30,643,226	Cross-cutting	Grant	Cross-cutting	2017
24	WB	MZ CYCLONE EMERGENCY RECOVERY PROJECT	93,536,854	Cross-cutting	Grant	Cross-cutting	2019
25	WB	MZ-AGRICULTURE NRM PROJECT	25,277,153	Cross-cutting	Grant	Cross-cutting	2019
26	WB	POWER EFFICIENCY AND RELIABILITY IMPROVEMENT PROJECT (PERIP)	98,151,826	Energy	Grant	Cross-cutting	2017

27	WB	PROENERGIA	21,590,902	Energy	Grant	Cross-cutting	2019
28	WB	SMALLHOLDER IRRIGATED AGRICULTURE AND MARKET ACCESS PROJECT- IRRIGA_1	28,135,128	Agriculture	Grant	Cross-cutting	2018
29	WB	TEMANE REGIONAL ELECTRICITY PROJECT-TREP	64,769,421	Energy	Grant	Cross-cutting	2019
30	Austria	CLIMATE SMART AGRICULTURE AND WATER IN SOFALA (CSAW SOFALA)	1,488,876	Agriculture	Grant	Cross-cutting	2020
31	Austria	DISASTER PREPAREDNESS IN MOZAMBIQUE	150,285	Disaster Prevention	Grant	Adaptation	2017
32	Austria	MANGROVES - ENVIRONMENT PROTECTION AND RENOWABLE ENERGY	9,890	Agriculture	Grant	Cross-cutting	2019
33	Austria	SOFALA PROVINCE WATER, ENERGY, AND FOOD SECURITY PROJECT (SWEF)	1,567,238	Agriculture	Grant	Cross-cutting	2020
34	Austria	STRENGTHENING OF DRR SYSTEMS AND AWARENESS TO REACH MOST VULNERABLE POPULATION GROUPS	88,616	Disaster Prevention	Grant	Adaptation	2018
35	Belgium	CLIMATE-RESILIENT FOOD SECURITY FOR WOMEN AND MEN SMALLHOLDERS IN MOZAMBIQUE THROUGH INTEGRATED CLIMATE RISK MANAGEMENT	3,028,389	Agriculture	Grant	Adaptation	2019
36	Belgium	CYCLONE IDAI: HUMANITARIAN ACTION IN MOZAMBIQUE	308,619	Other	Grant	Adaptation	2019
37	Belgium	FUNAE- INVESTMENT IN RENEWABLE ENERGY FOR ECONOMIC AND SOCIAL DEVELOPMENT IN RURAL MOZAMBIQUE	12,171,917	Energy	Grant	Cross-cutting	2020
38	Belgium	STRENGTHENING THE RESILIENCE OF THE MOZAMBIQUE HEALTH SYSTEM TO CLIMATE CHANGE IMPACTS	912,894	Health	Grant	Adaptation	2020
39	Belgium	USING RENEWABLE ENERGY FOR SUSTAINABLE ACCESS TO SAFE AND AFFORDABLE DRINKING WATER IN GAZA PROVINCE	977,431	Water	Grant	Cross-cutting	2019
40	Canada	BUILDING ECOSYSTEM SERVICES FOR POVERTY ALLEVIATION	32,554	General Environment	Grant	Cross-cutting	2020

41	Canada	CLIMATE AND RESILIENCE - OPERATING COSTS FOR CAPACITY BUILDING	7,392	General Environment	Grant	Cross-cutting	2019
42	Denmark	COUNTRY EXIT AND CONSOLIDATION PROGRAM. ENVIRONMENT AND CLIMATE CHANGE.	4,779,932	General Environment	Grant	Cross-cutting	2017
43	Denmark	ENVIRONMENTAL POLICY AND ADMINISTRATIVE MANAGEMENT	4,627,216	General Environment	Grant	Cross-cutting	2017
44	EU Institutions (excl. EIB)	MOZAMBIQUE ENERGY PROJECT PREPARATION FACILITY	13,329,998	Energy	Grant	Mitigation	2017
45	EU Institutions (excl. EIB)	GCCA+ BUILDING LOCAL CLIMATE RESILIENCE IN MOZAMBIQUE	6,347,618	General Environment	Grant	Cross-cutting	2017
46	EU Institutions (excl. EIB)	RECOVERY AND RESILIENCE PROGRAMME IN MOZAMBIQUE	17,211,739	Health	Grant	Adaptation	2019
47	EU Institutions (excl. EIB)	RECOVERY AND RESILIENCE PROGRAMME IN MOZAMBIQUE	68,846,956	Other	Grant	Adaptation	2019
48	EU Institutions (excl. EIB)	SUSTAINABLE INVESTMENTS AND JOBS FOR MOZAMBIQUE	11,952,184	Water	Grant	Cross-cutting	2020
49	EU Institutions (excl. EIB)	SUSTAINABLE INVESTMENTS AND JOBS FOR MOZAMBIQUE	35,856,553	Transport	Grant	Cross-cutting	2020
50	EU Institutions (excl. EIB)	SUSTAINABLE INVESTMENTS AND JOBS FOR MOZAMBIQUE	71,713,105	Energy	Grant	Cross-cutting	2020
51	EU Institutions (excl. EIB)	PROMOVE ENERGIA	100,808,827	Energy	Grant	Mitigation	2020

