

# Financial Protection against Disasters in Mozambique



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The report is the result of an extensive stakeholder consultation coordinated by the MEF, including meetings with different departments of the National Institute of Disaster Management (INGC); MEF; the Ministry of Education and Human Development; the Ministry of Gender, Child and Social Action; the Ministry of Public Works, Housing and Water Resources; the Ministry of Health; the Ministry of Agriculture and Food Security; the Mozambique Institute for Cotton; the Mozambique Insurance Supervision Institute; the Ministry of Industry and Commerce and the Eduardo Mondlane University.

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# Abbreviations

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|         |                                            |
|---------|--------------------------------------------|
| ANE     | National Road Administration               |
| ARC     | Africa Risk Capacity                       |
| ARV     | Africa RiskView                            |
| AU      | African Union                              |
| CAT-DDO | Catastrophe Deferred Disbursement Option   |
| CENOE   | National Emergency Operational Center      |
| EM-DAT  | Emergency Events Database                  |
| FGC     | Disaster Fund                              |
| INAM    | National Meteorological Institute          |
| INGC    | National Institute for Disaster Management |
| ISSM    | Mozambique Insurance Supervisory Institute |
| MEF     | Ministry of Economy and Finance            |
| MPD     | Ministry of Planning and Development       |





# Executive Summary

Mozambique is prone to recurrent natural hazards, namely, droughts, earthquakes, floods, tropical storms (cyclones), and tsunamis. Sixty percent of the population lives along the coastline and are vulnerable to tropical storms.<sup>1</sup> The recurrent natural hazards, according to the National Institute for Disaster Management (INGC), have been increasing in number and magnitude since 1960.

Given the country's risk profile, the public costs related to disaster management are significant and require diverse, harmonized and long-term actions by the Government and Partners. The World Bank and the Ministry of Economy and Finance (MEF) have prepared the present study on "Financial Protection against Disasters in Mozambique" as part of a forward-thinking agenda on disaster risk management.

The objectives of this study are: (i) to analyze the current funding mechanisms for disaster management in Mozambique, (ii) to investigate the financing gaps, and (iii) to suggest next steps to be taken by the Government of Mozambique under the leadership of MEF and INGC for the preparation and implementation of a Financial Protection Strategy against Disasters. The main components of this study are:

- > A discussion about Mozambique's risk profile and the economic impacts of disasters in the country in the last twenty years;
- > A review of the current disaster budgetary process, which includes case studies on financing gaps for post-disaster emergency response and reconstruction phases;
- > An overview of the disaster insurance market, focusing on sovereign insurance and rural microinsurance;
- > A discussion on possible next steps by the Ministry of Economy and Finance, the National Institute for Disaster Management, and other institutions involved in disaster management to strengthen the State's financial response capacity to disasters.

## Risk Profile and Impacts of Disasters in Mozambique

There is no comprehensive and up-to-date historical database that consolidates information on the occurrence of disasters in Mozambique and covers a relatively long period. However, the data collected from various sources

including the Emergency Events Database (EM-DAT),<sup>2</sup> DesInventar,<sup>3</sup> and Ministry of Planning and Development, provide an overview of the country's hazard profile.

The Emergency Events Database (EM-DAT) recorded 71 events (droughts, earthquakes, floods, landslides, or storms) in Mozambique between 1956 and 2016. The DesInventar database recorded 1,315 events in Mozambique's provinces (741 droughts, 437 floods, and 137 cyclones) in Mozambique between 2000 and 2012. In addition, Axco reported, besides the 2006 earthquake, a further five earthquakes in Mozambique since 2002.

According to data (at 2016 values) extracted from various sources, the annual average losses and damages caused by disasters between 1984 and 2014 was MZN 4,129 million. However, the average between 2000 and 2014 (the period for which more detailed information is available) was MZN 7,543 million, suggesting that larger events (from 2000, 2001, 2007 and 2013) and increased exposure tend to cause greater damage and economic losses, but also that losses and damages recorded in previous years may be significantly underestimated.

The World Bank Group is carrying out a national-level disaster risk assessment for cyclones, droughts, earthquakes, floods, and landslides. That is, the potential hazards, exposures, and vulnerabilities are being modeled for damages and losses.

Preliminary results of the assessment indicate that, on average, floods in Mozambique affect 122,000 inhabitants and inflict (estimated) US\$440 million in damages per year. The average annual damages caused by droughts in the agriculture sector are estimated at US\$20 million, while a 100-year return period earthquake could cause damages of US\$440 million or higher.

In short, based on the information available, it is possible to conclude that Mozambique is exposed to multiple natural hazards affecting different regions of the country, with different magnitudes and impact. However, the lack of complete historical information on events makes it difficult to analyze the risk profile of the country and the provinces, including changes over time. This situation reflects the difficulties and shortcomings in the processes of collecting, assessing and managing disaster data. Improving the systems for recording and managing data

<sup>1</sup>GFDRR. 2014. "Mozambique: Recovery from Recurrent Floods 2000-2013." Recovery Framework Case Study. Washington DC: Global Fund for Disaster Reduction and Recovery.

<sup>2</sup>The Emergency Events Database (EM-DAT) is a global database on disaster damages and losses. To be included in it, a disaster must meet at least one of these criteria: (i) 10 or more deaths; (ii) 100 or more persons affected, injured, or homeless; or (iii) a decreed state of emergency and/or appeal for assistance from the international community.

<sup>3</sup>The Disaster Inventory System (DesInventar) acquires, collects, retrieves, queries, and analyzes information on disasters of small, medium, and greater impact based on preexisting official data, academic records, newspaper sources, and institutional reports. DesInventar is sponsored by the United Nations Development Programme and the United Nations Office for Disaster Risk Reduction (<http://www.desinventar.net>). In Mozambique, the INGC consolidated the DesInventar database in 2010. GFDRR. 2012.

on the occurrence of disasters in Mozambique could allow for more detailed analysis.

### Fiscal Disaster Management in Mozambique

Currently, the main sources of funding available in Mozambique are ex-post, that is, established only after the occurrence of a disaster event. The current ex-ante sources (Annual Contingency Plans and Contingency Budgets) are limited and suffice only for financing the initial emergency phase.

Partners' contribution to the emergency response is planned and coordinated with the Government during the preparation of the Contingency Plan. Partners' resources for reconstruction are later defined and difficult to predict.

The use of credit operations for financing disaster management is also relevant in Mozambique and the main problem with this source of funding is the time required for the completion of the operations, which can take approximately two years. The use of contingent credit operations, which would give timely access to liquidity and speed up the disaster management actions, is under consideration.

Another recent development was the creation of the Disaster Management Fund (FGC). The implementation of this fund is ongoing and budget contribution should be at least 0.1 percent of the State Budget to ensure the stability of the fund.

Between 2009 and 2015, the initial allocation for disaster-related spending reached more than MZN 7 billion, corresponding to 0.66 percent of total initial allocations of the State budget in the same period. Disbursements, in turn, amounted to MZN 4.3 billion, or about 0.5 percent of the value disbursed in all budget lines.

The sectors with the highest initial allocation and execution levels are the roads sector, which includes roads and bridges reconstruction, and the housing sector, reflecting resettlement programs led by the INGC. The next category with the largest volume of resources allocated and executed refers to the expenses of the Contingency Plans that mainly reflect the emergency response.

During the process of preparing the Annual Contingency Plans, the INGC prepares budget forecasts for the period of the plan based on three different scenarios. The amounts executed are much lower than the needs indicated in the plans.

The events of 2013 and 2014 illustrate the difficulties faced by the Government in mobilizing resources to finance post-disaster recovery and reconstruction. According to the Reconstruction Plans, the damages

and losses to the public sector after these events were estimated at MZN 11,582 million. In this period, the final allocations totaled MZN 3,470 million and the disbursement reached MZN 1,405 million.

So, the total amounts allocated and disbursed for post-disaster recovery and reconstruction in Mozambique were far below the estimated public losses and damages observed in the same period, denoting a public financing deficit. Considering the observed levels of execution, the financing deficit for these events exceeds MZN 10 billion.

### Insurance against Disasters

In Mozambique, market penetration of non-life insurance is low (0.69 percent of GDP) compared to the average in Africa (1.11 percent of GDP).<sup>4</sup>

Since 2007 the Government of Mozambique has been working on the development of rural insurance, and in 2012 the implementation of the pilot projects was initiated. The project proceeded to a new phase in 2017. It is expected that this new phase of testing will be implemented over the next 5 years.