52	Finland	UNDP POST-CYCLONE RECOVERY FACILITY	2,461,352	Cross-cutting	Grant	Adaptation	2019
53	France	CONSTRUCTION D'UNE CENTRALE SOLAIRE PHOTOVOLTAÏQUE DE 41 MWC AU MOZAMBIQUE	20,882,714	Energy	Debt instrument	Mitigation	2019
54	France	EAU ET ASSAINISSEMENT-TRAITEMENT DES DÉCHETS	5,039	Water	Grant	Cross-cutting	2017
55	France	FAPS MOBILITÉ URBAINE ET INFRASTRUCTURES (MOA LOCALE), ET FAPS DÉCHETS NAMA (MOA AFD) + DÉLÉGATIONS FONDS NAMA DPP (MOA AFD)	615,831	Other	Grant	Mitigation	2019
56	France	NEOEN METORO CENTRAL SOLAR METORO S.A	20,884,484	Energy	Debt instrument	Mitigation	2019
57	France	P185 - MOZAMBIQUE - PROJET - AUTRES FONDS REÇUS PAR LE MEAE HORS PROGRAMME 209 - COOPÉRATION MARITIME ET ENJEUX CLIMATIQUES ET ENVIRONNEMENTAUX	17,115	General Environment	Grant	Cross-cutting	2019
58	France	P209 - AIDE-PROJET - CLIMAT - PISCCA - PRÉVENTION DES RISQUES LIÉS AU CHANGEMENT CLIMATIQUE LE LONG DES FLEUVES NAGARA ET NIPIODE	12,496	General Environment	Grant	Cross-cutting	2020
59	France	P209 - AIDE-PROJET - CLIMAT - PISCCA - RECYCLAGE ET GESTION DURABLE DES DÉCHETS DANS LES QUARTIERS PÉRIPHÉRIQUES DE BEIRA	14,041	General Environment	Grant	Cross-cutting	2020
60	France	P209 - AIDE-PROJET - CLIMAT - PISCCA - RESTAURATION ET PROMOTION DE LA MANGROVE DANS LES QUARTIERS PÉRIPHÉRIQUES DE QUELIMANE	1,198	General Environment	Grant	Cross-cutting	2020
61	France	P209 - AIDE-PROJET - CLIMAT - PISCCA - REUTILISATION DES EXCRETAS BOVINS POUR LA PRÉSERVATION DE L'ENVIRONNEMENT ET LA PRODUCTION D'ÉNERGIE	12,680	Other	Grant	Cross-cutting	2020
62	France	P209 - AIDE-PROJET - CLIMAT - PISCCA -EDUCATION ENVIRONNEMENTALE ET ÉCOLOGIQUE DANS LES ÉCOLES DE MAPUTO ET MATOLA	15,590	General Environment	Grant	Cross-cutting	2020

63	France	P209 - AIDE-PROJET - ECONOMIE - PISCCA - INSERTION ÉCONOMIQUE DES FEMMES SANS EMPLOI ET DES FILLES DESCOLARISÉES À MOCUBA	6,036	Other	Grant	Cross-cutting	2020
64	France	P209 - AIDE-PROJET - GOUVERNANCE - PISCCA	14,041	Agriculture	Grant	Cross-cutting	2020
65	France	P209 - OBJECTIFS DE DÉVELOPPEMENT DURABLE (P 209) - CLIMAT - LIVRE IBO - UNE ÎLE ENTRE NATURE ET CULTURE	8,736	General Environment	Grant	Cross-cutting	2020
66	France	P209 - OBJECTIFS DE DÉVELOPPEMENT DURABLE (P 209) - EDUCATION - LANCEMENT RAPPORT CENTRO TERRA VIVA - PIÈCE DE THÉÂTRE CENTRO TERRA VIVA	1,028	General Environment	Grant	Cross-cutting	2020
67	France	PRÉVENTION DES CATASTROPHES ET PRÉPARATION À LEUR SURVENUE-PRÉVENTION DES CATASTROPHES ET PRÉPARATION À LEUR SURVENUE	136,062	Disaster Prevention	Grant	Cross-cutting	2017
68	France	PROJET DE CONSERVATION DE LA BIODIVERSITÉ ET DE DÉVELOPPEMENT DURABLE COMMUNAUTAIRE DANS L'AIRE DE CONSERVATION DE CHIMANIMANI	3,595,024	General Environment	Grant	Mitigation	2020
69	Germany	ADAPTATION TO CLIMATE CHANGE	620,367	Water	Grant	Adaptation	2019
70	Germany	COASTAL CITIES AS SUSTAINABLE ECONOMIC HUBS	19,134,120	Other	Grant	Adaptation	2020
71	Germany	CONSTRUCTION OF A LEARNING CENTRE FOR AGRICULTURE IN MOZAMBIQUE	19,133	Agriculture	Grant	Adaptation	2018
72	Germany	GET FIT PROGRAMME MOZAMBIQUE (VP)	31,018,370	Energy	Grant	Mitigation	2019
73	Germany	IMPROVEMENT OF THE LIVING CONDITIONS OF PEOPLE AFFECTED BY THE CYCLONE IDAI	496,294	Other	Grant	Adaptation	2019
74	Germany	IMPROVING SOCIO ECONOMIC LIVING CONDITIONS OF FAMILIES IN MANHICA	225,547	Agriculture	Grant	Adaptation	2018
75	Germany	MOZAMBIQUE COUNTRY STRATEGIC PLAN 2019	13,335,369	Other	Grant	Adaptation	2020
76	Germany	SUPPORT RURAL COMMUNITIES TO ENHANCE SELF-PROTECTION AGAINST THE IMPACTS OF CLIMATE-CHANGE IN MOSAMBIK	1,680,250	Disaster Prevention	Grant	Adaptation	2017

77	Germany	SUPPORTING FAMILIES IN THEIR EFFORTS TO CLIMATE CHANGE ADAPTATION IN RURAL COMMUNITIES OF INHAMABANE	730,022	Agriculture	Grant	Adaptation	2020
78	Ireland	AQUAPONICS FOR WOMEN PROTECTION-HOMS FUND	5,939	Agriculture	Grant	Adaptation	2020
79	Ireland	DISBURSEMENT DESIGN LATFORM CLIMATE CHANGE	59,390	Governmen t	Grant	Cross-cutting	2020
80	Ireland	DISBURSEMENT FOR AGRICULTURE AND FISHING DPAGR	136,596	Agriculture	Grant	Cross-cutting	2020
81	Ireland	FOOD SECURITY AND NUTRITION: SOCIAL PROTECTION & CLAMATE LINKAGES - MABOTE 2017 FULL TRANCHE	337,829	General Environme nt	Grant	Adaptation	2017
82	Ireland	HUMAN DEVPT., CONSERVATION & SUSTAINABLE ECONMIC	1,187,793	General Environme nt	Grant	Cross-cutting	2020
83	Ireland	INCREASE CAPACITY AND RESILIENCE OF POOR PEOPLE: FOOD SECURITY & NUTRITION	737,081	Business	Grant	Cross-cutting	2017
84	Ireland	INCREASE CAPACITY AND RESILIENCE OF POOR PEOPLE: SUPPORT OF THE PILOT PHASE OF SOLAR GIRAFFE	8,272	Energy	Grant	Mitigation	2019
85	Ireland	'PRIORIZE INITIATIVE: LINKING SOCIAL PROTECTION AND CLIMATE ADAPTATION TO ADDRESS POVERTY AND CLIMATE RISKS' IN MABOTE, INHAMBANE PROVINCE	609,371	General Environme nt	Grant	Adaptation	2018
86	Ireland	STRENGHTENING GREEN ENTREPRESENEURSHIP SUP. ECOSYS	9,740	Industry	Grant	Cross-cutting	2020
87	Ireland	UTILISING S.POTATO FOR NUTRITION DEVLP. IN IBANE	356,338	Agriculture	Grant	Cross-cutting	2020
88	Italy	AGRI URB - URBAN AGRICULTURE TO IMPROVE FOOD SECURITY IN THE INFORMAL SETTLEMENTS OF MAPUTO	356,697	Cross-cutting	Grant	Cross-cutting	2020
89	Italy	AGRI-SMART: SUPPORTING THE RESILIENT AND INCLUSIVE DEVELOPMENT OF THE DISTRICTS OF LUGELA DERRE NAMARROI AND GILÉ IN ZAMBEZIA - MOZAMBIQUE	2,174,051	Cross-cutting	Grant	Cross-cutting	2018