In addition, since 2011, the Government of Mozambique has been working in partnership with the ARC (African Risk Capacity) to develop sovereign insurance against drought, flood and cyclone risks. The dialogue is still ongoing, but the maximum coverage allowed by the ARC is estimated at US\$ 30 million per hazard. That is, when combined, contracting insurance for droughts, floods and cyclones may offer coverage of a maximum of US \$ 90 million.

### Main Conclusions and Option for Consideration

Based on the information collected under the scope of this study, there is evidence that the burden of disasters on the public sector in Mozambique is substantial and the government still faces significant difficulties in mobilizing the resources for financing post-disaster emergency response, recovery, and reconstruction.

However, it is important to emphasize: (i) the establishment of a Disaster Management Fund in July 2017 with an initial allocation of 0.1 percent of the State Budget and the progress in the work for its operationalization; (ii) the advances in contracting contingent credit; and (iii) the ongoing initiatives for developing catastrophe insurance, both sovereign and microinsurance. Together, these initiatives indicate the government's interest in pursuing a holistic approach while offering an encouraging sign that in the medium and long term, Mozambique could strengthen its financial capacity to manage disasters and increase its financial resilience against natural hazards.

<sup>4</sup>GFDRR. 2012. "Mozambique: Disaster Risk Financing and Insurance Country Note"

The following are options to be considered as steps towards strengthening the country's financial protection against disasters:

- > Developing and formalizing a National Financial Protection Strategy against Disasters. The development of instruments and criteria for the combined or alternate use of the various mechanisms currently being considered should reflect the priorities identified by the Ministry of Economy and Finance and the National Institute for Disaster Management. These priorities can be communicated to the institutions involved in disaster management through a comprehensive financial protection strategy against disasters. The strategy could be updated as information accrues on Mozambique's risk profile and the instruments' performance. Given that the Disaster Fund may not meet the sectors' funding needs, continuing the dialogue on the use of alternative sources of financing will be essential for Mozambique to strengthen its response capacity and financial resilience in the medium and long term.
- > Carrying out more detailed analysis focused on the implementation of the Disaster Fund (FGC) and its complementary regulations. Among the activities required to implement the FGC are establishing the criteria for access and use of the fund's resources and defining the processes for the procurement of goods and services. The institutional arrangements will be crucial to the performance of the Disaster Fund in terms of disbursement, the timing of response, and the impact of the FGC on the well-being of the affected populations. In this sense, more detailed studies of the international experience in the management of disaster funds and exchanges with other countries may be useful to the INGC.
- > Considering the use of contingent credit operations. Among the issues emphasized by the government institutions involved in disaster management, the lengthy processes for mobilizing the financial resources (which may take up to two years) for recovery and reconstruction significantly delay the implementation of these projects. In addition, during the emergency response it is also important to ensure access to the financial resources needed for rapid response. Preparation of contingent credit operations prior to the occurrence of a disaster event could guarantee access to liquidity and allow for the timely mobilization of resources for all phases of disaster management.
- > Exploring risk transfer through disaster insurance. Given the limited risk retention capacity of the public sector, continuing the dialogue with Africa Risk Capacity to develop sovereign insurance could limit the fiscal burden from disasters in the medium and long term. Regarding microinsurance, the results from the pilot projects will inform the expansion of its use and the possibility of coverage for different crops and regions of the country.
- > Improving and institutionalizing the systems and methods for collection and management of data on the occurrence, magnitude, and impacts of disasters would allow for more detailed studies on the frequency, severity, and spatial distribution of the impacts of disasters in the country. Moreover, a methodology and processes for the assessment of the economic impacts of disasters in Mozambique need to be developed. Such information is extremely important to establish the country's risk profile and can be used, for example, in the calibration of stochastic models of financial losses from disasters.
- > Considering alternative risk assessments of financial losses from disasters. The disaster fiscal risks could be integrated into the risk assessments prepared by the Fiscal Risk Unit. The historical data on occurrences and impacts of disasters in Mozambique currently available are insufficient for a statistical analysis of disaster financial losses. Alternatively, it is possible to consider preparing probabilistic catastrophe models focused on the hazards relevant to the country's profile, as well as forensics reconstruction of the historical series of economic losses based on the available information, administrative records, and other sources. Combining the two types of analysis, Mozambique could obtain a better assessment of the distribution of financial losses caused by disasters.
- > Improving the monitoring of public expenditure related to disaster management. In the context of implementing a program-based public accounting system, to establish indicators that allow systematic monitoring of public spending related to post-disaster response and reconstruction. Easy access to disaster management fiscal indicators could facilitate monitoring the performance of an established financial protection strategy and the Disaster Fund, thus allowing for the improvement of these instruments over time.
- > Establishing a mechanism or platform to coordinate resources from the donor community. In the context of the operationalization of the Disaster Fund, to establish a mechanism to improve the predictability of the resources provided by the donors as well as its performance in terms of allocation and disbursement, facilitating the planning of public spending on post-disaster reconstruction in specific sectors.



# 1. Introduction

Mozambique is prone to recurrent natural hazards, namely, droughts, earthquakes, floods, tropical storms (cyclones), and tsunamis. Sixty percent of the population lives along the coastline and are vulnerable to tropical storms. The recurrent natural hazards, according to the National Institute for Disaster Management, have been increasing in number and magnitude since 1960.<sup>5</sup>

The potential impacts of climate change, such as floods, coastal erosion and rising sea levels threaten major coastal cities. About 58% of Mozambique's population is exposed to at least one hydro meteorological hazard. More than 37% are exposed to two or more hazards. The economic activity is often affected by the occurrence of disasters and disaster management requires a number of government actions, which imply that the costs of for the public sector are significant.

The present means of managing the country's disaster profile—government interventions at significant cost to the public sector—is no longer sustainable. Budgetary resources cannot cover the costs of financing disaster risks. Donations from the international community and National Solidarity fall outside the envelope of long-term planning but represent a last resort. The government has also contracted credit operations to finance post-disaster reconstruction.

Within this context, Mozambique has initiated the development of a financial protection agenda against disasters, which includes risk retention and risk transfer mechanisms such as sovereign insurance and rural microinsurance. As part of this dialogue, the Ministry of Economy and Finance and the World Bank Group prepared the study "Financial Protection against Disasters in Mozambique". It analyzes current funding mechanisms

for disaster management, identifies possible technical and institutional bottlenecks, investigates financing gaps, and presents options for next steps to be considered by the MEF and the National Disaster Management Institute (INGC):

- > A discussion on Mozambique's risk profile and the economic impacts of disasters in the country in the last twenty years;
- > A review of the current disaster budget management process, which includes case studies on financing gaps for post-disaster emergency response and reconstruction phases;
- > An overview of the insurance market for disasters, focusing on sovereign insurance and rural microinsurance;
- > A discussion on possible next steps by the Ministry of Economy and Finance, National Institute for Disaster Management, and other institutions involved in disaster management to strengthen the State's capacity for financial response to disasters.

This report is composed of five chapters, including this Introduction. Chapter 2 provides a brief presentation of the risk profile and impacts of disasters in Mozambique in recent decades. Chapter 3 provides an overview of existing post-disaster financing mechanisms and an analysis (based on case studies) of the financing gap for emergency response, recovery, and reconstruction. A review of the dialogue on the use of disaster insurance is presented in Chapter 4. Finally, Chapter 5 summarizes the main conclusions and presents options to improve mechanisms for financial protection against disasters in Mozambique.

<sup>5</sup>INGC. 2009. "Synthesis Report. INGC Climate Change Report: Study on the Impact of Climate Change on Disaster Risk in Mozambique." Edited by van Logchem, B., and R. Brito. Maputo: National Institute for Disaster Management.



# 2. Risk Profile and Impacts of Disasters in Mozambique

## 2.1. Hazard Profile

There is no comprehensive and up-to-date historical database that consolidates information on the occurrence of disasters in Mozambique and covers a relatively long period. This report has collected data from various sources including the Emergency Events Database (EM-DAT), DesInventar, and Ministry of Planning and Development. In sum, these data provide an overview of the country's hazard profile.

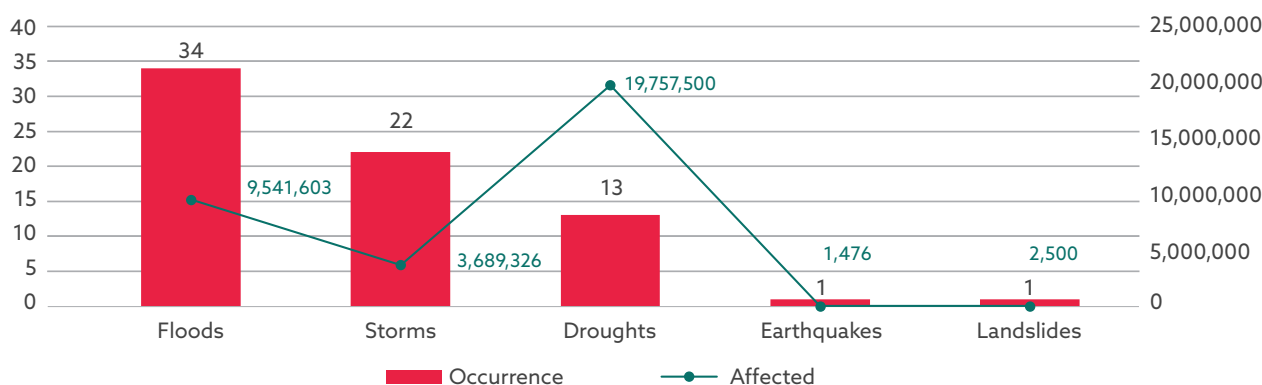
The Emergency Events Database (EM-DAT) recorded 71 events (droughts, earthquakes, floods, landslides, or storms) in Mozambique between 1956 and 2016. Of the total recorded, there were 56 floods or storms, 13 droughts, one earthquake (the 2006 Great Earthquake) and one landslide. Together, they affected nearly 33 million inhabitants (Figure 1).

Droughts correlate to nearly two-thirds of the affected inhabitants (about 19.8 million people). Floods and storms occurred almost four times more often than droughts. This information, though limited, provides an indication of the magnitude, severity, and territorial and temporal diversity of economic and social impacts caused by the different natural hazards.

The DesInventar database recorded 1,315 events in Mozambique's provinces (741 droughts, 437 floods, and 137 cyclones) in Mozambique between 2000 and 2012. The data cannot be used to calculate the frequency of disasters because the same event can be counted multiple times if it affected more than one province. But the data can be used to calculate the occurrence of natural hazards in a province (Figure 2).

All provinces suffer recurrent disasters, with some

**FIGURE 1. OCCURRENCE OF DISASTERS IN MOZAMBIQUE**  
(TYPE OF THREAT, 1956-2016)



Source: World Bank Group estimates based on EM-DAT data (2018).

affected more frequently by droughts and others by floods. Gaza, Inhambane, and Tete reported more droughts, while Sofala, Tete, and Zambézia reported more floods. Nampula suffers the highest number of cyclones.

Other sources indicate more disasters in roughly the same period. Axco reported, in addition to the 2006 earthquake, a further five earthquakes in Mozambique since 2002 (Table 1).<sup>6</sup>

In short, based on the information available, it is possible to conclude that Mozambique is exposed to multiple natural hazards affecting different regions of the country, with different magnitudes and impact. However, the lack of complete historical information on events makes it difficult to analyze the risk profile of the country and the provinces, including changes over time. This situation reflects the difficulties and shortcomings in the processes

of collecting, assessing and managing disaster data. Improving the systems for recording and managing data on the occurrence of disasters in Mozambique can allow for more detailed analysis.

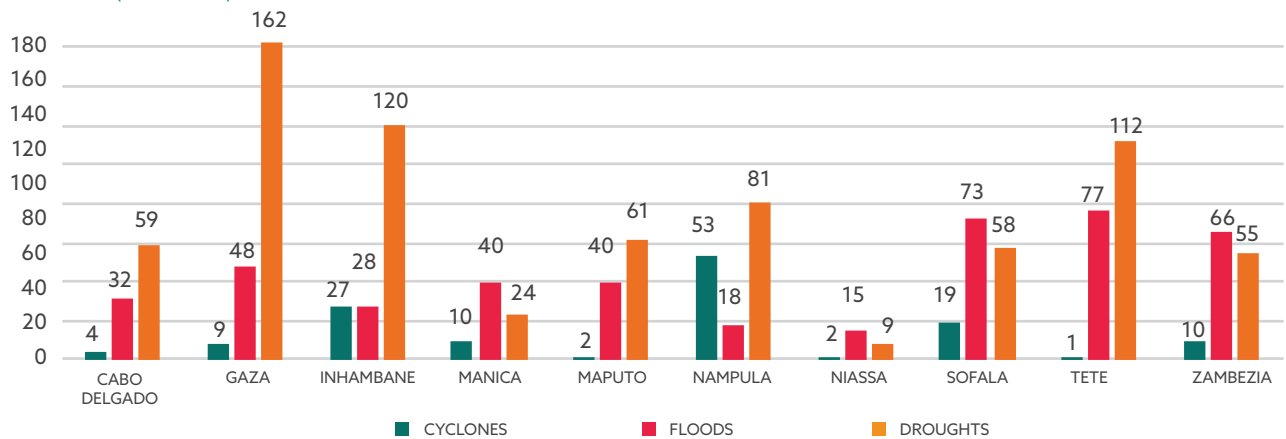
## 2.2. Recent Disaster Damages and Losses

Mozambique does not have a consolidated series on the damages and losses caused by disasters. The information on the economic impacts of disasters identified within the scope of this report is presented in the figures below. The consolidated indicators include data from EM-DAT, DesInventar, and the Ministry of Planning and Development's post-disaster reconstruction plans. The data cover a period of about 50 years, from 1967 to 2014.

Official data on damages and losses are not available for the first 25 years of independence (1975-1999), but

<sup>6</sup>Insurance Market Report - Mozambique: Non-Life (P&C). Axco Insurance Information Services, 2017.

**FIGURE 2. OCCURRENCE OF DISASTERS IN MOZAMBIQUE PER PROVINCE (2000-2012)**



Source: Prepared by the World Bank with data from DesInventar.

they are available in Post-Disaster Reconstruction Plans for major events over the last 18 years: the Ministry of Planning and Finance (2000 and 2001) and the Ministry of Planning and Development (2007, 2013, and 2014).

The macroeconomic impacts of extreme events have been significant in Mozambique. The costs estimated for the 2000 events totaled almost US\$450 million (at current values), almost 9 percent of gross domestic product (GDP). In 2013, the sum exceeded US\$517 million (at current values), over 3 percent of GDP. The 1984–2014 and 2000–2014 annual averages were (at 2016 values) MZN 4,129 million and MZN 7,543 million (Figure 4).

The significant difference between the average losses in the two periods may be a result of: (i) greater impact of more severe events (the 2000 event was considered the worst in 100 years and the 2013 floods were equally severe in magnitude (10 meters in 2000 and 9.8 meters in 2013); (ii) accumulated impact of more frequent events; (iii) increased exposure from economic growth and urbanization in high-risk areas; and/or (iv) significantly underestimated losses and damages.

To compensate for these data limitations, the World Bank Group is carrying out a national-level disaster risk assessment for cyclones, droughts, earthquakes, floods, and landslides. That is, the potential hazards, exposures, and vulnerabilities are being modeled for damages and losses.

Preliminary results of the assessment indicate that in Mozambique floods, based on the annual average, affect 122,000 inhabitants and inflict (estimated) US\$440

**TABLE 1. EARTHQUAKES IN MOZAMBIQUE, 2002–2015**

| PERIOD         | LOCATION                  | MAGNITUDE |
|----------------|---------------------------|-----------|
| 2002           | Coast of Mozambique       | 5.0       |
| 2006           | Manica (Great Earthquake) | 7.2       |
| March 2010     | Nampula                   | -         |
| September 2010 | Beira                     | 3.6       |
| 2012           | Central Mozambique        | 4.6       |
| 2015           | Coast of Mozambique       | 4.7       |

Source: Axco Insurance Information Services Ltd.

million in damages. The average annual damages caused by droughts in the agriculture sector are estimated at US\$20 million. And, a 100-year return period earthquake could cause damages of US\$440 million or higher. These preliminary results are being further validated and calibrated. The final results should be available in the following months.