90	Italy	BEYOND SUBSISTENCE. PROMOTION OF SUSTAINABLE AGRICULTURAL SUPPLY CHAINS IN GORONGOSA AND MARÍNGUÈ THROUGH SUPPORT OF PRODUCERS' ASSOCIATIONS	1,952,064	Agriculture	Grant	Cross-cutting	2018
91	Italy	BOA_MA_NHA, MAPUTO!	29,535	Agriculture	Grant	Adaptation	2020
92	Italy	CAREVOLUTION: INNOVATION OF COMMUNITY HEALTH SERVICES IN THE PROVINCE OF INHAMBANE	383,903	Health	Grant	Adaptation	2020
93	Italy	CAREVOLUTION:INNOVATION OF THE COMMUNITY HEALTH SERVICES IN THE PROVINCE OF INHAMBANE. BEST PRACTICES IN NATIONAL HEALTH AND NUTRITION SERVICES	19,643	Cross-cutting	Grant	Adaptation	2020
94	Italy	CLIMATE CHANGE INDUCED DISASTER MANAGEMENT IN AFRICA - CIDMA	112,681	Education	Grant	Cross-cutting	2019
95	Italy	FOOD SECURITY: STRENGTHENING THE AGRO-ZOOTECHNICAL SECTOR IN THE PROVINCES OF GAZA AND SOFALA - SALSA	2,170,008	Agriculture	Grant	Cross-cutting	2018
96	Italy	IMPLEMENTATION OF AN OPERATIONAL WRF METEO-MODEL SIMULATION AT 4 KM GRID SPACING, COVERING THE MOZAMBIQUE AREA	3,020	Disaster Prevention	Grant	Adaptation	2019
97	Italy	INTEGRATED FOOD SECURITY & LIVELIHOODS (FSL) AND MATERNAL, NEW-BORN AND CHILD HEALTH (MNCH) PROJECT IN GAZA PROVINCE, MOZAMBIQUE	1,344,418	Cross-cutting	Grant	Adaptation	2020
98	Italy	LIMPAMOS MOZAMBIQUE: PROGRAM TO STRENGTHEN THE URBAN SOLID WASTE MANAGEMENT IN THE CITIES OF BEIRA AND NAMPULA	1,661,399	Cross-cutting	Grant	Cross-cutting	2019
99	Italy	MAIS PEMBA: A CITY TO CITY AND MULTISTAKEHOLDER APPROACH FOR AN INTEGRATED, SUSTAINABLE AND INCLUSIVE URBAN DEVELOPMENT OF THE CITY OF PEMBA	14,166	Cross-cutting	Grant	Cross-cutting	2020
100	Italy	MANAGEMENT PLAN OF QUIRIMBAS BIOSPHERE - MAP QUIBO	118,899	General Environment	Grant	Cross-cutting	2020

101	Italy	MEDICAL ASSISTANCE, HYGENE, WATER AND FOOD SECURITY IN THE DISTRICTS OF BÚZI AND CHIBABAVA TO THE VULNERABLE POPULATION HIT BY THE CYCLONE IDAI	14,268	Emergency Response	Grant	Adaptation	2020
102	Italy	MONITORAGGIO DELL'INIZIATIVA ILUMINA: ACCESSO ALL'ENERGIA PER LO SVILUPPO LOCALE E L'EMPOWERMENT DELLE DONNE	3,144	Energy	Grant	Cross-cutting	2020
103	Italy	MOZ-RESILIENT - POST-CYCLONE EMERGENCY. LET'S REBUILD BETTER. RESILIENT SCHOOLS AND SAFE WATER FOR THE CHILDREN OF THE QUIRIMBAS ISLANDS	18,585	Education	Grant	Adaptation	2020
104	Italy	MULTI-DONOR FUND TO SUPPORT THE MOZAMBICAN NATIONAL HEALTH SYSTEM - PROSAUDE III	594,496	Health	Grant	Adaptation	2020
105	Italy	PARTICIDADE: PARTICIPATED URBAN PLANNING OF CITY SERVICES AND EDUCATIONAL AND RESILIENT COMMUNITIES IN MOZAMBIQUE	607,862	Cross-cutting	Grant	Cross-cutting	2018
106	Italy	PRODUCTION AND SALE OF EFFICIENT COOK STOVE IN THE URBAN AREA OF MAPUTO	182,227	Cross-cutting	Grant	Mitigation	2018
107	Italy	PROMOTING FOOD SECURITY IN THE BACKGROUND OF THE CLIMATE CHANGE	47,560	Education	Grant	Adaptation	2020
108	Italy	QUELIMANE SMART: SUSTAINABILITY, MARKETS, AGRICULTURE, REQUALIFICATION, TRAINING	35,333	Cross-cutting	Grant	Cross-cutting	2020
109	Italy	RESILIENCE AND CLIMATE CHANGES	41,413	Agriculture	Grant	Mitigation	2017
110	Italy	RESOURCE INNOVATION AND DEVELOPMENT FOR THE CONSERVATION AREAS (RINO)	3,668,509	Tourism	Grant	Cross-cutting	2019
111	Italy	RIGENERA: INTEGRATED REDEVELOP OF CHAMANCULO C NEIGHBORHOOD IN MAPUTO - DIRECT MANAGEMENT	772,117	Water	Grant	Cross-cutting	2018
112	Italy	SAFARI NJEMA - FROM PARATRANSIT MOBILITY TO MOBILITY POLICIES THROUGH BIG DATA ANALYSIS	23,505	Transport	Grant	Cross-cutting	2020
113	Italy	SUSTAINABLE RURAL DEVELOPMENT TO IMPROVE FOOD SECURITY AND NUTRITION OF THE VULNERABLE COMMUNITIES OF MAQUIVAL	311,998	Agriculture	Grant	Adaptation	2020