### 2.3. Collection and Management of Data from Disasters

In Mozambique, disaster data and information are recorded in an official form and flow through three main trigger points; the outputs inform strategic annual reports and budgetary allocations. The country faces difficulties and gaps in collecting disaster data, assessing the resulting losses and damages, and managing the information about disaster events and their impacts. It is currently exploring international best practices for the collection and management process.

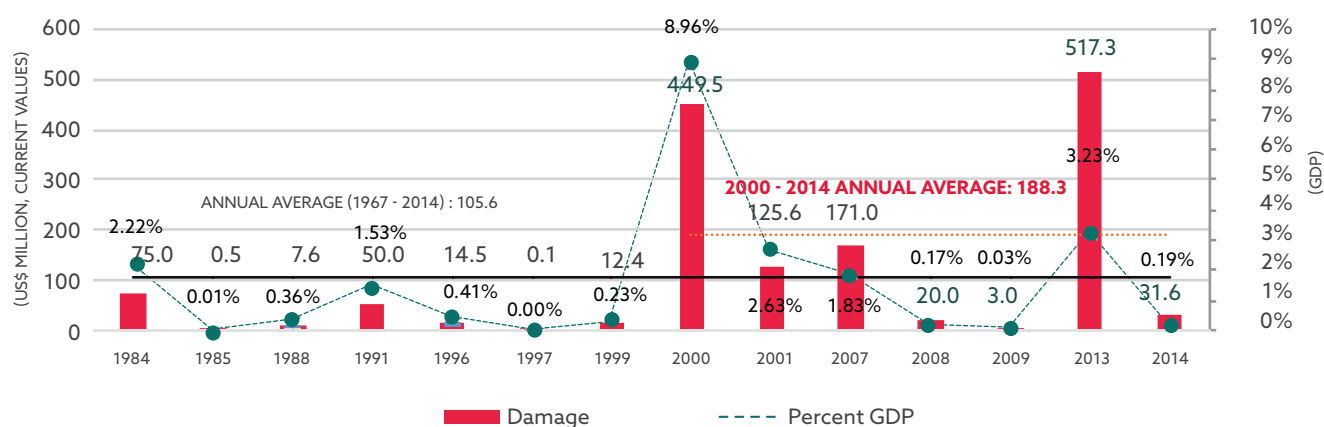
An official disaster damage assessment form is used by the Disaster Management Technical Councils at the central and provincial levels and by the Disaster Management Committees at the district level. The form has been improved over the years and has been reinforced through trainings. However, the form focuses on the quantification of damages while lacking a methodology to assess economic impacts.

Data and information flow upward. After the information is collected by the districts, the provinces aggregate the data and send it to the INGC for consolidation at the central level. The consolidated data are included in the Rain Season Balance Report, which is a document prepared after the rainy season each year. However, disaggregated microdata is not stored in any database software, which makes regular, systematic queries impossible. That is, improving disaster data collection and management could facilitate access to valuable information by the institutions involved in disaster management.

The consolidated data feeds into the annual Rain Season Balance Report, a document prepared by INGC each year after the rainy season (November to March). The report's



**FIGURE 3 PROVIDES A 30-YEAR WINDOW (1984-2014) ON THE COST OF DAMAGES CAUSED BY DISASTERS.**  
DISASTER DAMAGES IN MOZAMBIQUE BASED ON AVAILABLE DATABASES (US\$ MILLION, CURRENT VALUES)



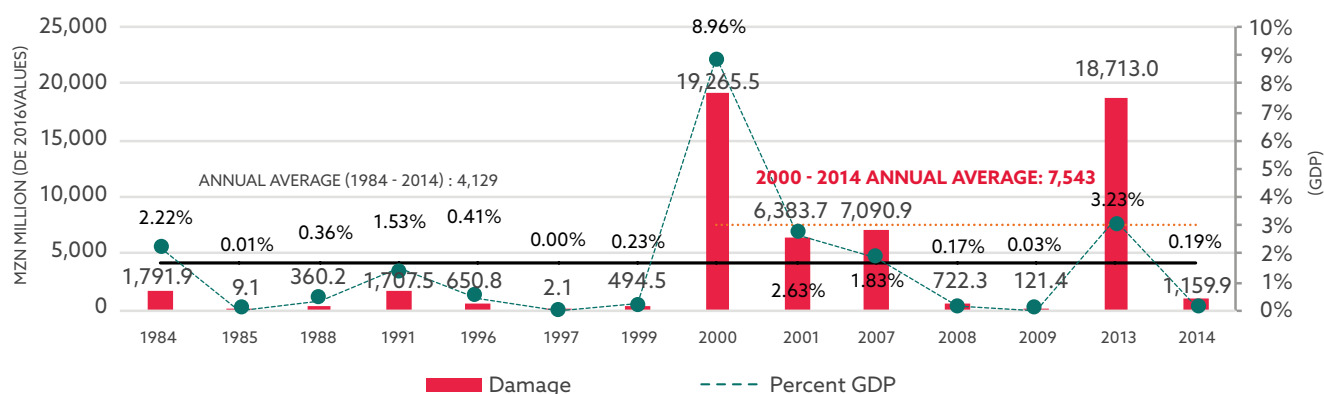
Source: World Bank Group estimates based on EM-DAT data, DesInventar data, and Ministry of Planning and Development (2018)

assessments serve as major inputs for the Ministry of Economy and Finance's post-disaster budgetary planning. But, there is no official template or guidelines on collecting data and information for the report.

Thus, the allocation of resources for the recovery and reconstruction of disaster-affected social and economic infrastructure requires that the needs of the affected populations first be registered in the Rain Season Balance Report and accounted for in the Reconstruction Plans. But the lack of standardized data and information create asymmetric information flows that generate incomplete reports and plans.

In this sense, institutionalizing the processes and methods for assessing disaster damages and losses could improve disaster risk management by various sectors. For example, until the 2014/15 rainy season, damages to health infrastructure were not regularly included in the Rain Season Balance Report. Representatives of the health sector pointed out that the lack of historical data on material damages (such as, the quantity of hospital equipment and medicines damaged) or on post-disaster emergency needs (such as, hospital tents, medicines, medical equipment, and health personnel) jeopardizes ex-ante planning of emergency responses.

**FIGURE 4. DISASTERS DAMAGES IN MOZAMBIQUE**  
BASED ON AVAILABLE RECORDS (MZN MILLION, 2016 VALUES)



Source: World Bank Group estimates based on EM-DAT data, DesInventar data, and Ministry of Planning and Development (2018).

To this end, the INGC is engaged in dialogues with international partners to institutionalize the process to assess disaster damages and losses. The objectives include formalizing the procedures to collect and manage disaster data and information and establishing an official methodology for the valuation of disaster impacts. Such methodology will be based on international best practices but adapted to the local context. The proposed activities are expected to inform the preparation of specific regulation for the Disaster Law and provide inputs for the revision of the INGC statute.

Promoting and including the Ministry of Economy and Finance in these discussions is important so that the ongoing and upcoming reforms consider and incorporate the country's disaster risk financing needs. Improving the disaster damage and loss assessment systems should be part of the core activities in developing a financial protection strategy against disasters in Mozambique. The next chapter describes the main sources of funding for disaster management activities in Mozambique, from preparedness and emergency response to recovery and reconstruction.



## 3. Fiscal Disaster Management in Mozambique

Understanding the current state of disaster risk financing is the first step in developing a financial protection strategy against disasters. That is, a strategy able to strengthen the government's financial capacity to allocate resources in a timely and efficient manner and to minimize the negative impacts of disasters on the country's public finances.

Depending on the magnitude of the event, the Ministry of Economy and Finance coordinates the mobilization of financial resources for recovery and reconstruction. The current sources of financing include budget lines, budget reallocations, new loans, and donations from national and international partners. Localized events, limited to a province, district, or municipality or an event of a lower severity might be managed at the local or sectoral level, depending on the case.

### 3.1. Sources of Revenue

Table 2 presents the sources of financing for disaster response, recovery, and reconstruction currently available in Mozambique. Table 3 presents alternative sources of funding being considered by the government to strengthen the country's financial protection against natural hazards.

Both tables present the risk layers covered by each of the instruments and the timing of resource mobilization. The low-risk layer refers to recurring events with limited financial impacts. The medium-risk layer includes events that are not rare but could cause damages and losses. The high-risk layer cover disasters with low-probability, high-impact events. The different sources of funding are also classified according to timing of the planning and allocation of the funds. Ex-ante sources of funding are established before the occurrence of a disaster event, while ex-post sources of funding are mobilized after a disaster.

Overall, the main sources of funding available in Mozambique are ex-post, that is, established only after the occurrence of a disaster event. The current ex-ante sources (Annual Contingency Plans and Contingency Budgets) are limited and suffice only for financing the initial emergency phase.

The need to mobilize financing for disaster response, recovery, and reconstruction causes delays, increases the financial costs, jeopardizes the disbursement and monitoring of disaster-related spending, and can reverse years of development gains. Within this context, the

**TABLE 2. SOURCES OF FUNDING CURRENTLY AVAILABLE IN MOZAMBIQUE**

| Instrument                           | Risk Layer                 | Timing of Mobilization | AVAILABLE INSTRUMENTS                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------|----------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      |                            |                        | Additional Information                                                                                                                                                                                                                                                                                                                                                               |
| Annual Contingency Plan <sup>7</sup> | Low, medium, and high risk | Ex-ante                | Annual contingency plans cover only the emergency response phase and are the main ex-ante source of funding available in Mozambique. Between 2009 and 2015, initial allocations ranged from 0.07% to 0.13% of the State Budget. From 2009 to 2015, the average annual allocation was MZN 148 million. In 2015, the initial allocation of MZN 271 million was the highest since 2009. |
| Donor Community                      | Medium and high risk       | Ex-post and Ex-ante    | Donor community operations are a significant source of financing and are off-budget, difficult to monitor and predict. From October 2013 to March 2014, donor support for the annual contingency plans was estimated at MZN 283 million. In 2013, the contingency plan disbursed MZN 167 million.                                                                                    |
| Emergency Loan                       | High risk                  | Ex-post                | Emergency loans are unpredictable, require long negotiations that cause significant delays in the recovery and reconstruction phases, and are difficult to monitor. Following the 2015 floods and 2016 droughts, a US\$60 million World Bank Group loan financed part of the reconstruction activities.                                                                              |

<sup>7</sup>In Mozambique, Contingency Plan revenues are used across all layers of risk. Even after the most severe events, Contingency Plan resources are used in the emergency response phase.

|                    |                      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | Medium and high risk | Ex-post | Budgetary reallocations require revision of the State and sector Budgets and do not have a mechanism to track the resources allocated to disaster management.<br>Use of budget reallocations is recurrent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Contingency Budget | Low and medium risk  | Ex-ante | Contingency budgets allocate resources to a budget line for specific emergency recovery.<br>The Ministry of Public Works, Housing, and Water Resources is the only sector to use a contingency budget. It allocates resources to emergency recovery of roads and bridges, corresponding to about 10-15% of the National Roads Administration.<br>However, this practice was not reported by other sectors. Between 2009 and 2015, the initial allocation to the emergency recovery of roads and bridges was, on average, MZN 514 million per year.<br>Excluding 2014 when more than MZN 2 billion was allocated to this Budget line, the annual average was MZN 290.5 million. |

**TABLE 3. ALTERNATIVE SOURCES OF FUNDING UNDER CONSIDERATION IN MOZAMBIQUE**

| INSTRUMENTS UNDER DEVELOPMENT                          |                            |                        |                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------|----------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Instrument                                             | Risk Layer                 | Timing of Mobilization | Additional Information                                                                                                                                                                                                                                                                                          |
| Disaster Fund                                          | Low, medium, and high risk | Ex-ante                | The main objective of the disaster fund is to guarantee the timely allocation of resources for disaster response.<br>Annual allocations must correspond to at least 0.1% of the State budget.                                                                                                                   |
| Sovereign Insurance <sup>8</sup>                       | High risk                  | Ex-ante                | Sovereign insurance is under development.<br>Coverage might include floods, droughts, and cyclones.<br>Coverage will be limited by the availability of resources to pay the premium.<br>Maximum coverage for each hazard is US\$30 million.                                                                     |
| Contingent Credit                                      | Medium and high risk       | Ex-ante                | Under consideration.                                                                                                                                                                                                                                                                                            |
| Disaster Private Property Insurance and Microinsurance | Low, medium, and high risk | Ex-ante                | Under development with pilot projects ongoing in the agriculture sector.<br>Disaster property insurance has very low penetration (overall insurance penetration in the country is low, estimated at 1.58% in 2015).<br>Insurance of public assets is allowed but not widespread across government institutions. |

government of Mozambique is developing ex-ante instruments to facilitate the financial planning, close funding gaps, and promote the timely availability of financial resources for post-disaster emergency response, recovery, and reconstruction.

The following sections contain key information on the sources of funding identified in Mozambique. The next chapter presents information on the options for transferring disaster risk to the private sector.

### 3.1.1. Sources of Funding Currently in Place

#### > Annual Contingency Plans

Annual Contingency Plans are the main planning mechanism and ex-ante source of funding for disaster response in Mozambique. Under Article 12 of the Disaster Law (Law 15/2014, June 20), the government is required to approve an annual Contingency Plan. The plan is based on climate forecasts provided by the National Meteorological Institute (INAM).

<sup>8</sup>Sovereign Insurance is typically used after severe and rare disasters, but more frequent events have also been covered by this type of instrument in other countries. The terms and conditions for the use of Sovereign Insurance in Mozambique are yet to be considered by the Government.

The Contingency Plan is multi-sectoral and coordinated by INGC, which is the main executive body for activities under the scope of the plan. The Contingency Plans are prepared in accordance with the terms of reference (which specify the information to be provided by the sectors) determined by the INGC.

In general, at the central level, the sectors and the INGC coordinate the preparation of the province-level Contingency Plans, which in turn include district-level information. The final Annual Contingency Plan includes an estimation of the financial needs for emergency response and post-disaster recovery accounting for three different scenarios.

However, the amount allocated ex-ante to the Contingency Plan is intended for financing emergency response needs, more specifically, search and rescue operations and humanitarian assistance for victims within 72 hours of the event (such as, provision of temporary shelter, food) and monitoring the critical activities, while additional resources are mobilized and provided by the national and international partners to cover the humanitarian assistance needs. The amount allocated by the State government covers up to 20 percent of the total needs of the Contingency Plan. This means that most resources are provided by international partners and national solidarity.

Between 2009 and 2015, the initial allocations to annual Contingency Plans ranged from 0.07 percent to 0.13 percent of the State budget. From 2009 to 2015, the average annual allocation was MZN 148 million. In 2015, the initial allocation of MZN 271 million was the highest since 2009.

The amount allocated to the Contingency Plan is approved by the government until September 30 of each year, when the State Budget for the following year is submitted for approval. In general, the allocation of the resources to the Contingency Plan budget line takes place prior to the preparation of the Contingency Plan itself, which is prepared by INGC at the end of September following release of the seasonal climate forecast, and then approved by the government in October.

The preparation of the Contingency Plan involves validating the sectoral emergency response needs in terms of human, material, and financial resources as well as its distribution among the national institutions, provinces, districts, according to the exposed population in each area, the risk in each sector, and the mandate of the institutions involved in disaster response.

In the event of a disaster, the resources for recovery are raised ex-post and, in practice, the Contingency Plans are a source of ex-ante financing only for the emergency humanitarian assistance. Recovery and reconstruction activities are typically beyond the scope

of the Contingency Plan. Recovery and reconstruction activities are part of the Ministry of Economy and Finance Reconstruction Plans, which (when existing) are incorporated in the budgets of the government's executive bodies and financed with resources from various sources, including budgetary reallocations, State borrowing, and donations.

#### > Donations

Donations from the national and international donor community are a significant source of funding for disaster response, recovery, and reconstruction. However, there is no centralized monitoring and coordinating mechanism that allows for the planning and management of such resources. Often the donations are made off-budget and include both financial and in-kind resources, the latter being particularly difficult to officially value and record.

In case of severe events, the government appeals to national and international donors. Following an appeal, the resources are managed by the INGC, especially those allocated to humanitarian assistance and rehabilitation of social infrastructures (such as, housing and agriculture). The resources to reconstruct infrastructure (such as water and sanitation services, roads, and bridges) are allocated to the line ministries. The Treasury might register these donations as internal revenues or donations. But it is not possible to identify donations related to disasters. (The country receives donations for non-disaster related programs as well.)

Further, there is a clear distinction between the management of the donor community resources for emergency response and for post-disaster recovery and reconstruction. For emergency response, there is a structure to facilitate collaboration by donors. Partner operations are coordinated within the framework of the National Emergency Operational Center (CENOE), which has sole command of emergency response in the country. The contribution from partners to the emergency response is planned and coordinated with the government during preparation of the Contingency Plan, considering the three hazard scenarios.