114	Japan	RURAL ROADS AND JOBS: RESTORING ACCESS AND IMPROVING RESILIENCE IN MANICA PROVINCE IN THE AFTERMATH OF CYCLONE IDAI MOZAMBIQUE THIS PROPOSED PROJECT	525,924	Other	Grant	Adaptation	2020
115	Japan	TC AGGREGATED ACTIVITIES	11,501,151	Cross-cutting	Grant	Cross-cutting	2017
116	Japan	THE FOOD ASSISTANCE PROGRAMME	3,628,328	Other	Grant	Adaptation	2020
117	Japan	THE PROJECT FOR INSTALLATION OF SOLAR POWER FOR METORO OPERATING THEATRE, LABORATORY AND MATERNITY WARD	76,098	Health	Grant	Cross-cutting	2020
118	Korea	CAPACITY BUILDING FOR MAINTENANCE OF METEOROLOGICAL INSTRUMENTS AND EARLY WARNING SYSTEM	19,279	General Environment	Grant	Cross-cutting	2019
119	Korea	ENVIRONMENT MANAGEMENT MASTER PLAN PROJECT	815,695	General Environment	Grant	Cross-cutting	2017
120	Korea	HUMANITARIAN ASSISTANCE TO RECOVER THE DAMAGE FROM THE CYCLONE IDAI	90,960	Emergency Response	Grant	Adaptation	2019
121	Korea	KOICA-UNISDR MAINSTREAMING CLIMATE CHANGE ADAPTATION AND DISASTER RISK REDUCTION FOR SUSTAINABLE DEVELOPMENT(2018)	44,887	Other	Grant	Cross-cutting	2018
122	Korea	MASTER`S DEGREE PROGRAM IN WATER RESOURCES MANAGEMENT(17-19)	42,236	Water	Grant	Adaptation	2017
123	Korea	RELIEVING DAMAGES OF CYCLONE IDAI IN MOZAMBIQUE_MOZAMBIQUE RED CROSS	317,988	Emergency Response	Grant	Cross-cutting	2019
124	Korea	RELIEVING DAMAGES OF CYCLONE KENNATH IN MOZAMBIQUE_FGC	529,979	Emergency Response	Grant	Cross-cutting	2019
125	Korea	RELIEVING DAMAGES OF CYCLONE KENNATH IN MOZAMBIQUE_WFP	317,988	Emergency Response	Grant	Cross-cutting	2019
126	Netherlands	AECF REACT MZ	3,622,544	Energy	Grant	Mitigation	2020
127	Netherlands	MAP IMPLEM. BEIRA MASTERPLAN	3,970,951	Water	Grant	Adaptation	2018
128	Netherlands	MAP UNDP MOZAMBIQUE CYCLONE MDTF	3,150,185	Other	Grant	Adaptation	2019
129	Netherlands	MAP/ MARAZA LAND DEVELOPMENT PILOT PROJ.	2,876,553	Water	Grant	Adaptation	2019