Such estimates are prepared jointly with partners and reflect known information on the quantities of goods in the INGC and partner warehouses. The INGC has access to estimates of the goods stored by partners because these goods can only be imported tax-free into Mozambique if the INGC classifies them as emergency response resources. Most partner resources for emergency response are in-kind donations; financial support, when available, is made through the national solidarity account.

From October 2013 to March 2014, donor support for the annual Contingency Plans was estimated at MZN 283 million. While, in 2013, the Contingency Plan disbursed MZN 167 million.

On the other hand, the resources from the donor community for recovery and reconstruction are specific, one-off, defined ex-post, and difficult to predict—often being delivered in building materials. In the other words, while there is a structure to facilitate the collaboration by donors in during the emergency response, for recovery and reconstruction phases, donor support is negotiated ex-post by the Ministry of Economy and Finance and by the affected sectors. These resources are, thus, unpredictable and difficult to include in the planning and management of post-disaster reconstruction financing.

The establishment of a mechanism or platform to facilitate the management and monitoring of the donor resources allocated to recovery and reconstruction could improve predictability of such resources, their allocation and disbursement performance, and the planning of post-disaster public spending in specific sectors such as housing, education, and agriculture, which rely heavily on external support for speedy recovery.

#### > **Emergency Loans**

The use of contingent credit could be considered because this type of operation is prepared in advance and the funds are available a few days after the declaration of a state of emergency. In addition to expediting reconstruction, emergency loans could be used to finance emergency response and recovery given their timely availability. The use of contingent credit is under consideration.

Regarding the disaster-related debt stock, there is no readily available information from the Treasury to estimate the credit operations carried to finance post-disaster reconstruction (carrying out such exercise would involve a manual review of projects, contracts, decrees, and other internal documents). Recent operations include loans for the acquisition of temporary bridges and the World Bank Group's Immediate Response Mechanism. The World Bank Group funding for the Productive Social Action Program and the Road Management Program includes post-flood recovery and rehabilitation (2013).<sup>9</sup>

In addition, in response to the floods in early 2015, an agreement was signed with the World Bank Group in October of the same year to finance a US\$40 million Emergency and Resilient Recovery Project (ERRP) to reconstruct damaged infrastructure. The Immediate Response Mechanism (an instrument that allows countries to rapidly access resources following a crisis) was activated in Mozambique under the ERRP to improve the government's capacity to quickly respond to the drought caused by the El Niño in 2016. In February 2017, the World Bank approved US\$20 million additional financing to support the country in meeting the further financial needs arising from the drought.

The ERRP is being implemented by various government

institutions through existing projects financed by the World Bank Group. The project aims at (i) rehabilitation, in the short term, of flood protection dykes; (ii) rehabilitation, in the medium term, of the Mocuba drinking water supply system and rural and irrigation infrastructures; and (iii) technical assistance and analytical support for safer schools, early warning systems, recovery frameworks, and management of catchment areas to build long-term resilience.

In the education sector, the project will pilot new construction techniques to develop resilient structures in line with the recommendations proposed in the context of the first phase of the Safe Schools Project. The pilot seeks to integrate risk considerations into investments planned for school construction.

#### > **Budget Reallocations**

Post-disaster budget reallocations from operations and maintenance result in an opportunity cost as high as 37–44 percent.<sup>10</sup> There also are limits to resource reallocations without rectification of the State Budget; depending on the amount of resource reallocations between different projects, budget reallocations can be decided at the ministry level in Mozambique.

In interviews conducted with government representatives, the reallocation of budgetary resources for disasters response was mentioned several times as a source of funding, but it was not possible to identify such reallocations in the fiscal database. The difficulty of tracking such relocations possibly reflects the use of generic budget lines for disaster response funding and indicates that improved tracking of disaster-related expenditures in the State budget could be an important activity in developing a financial protection strategy against disasters in the country.

#### > **Contingency Budgets**

Some sectors have specific provisions for post-disaster recovery and reconstruction in their budgets, but the amounts made available and the process through which the resources are allocated each year vary case by case. For example, at the national level, the education and human development sector there is no specific budget line for the reconstruction of schools affected by disasters or for the recovery of damaged classrooms. At the local level, schools can use up to 20 percent of their budgets for discretionary items, which often include post-disaster recovery (such as, procurement of tarpaulins). That is, a significant part of the sector's emergency response is done at the local level. But Contingency Budgets only suffice when damages are limited, and the school is large enough since the budget is defined on a per pupil basis.

In the Ministry of Public Works, Housing, and Water Resources, budget planning for post-disaster recovery

<sup>9</sup>GFDRR. "Recovery from Recurrent Floods 2000-2013." [https://www.gfdr.org/sites/default/files/Mozambique\\_\(Portuguese\)\\_September\\_2014.pdf](https://www.gfdr.org/sites/default/files/Mozambique_(Portuguese)_September_2014.pdf)

<sup>10</sup>Clarke, D. and R. Hill. 2016. "Disaster Risk Financing as a Tool for Development. A Summary of Findings from the Disaster Risk Finance Impact Analytics Project." Washington DC: World Bank Group, p. 31.

and reconstruction varies according to the organizational unit. The National Road Administration (ANE), for example, annually allocates resources for national-level emergency maintenance of roads and bridges (10–15 percent of its total budget) and is, in fact, the only sector that has a specific sub-program budget line for this purpose.

However, the allocated resources cover only emergency rehabilitation of the affected roads or bridges, with the objective of reestablishing road traffic. Between 2009 and 2015, the initial allocation to the emergency recovery of roads and bridges was, on average, MZN 514 million per year. However, excluding 2014 when more than MZN 2 billion were allocated to this budget line, the annual average was MZN 290.5 million.

The ANE usually finances reconstruction from other sources, including government loans, review and update of investment priorities, and budget reallocations. It also has regional logistics bases in place (with metal bridges and other equipment) to act during the emergency response, particularly for reestablishing traffic on disaster-affected roads and bridges.

### 3.1.2. Sources of Funding under Consideration

#### > Disaster Fund

Disaster Law 15/2014 mandates the Council of Ministers establish a Disaster Fund to finance the bodies and agencies involved in post-disaster response, recovery, and reconstruction. Non-governmental organizations can access its resources, but the terms are still to be determined.

The Council of Ministers approved the subsequent decree creating the Management Disaster Fund (FGC), and it is awaiting publication in the Bulletin of the Republic. The regulations stipulate that the FGC exclusively finance operations related to post-disaster “preparedness, response, recovery and reconstruction” and that resources from the current Contingency Plans will be transferred to the fund. Disaster prevention will continue to be funded by sector budgets.

To guarantee the Disaster Fund’s stability, budget allocations are required to be at least 0.1 percent of the State budget. Resources mobilized by national and international partners and any other type of donation or national and international contribution can be received by the FGC.

The Disaster Fund’s priority is the timely provision of resources for preparedness and emergency response, with financing for post-disaster recovery and reconstruction dependent on the availability of resources. But the FGC also can be used as a broader financial instrument for financial protection against natural

hazards. For example, it can pay sovereign insurance premiums and at the end of each fiscal year, convert financial balances into revenues for the fund in the following year.

The Disaster Fund will be managed by the INGC. The INGC is mandated to, among others, establish cooperation agreements with national and foreign institutions, pay the FGC’s expenses (including sovereign insurance premium) and prepare investment and resource mobilization proposals. It also is responsible for preparing the annual budget proposal, the Annual Report, and the Disaster Fund Account.

Regarding the institutional arrangements for the operationalization of the fund, the INGC should prepare, establish and carry out the procurement of goods and services as well as propose terms of access and use of funds. Access to resources by the sectors will be governed by standards approved by the Ministry of Economy and Finance.

The Disaster Management Technical Council is a multi-sectoral entity that approves all technical actions developed by INGC. It will support the INGC by assessing the annual budget proposal and annual balance reports that require approval by the Disaster Management Coordinating Council, which is a high level multi-sectoral entity headed by the Prime Minister and responsible for all policy issues/decisions. Further, the Disaster Management Technical Council will assess the processes proposed for the purchase of sovereign insurance and other services by the Fund. The Ministries of Economy and Finance and the local Ministries of State and Public Administration must approve additional regulations to the original decree.