130	Norway	ENERGY ACCESS AND CLIMATE POLICY IN MOZAMBIQUE	1,580,343	Energy	Grant	Cross-cutting	2017
131	Norway	INCLUSIVE HUMANITARIAN ACTION AND RECOVERY IN MOZAMBIQUE	2,492,285	Other	Grant	Adaptation	2019
132	Norway	PEACE CORPS, FK NORWAY, PERSONNEL EXCHANGE	15,885	Agriculture	Grant	Mitigation	2017
133	Norway	POVERTY REDUCTION IN THE GORONGOSA NATIONAL PARK BUFFER ZONE	10,886,239	Other	Grant	Adaptation	2020
134	Norway	RURAL FOOD SECURITY PROGRAMME	245,734	Other	Grant	Adaptation	2018
135	Norway	SUPPORT TO A SUSTAINABLE AND EQUITABLE IMPROVEMENT OF SMALL SCALE FARME	6,282,991	Agriculture	Grant	Adaptation	2018
136	Portugal	ACCESS TO SUSTAINABLE ENERGY IN TITIMANE. INTEGRATED RURAL DEVELOPMENT COMPONENT.	86,150	Energy	Grant	Mitigation	2017
137	Portugal	BIKE PATH IMPLEMENTATION	24,942	Transport	Grant	Mitigation	2020
138	Portugal	COMMUNITY ACTION PLAN FOR ADAPTATION IN MOZAMBIQUE - PACA (EX-IPPALAM)	199,143	Other	Grant	Adaptation	2018
139	Portugal	EMERGENCY MEASURES TO MINIMIZE THE EFFECTS OF DROUGHT IN THE MAPUTO METROPOLITAN AREA	665,238	Water	Grant	Adaptation	2017
140	Portugal	INSTALLATION OF PHOTOVOLTAIC SYSTEMS	419,582	Energy	Grant	Mitigation	2017
141	Portugal	MEASURES TO STRENGTHEN WATER AVAILABILITY AND INCREASE THE RESILIENCE OF WATER SUPPLY SYSTEMS UNDER CLIMATE CHANGE	1,229,254	Water	Grant	Adaptation	2018
142	Portugal	NATIONAL PLAN FOR SUPPORT OF URBAN SANITATION IN THE PERSPECTIVE OF REDUCING EMISSIONS AND CLIMATE CHANGE ADAPTION - PLASU-AC	793,522	Water	Grant	Cross-cutting	2017
143	Portugal	OUR FUTURE IS TODAY - STRENGTHENING THE FOOD AND ENVIRONMENTAL RESILIENCE OF VULNERABLE HOUSEHOLDS IN THE MATUTUÍNE DISTRICT	115,271	Disaster Prevention	Grant	Adaptation	2018
144	Portugal	SUPPORT RECOVERY OF THE AGRICULTURAL SECTOR AS A WAY TO CONTRIBUTE TO THE FOOD SECURITY OF THE POPULATIONS MOST AFFECTED BY CYCLONES IDAI AND KENNETH	451,204	Other	Grant	Adaptation	2019

145	Portugal	TRIANGULAR COOPERATION PORTUGAL / BRAZIL / MOZAMBIQUE - SUSTAINABLE COFFEE PRODUCTION IN GORONGOSA NATIONAL PARK	205,210	Agriculture	Grant	Cross-cutting	2017
146	Spain	2018 MZ PROSALUS REDUCING CHRONIC MALNUTRITION IN THE PROVINCE OF MAPUTO BY STRENGTHENING FAMILY FARMING FOR FOOD SOVEREIGNTY	3,105,888	Cross-cutting	Grant	Adaptation	2018
147	Spain	BUILDING LOCAL RESILIENCE AGAINST CLIMATE CHANGE IN MOZAMBIQUE	355,143	General Environment	Grant	Cross-cutting	2019
148	Spain	CAPACITY BUILDING ON CLIMATE CHANGE ADAPTATION FOR CHIGUBO COMMUNITIES	271,971	General Environment	Grant	Cross-cutting	2017
149	Spain	DEVELOPMENT AND TRANSFER OF A LOW COST TECHNOLOGY AND EASY USE FOR THE CONSERVATION OF WILD MUSHROOMS IN THE SOUTH OF MOZAMBIQUE	83,911	Agriculture	Grant	Cross-cutting	2018
150	Spain	DEVELOPMENT OF A FORECAST TOOL FOR SHORT AND MIDDLE TERM CLIMATE IMPACTS OF RURAL COMMUNITIES	258,001	General Environment	Grant	Adaptation	2020
151	Spain	IMPROVEMENT OF THE STANDARD OF LIVING AND FOOD SAFETY THROUGH THE AGRICULTURAL ECOLOGICAL RESILIENT DEVELOPMENT AGAINST CLIMATE CHANGE IN CABO DELGADO	495,975	Cross-cutting	Grant	Cross-cutting	2019
152	Spain	IMPROVING FOOD SECURITY AND GENERATING INCOME THROUGH EMPOWERING WOMEN	372,685	Other	Grant	Cross-cutting	2018
153	Spain	IMPROVING THE QUALITY OF LIFE OF THE RURAL POPULATION OF THE ADMINISTRATIVE POST OF ILHA JOSINA MACHE DISTRICT OF MANHICA THROUGH ACCESS TO WATER	234,654	Water	Grant	Adaptation	2018
154	Spain	MORE CLASSROOMS – IMPROVING ACADEMIC PERFORMANCE IN THE PRIMARY SCHOOL OF MACHAUCHAU	5,987	Education	Grant	Mitigation	2020

155	Spain	NOT LEAVING ANYONE OR ANY OTHER SPACE BEHIND STRENGTHENING AN INTEGRATED TERRITORIAL DEVELOPMENT FOR THE IMPLEMENTATION OF THE NEW URBAN AGENDA	248,471	Other	Grant	Adaptation	2018
156	Spain	PHASE I OF THE SOCIO ECONOMIC DEVELOPMENT PROGRAM OF THE DISTRICT OF BALAMA IN CABO DELGADO NIASSA CORRIDOR	111,773	Agriculture	Grant	Cross-cutting	2018
157	Spain	PROMOTION OF THE AGRICULTURAL AND FISHERY SUSTAINABLE TECHNOLOGICAL DEVELOPMENT IN THE PROVINCE OF MAPUTO IN THE CONTEXT OF LOCATION OF SDG	423,431	Other	Grant	Cross-cutting	2020
158	Spain	REINFORCEMENT OF TECHNICAL AND OPERATIONAL SKILLS FOR THE IMPROVEMENT OF WATER RESOURCE MANAGEMENT IN MOZAMBIQUE (AQUA – MOZ)	214,310	Water	Grant	Cross-cutting	2019
159	Spain	REINFORCEMENT OF THE DIVERSIFIED SUSTAINABLE AND RESILIENT MEANS OF LIFE IN THE DISTRICT OF NAMAACHA	362,941	Other	Grant	Cross-cutting	2020
160	Spain	STRENGTHEN THE RESILIENCE OF PEASANT WOMEN FOR FOOD SOVEREIGNTY IN THE MAGUDE DISTRICT OF MAPUTO CITY IN MOZAMBIQUE	5,314	Water	Grant	Cross-cutting	2018
161	Sweden	AECF 2017-22 RENEWABLE ENERGY AND ADAPTATION TO CLIMATE TECHNOLOGIES (REACT) - REACT - MOCAMBIQE	6,434,204	Energy	Grant	Cross-cutting	2017
162	Sweden	AFRICA LOSS AND DAMAGE NETWORK (FLAME)	32,691	Other	Grant	Adaptation	2019
163	Sweden	BEYOND THE GRID FUND FOR AFRICA - BEYOND THE GRID FUND FOR AFRICA - MOCAMBIQUE	12,259,050	Energy	Grant	Mitigation	2019
164	Sweden	COASTAL ADAPTATION AND RESILIENCE	8,403,070	General Environment	Grant	Cross-cutting	2017
165	Sweden	FOOD SECURITY THROUGH CLIMATE ADAPTATION AND RESILIENCE IN MOZAMBIQUE (FAR)	15,442,089	Agriculture	Grant	Cross-cutting	2017

166	Sweden	LOCAL CLIMATE ADAPTIVE LIVING FACILITY - LOCAL - LOCAL CLIMATE ADAPTIVE LIVING FACILITY- LOCAL	14,215,746	General Environment	Grant	Cross-cutting	2018
167	Sweden	MOZAMBIQUE ENERGY FOR ALL, MDTF - MOZAMBIQUE - ENERGY FOR ALL, MDTF	18,388,575	Energy	Grant	Cross-cutting	2019
168	Sweden	PREPARATORY PHASE: CLIMATE RESILIENT FOOD SECURITY - PREPARATORY PHASE CLIMATE RESILIENT FOOD SECURITY	215,546	Agriculture	Grant	Cross-cutting	2017
169	Sweden	RECONSTRUCTING HYDROCLIMATIC EXTREMES ACROSS SOUTH-EASTERN AFRICA USING PALEO-DATA AND CLIMATE MODELLING	171,259	General Environment	Grant	Cross-cutting	2019
170	Sweden	STRENGTHENED COLLABORATION BETWEEN SLU AND WORLDFISH TO CLIMATE PROOF THE FLOW OF NUTRITION FROM SMALL-SCALE FISHERIES IN AFRICA AND THE PACIFIC	16,019	Agriculture	Grant	Adaptation	2020
171	Sweden	WWF FRAME 2018-2020 - WWF FRAME 2018-2022	307,945	General Environment	Grant	Cross-cutting	2018
172	United States	AGRIFUTURO PROJECT.	437,175	Agriculture	Grant	Cross-cutting	2017
173	United States	ALLIANCE FOR ECOSYSTEM CONSERVATION SYSTEMS, MARKETS AND TOURISM (ECOSMART)	10,222,023	General Environment	Grant	Cross-cutting	2017
174	United States	BIODIVERSITY INTEGRATION FOR DEVELOPMENT AND ENVIRONMENTAL GAINS (BRIDGE)	181,491	Cross-cutting	Grant	Mitigation	2018
175	United States	COASTAL CITY ADAPTATION PROJECT (CCAP)	5,346,979	General Environment	Grant	Cross-cutting	2017
176	United States	FEASIBILITY STUDY - NAMAACHA WIND POWER PLANT, THROUGH WORLEYPARSONS LIMITED	1,143,360	Energy	Grant	Mitigation	2018
177	United States	FEASIBILITY STUDY - SOLAR PV PLUS STORAGE PLANT AT NACALA AIRPORT, THROUGH HDR, INC.	1,284,820	Transport	Grant	Mitigation	2018