The World Bank is currently supporting the government of Mozambique with the full establishment and operationalization of the FGC through a technical assistance for the development of manuals of procedures for financial management and access to resources.

#### > Contingent Loans

Contingent loans are under consideration. To date, no contingent credit operation has been used for disaster response in Mozambique. Discussions are ongoing between the Ministry of Economy and Finance and the World Bank Group on a Development Policy Operation focused on inclusive resilience and disaster risk management that might include a contingent credit component, Catastrophe Deferred Disbursement Option (CAT-DDO), that activates following an emergency declaration by the government.

CAT-DDOs were made available to IDA countries from July 2017. These resources are available for three years after a disaster, and the operation can be renewed once for a



further three years. IDA countries can contract CAT-DDOs of up to US\$250 million or up to 0.5 percent of GDP. The amounts are defined by the government, depending on the country's payment capacity.

The purpose of a CAT-DDO is to provide the government has immediate access to liquidity after a disaster, during the humanitarian assistance phase. CAT-DDOs also can be used for post-disaster recovery and reconstruction, including fiscal stabilization.

In practice, contingent credit has the advantage that it can be used to initiate response, recovery and reconstruction while other sources of funding (such as, donations from the international community or other credit operations) are mobilized. Institutions such as the Japan International Cooperation Agency (JICA) and the Inter-American Development Bank (IDB) also have contingent credit lines to guarantee access to post-disaster financial liquidity.

In Mozambique, two-year delays (approximately) in raising funds for post-disaster recovery and reconstruction was mentioned by several government representatives as a major bottleneck. In this context, negotiation of a contingent credit operation could guarantee the necessary access to liquidity for rapid response and reconstruction, as well as strengthen the government's position in mobilizing additional resources as necessary.

Mozambique could be one of the first IDA countries to benefit from the CAT-DDO option.

### 3.2. Disaster Response in Mozambique: Fiscal Indicators

Mozambique is transitioning to a public accounting system based on a programmatic functional classification of expenditures. On the one hand, this means that over the period considered, the programs and sub-programs used to track disaster spending had undergone changes, making it difficult to define the indicators and to interpret the results. On the other hand, the ongoing reform is

an opportunity for discussing ways to monitor disaster expenditures and to incorporate disaster management spending into the public accounting system.

Currently, there are no specific budget lines for disaster-related spending or other mechanisms to systematically track disaster-related public spending. Identifying these expenditures in Mozambique's fiscal databases requires methodological efforts and case-by-case analyses. Within the scope of this study, the impacts of disasters on government revenues could not be estimated.<sup>11</sup>

Considering alternatives and data sources, fiscal indicators of disaster-related public spending could be obtained. The functions and sub-functions and the programs and sub-programs in the period considered (even accounting for the institutional arrangements and administrative units involved in disaster management) could be used. But the budget lines that are not actually used to finance disaster-related spending could not be excluded. Thus, the resulting indicators could contain significant errors.

Alternatively, the fiscal data presented in this section are based on the BOOST<sup>12</sup> database, available for the 2009–2015 period. The BOOST database contains data on initial allocations, final allocations, and disbursements as well as the sources of funding and other information, by budget line (budgetary activity). More than 17,500 different budget lines were identified in the fiscal database. For this reason, the analysis was based on relevant keywords as identified in interviews with public-sector representatives. For example, keywords such as "disaster," "resettlement," "emergency," "INGC" and so on were used.

Based on the keywords, this study identifies 39 disaster management budget lines, totaling 1,339 occurrences in the database between 2009 and 2015. Ambiguities were resolved on a case-by-case basis. The fiscal indicators obtained, based on this methodology (Table 4), are presented and discussed below.

**TABLE 4. DISASTER RELATED PUBLIC SPENDING, BY YEAR, 2009-15 (MZN MILLION)**

| Year         | Initial Allocation | Final Allocation | Disbursement |
|--------------|--------------------|------------------|--------------|
| MZN millions |                    |                  |              |
| 2009         | 743                | 586              | 452          |
| 2010         | 679                | 1,144            | 1,045        |
| 2011         | 607                | 429              | 423          |
| 2012         | 819                | 453              | 377          |
| 2013         | 451                | 757              | 739          |
| 2014         | 2,512              | 2,393            | 344          |
| 2015         | 1,221              | 924              | 924          |
| <b>Total</b> | <b>7,032</b>       | <b>6,685</b>     | <b>4,303</b> |

Source: World Bank Group estimates based on BOOST dataset (2018).

<sup>11</sup>The use of tax exemptions as support to the private sector was reported by the Ministry of Economy and Finance as having been applied to promote recovery of the private sector following devastating floods in 2000 and Cyclone Fávio in 2007 which devastated tour operators and fishermen throughout Inhambane Province. As to the floods of 2000, the Reconstruction Plan drawn up by the then Ministry of Planning and Finance accepts the loss of tax revenues as a result not only of the paralysis of productive activity, but also of the need for temporary tax exemption as a way to support rapid recovery and activity by the private sector.

<sup>12</sup>BOOST is a World Bank Group initiative launched in 2010 to facilitate access to fiscal data. Mozambique was included in the project in 2014.

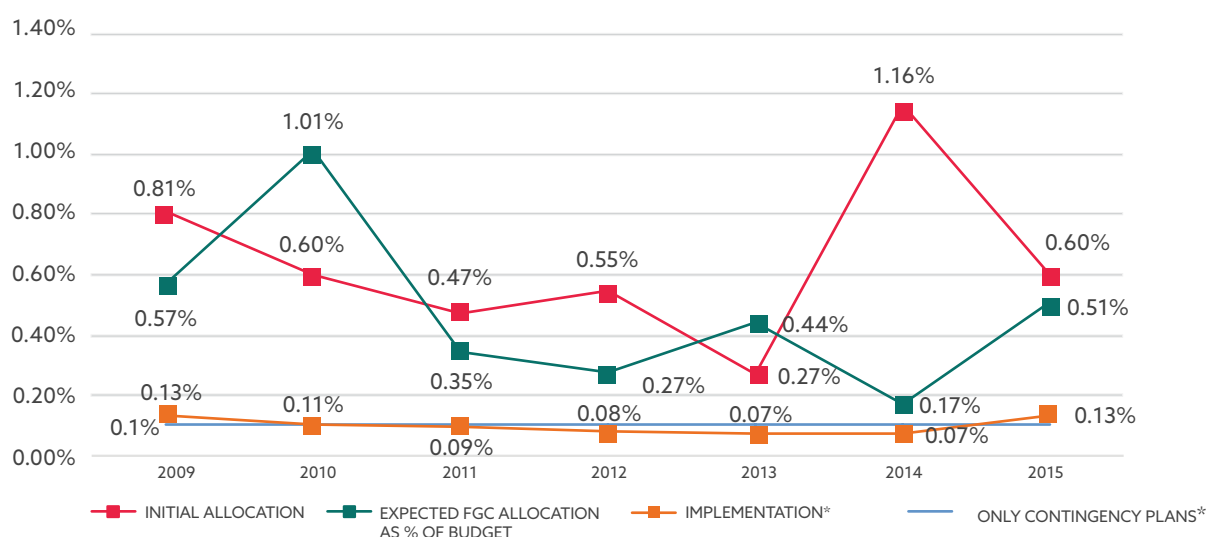


> **About the Budgetary Allocations**

Between 2009 and 2015, the initial allocation for disaster-related spending reached more than MZN 7 billion, corresponding to 0.66 percent of total initial allocations of the State budget in the same period. Disbursements, in

turn, amounted to MZN 4.3 billion, or about 0.5 percent of the value disbursed in all budget lines. The evolution of these indicators over the years is presented in Figure 5 below.

**FIGURE 5. POST-DISASTER-RELATED SPENDING AS A PROPORTION OF BUDGET, 2009-2015**



Source: World Bank Group estimates based on Boost dataset, Ministry of Economy and Finance reports, and INGC information (2018).

As mentioned above, the Disaster Fund is expected to receive budget allocations of at least 0.1 percent of the State budget. This allocation, combined with the conversion of balances into the fund's revenues, increases the contribution and availability of public resources for emergency response. It also makes room for financing recovery and reconstruction activities if resources are available in the fund.

Approval of this measure is positive because it establishes a source of stable ex-ante funding and facilitates expense planning by the institutions involved in disaster management. However, considering all sectors operating in disaster management in the analyzed period, the resources allocated and implemented were systematically higher than 0.1 percent of the respective total budgets.