178	United States	FEED THE FUTURE INNOVATION LAB FOR COLLABORATIVE RESEARCH ON NUTRITION IN AFRICA	869,355	Cross-cutting	Grant	Cross-cutting	2017
179	United States	FEED THE FUTURE PARTNERING FOR INNOVATION	2,188,056	Agriculture	Grant	Cross-cutting	2020
180	United States	FOOD SECURITY POLICY RESEARCH, CAPACITY AND INFLUENCE (FS-PRCI)	183,717	Agriculture	Grant	Adaptation	2020
181	United States	FOOD SECURITY SERVICE CENTER II	234,249	Agriculture	Grant	Cross-cutting	2020
182	United States	GLOBAL ENVIRONMENTAL MANAGEMENT SUPPORT II (GEMS II)	33,103	Health	Grant	Cross-cutting	2017
183	United States	INHAMBANE WIND POWER PLANT, THROUGH ENTERPRISE - UNITED STATES UNKNOWN	1,280,083	Energy	Grant	Mitigation	2020
184	United States	INTEGRATED GORONGOSA NATIONAL PARK AND BUFFER ZONE PROJECT	8,221,518	Cross-cutting	Grant	Cross-cutting	2017
185	United States	MANHIÇA WIND POWER AND STORAGE PLANT, THROUGH DNV GL ENERGY USA, INC, F/K/A DNV KEMA RENEWABLES, INC.	1,500,404	Energy	Grant	Mitigation	2020
186	United States	SMALL PROJECT ASSISTANCE (SPA) PROGRAM WITH PEACE CORPS	16,552	Health	Grant	Cross-cutting	2017
187	AF	South-South Cooperation Grant (SSC)	50,000	Public administration	Grant	Adaptation	2019
188	AF	Building urban climate resilience in south-eastern Africa (Madagascar, Malawi, Mozambique, Union of Comoros)	3,500,000	Disaster management	Grant	Adaptation	2019
189	CIF	DGM for Indigenous Peoples and Local Communities	1,600,000	Forestry	Grant	Adaptation	2017
190	CIF	Emissions Reductions in the Forest Sector Through Planted Forests with Major Investors	5,660,000	Forestry	Grant	Mitigation	2017
191	CIF	Mozambique Forest Investment Project (MozFIP)	30,000,000	Forestry	Grant	Cross-cutting	2017
192	GCF	Mozambique - Establishing and strengthening the National Designated Authority & Developing strategic frameworks for	300,000	Public administration	Grant	Cross-cutting	2018

		engagement with the GCF including the preparation of country programmes					
193	GCF	Entity Support for Mozambique	40,000	Public administration	Grant	Cross-cutting	2018
194	GCF	Implementing the NDCs to Promote Low-Carbon Growth in Mozambique	600,000	Public administration	Grant	Cross-cutting	2020
195	GEF	Towards Sustainable Energy for All in Mozambique: Promoting Market-Based Dissemination of Integrated Renewable Energy Systems for Productive Activities in Rural Areas	2,851,384	Energy	Grant	Mitigation	2017
196	GEF	Conservation Areas for Biodiversity Conservation and Development II-Additional Financing	23,115,776	Forestry	Grant	Mitigation	2020
197	LDCF	Mozambique: Building Resilience in the Coastal Zone through Ecosystem Based Approaches to Adaptation (EbA).	6,000,000	Forestry	Grant	Adaptation	2019
198	UNCTCN	Development of energy efficient appliances and equipment strategy in Mozambique	324,198	Energy	Grant	Mitigation	2019
		Total	**1,643,054,309**				

Glossary:

International Climate Funds:

- AF – Adaptation Fund
- CIF – Climate Investment Fund
- GCF – Green Climate Fund
- GEF – Global Environment Facility
- LDCF – Least Development Country Fund
- UNCTCN – United Nations Climate Technology Centre & Network

Multilateral Development Banks:

- AfDB – African Development Bank

- EIB – European Investment Bank
- IsDB – Islamic Development Bank

WB – World Bank