Considering only the budget of the Annual Contingency Plans between 2009 and 2015, initial allocations were between 0.07 and 0.13 percent of the State budget. That means, the proposed allocation to the Disaster Fund (0.1 percent of the State budget) is close to the value of resources allocated to Contingency Plans in recent years. However, given the country's high-risk profile and non-

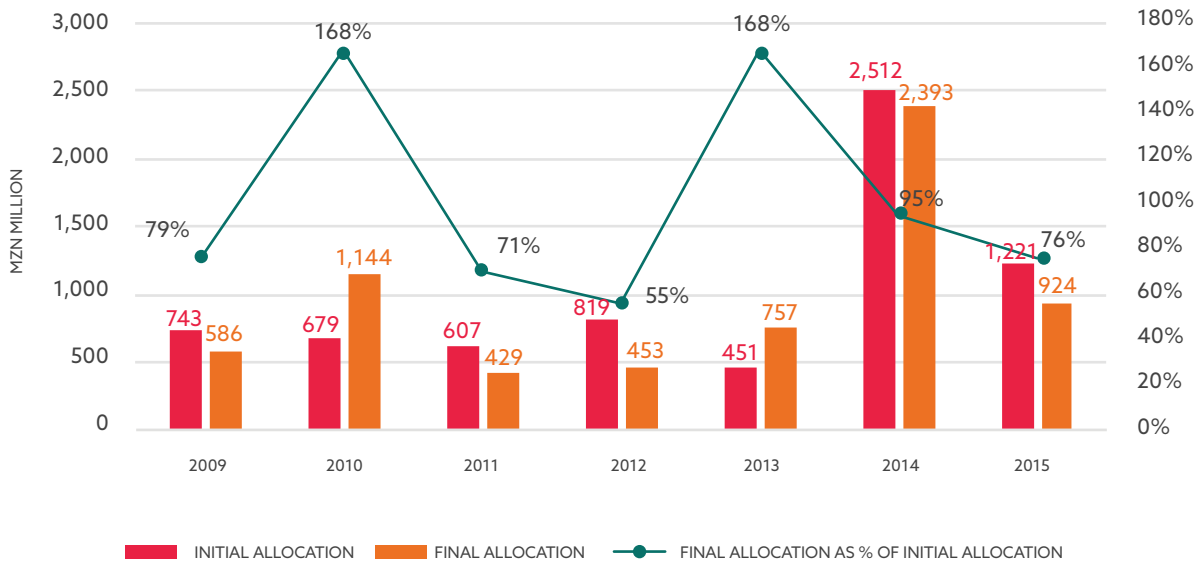
existent capacity to transfer risks to the private sector, the Disaster Fund Resources alone from the State cannot reinforce the country's financial resilience against natural hazards. Advancing the dialogue on adopting and using other financial protection instruments, such as contingent credit and insurance against disasters (sovereign and private), is critical.

> **Disbursement Performance**

Regarding the disbursements, data show the initial allocation of disaster-related budget lines present significant changes throughout the fiscal year and that the direction of these changes depends on the year (see above Table 4).

In five of the seven years analyzed, the initial allocation is revised downward, indicating cancellation or reallocation of disaster management resources (Figure 6). This could reflect difficulties in revenue collection or resource mobilization, common to countries with a fiscal structure such as that of Mozambique. Or it could reflect difficulties in low implementation capacity by involved sectors, often induced by bottlenecks in the procurement processes.

**FIGURE 6. DISASTER MANAGEMENT FISCAL INDICATORS INITIAL AND FINAL ALLOCATION, 2009-15 (MZN MILLION)**



Source: World Bank Group estimates based on Boost dataset, Ministry of Economy and Finance reports, and INGC information (2018).

The volatility of the disbursement indicators is another factor. As shown in Figure 7, disbursement as a proportion of initial allocation is often relatively low. In 2010 and 2013, disbursements were well above initial allocations, indicating the considerable reallocation of resources in these periods, such as those formalized through amending budgets in 2013.

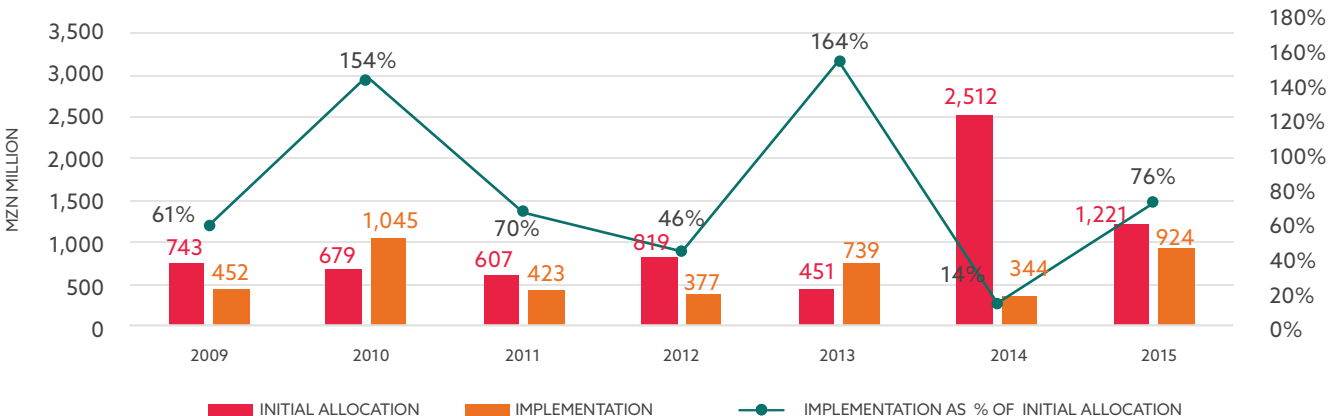
The high disbursement in 2010 is associated with the maturation phase of the resettlement program in the Zambezi Valley, started after the floods in 2007 and readjusted after the floods of 2008. This program received significant State investments for construction

of houses, demarcation of plots, opening of roads, and construction of basic social infrastructure such as water supply, sanitation, energy, and markets to ensure the population's resettlement.

In 2013, the government immediately invested in the recovery of agricultural activity in the Limpopo Valley, rehabilitating Chókwe and Xai-Xai irrigation and protective dykes. It used retroactive financing schemes, particularly for investments supported by the World Bank Group.

The speedy procurement processes associated with resettlement activities in the Zambezi Valley and post-

**FIGURE 7. INITIAL ALLOCATION AND IMPLEMENTATION, 2009-2015 (MZN MILLION)**



Source: World Bank Group estimates based on Boost dataset, Ministry of Economy and Finance reports, and INGC information (2017).

flood reconstruction in the Limpopo Valley explain the high levels of disbursement in 2010 and 2013.

> **Analysis by Sector: Post-Disaster Reconstruction**

The breakdown of budget lines by the sectors housing, roads, education, and other infrastructure was possible as well (Table 5). Other infrastructure includes projects types such as flood protection, dams, and other non-classifiable

assets in other sectors. Activities in the agriculture sector mainly include response to drought. It was not possible to separately identify, for example, reconstruction in the health sector. It was possible to calculate fiscal indicators for the Contingency Plans.

The roads sector had the largest initial allocation and disbursement from 2009 to 2015; the low number of

**TABLE 5. POST-DISASTER SPENDING BY SECTOR, 2009-15 (MZN MILLION)**

| Sector               | Initial Allocation | Final Allocation | Implementation |
|----------------------|--------------------|------------------|----------------|
|                      | MZN million        |                  |                |
| Housing              | 647                | 566              | 562            |
| Education            | 555                | 221              | 120            |
| Roads                | 3,987              | 4,112            | 2,178          |
| Agriculture          | 448                | 572              | 308            |
| Other Infrastructure | 362                | 207              | 131            |
| Contingency Plans    | 1,034              | 1,007            | 1,005          |
| <b>Total</b>         | <b>7,032</b>       | <b>6,685</b>     | <b>4,303</b>   |

Source: World Bank Group estimates based on BOOST dataset (2018).

interventions (69) indicates a larger financial volume.

This reflects not only the high cost of replacing disaster-affected roads and bridges infrastructure but also the severity of damages, measured by the length of roads, the affected structural works, and the damaged bridges. Contingency Plans rank second, expenses that mainly reflect emergency response (Table 5).

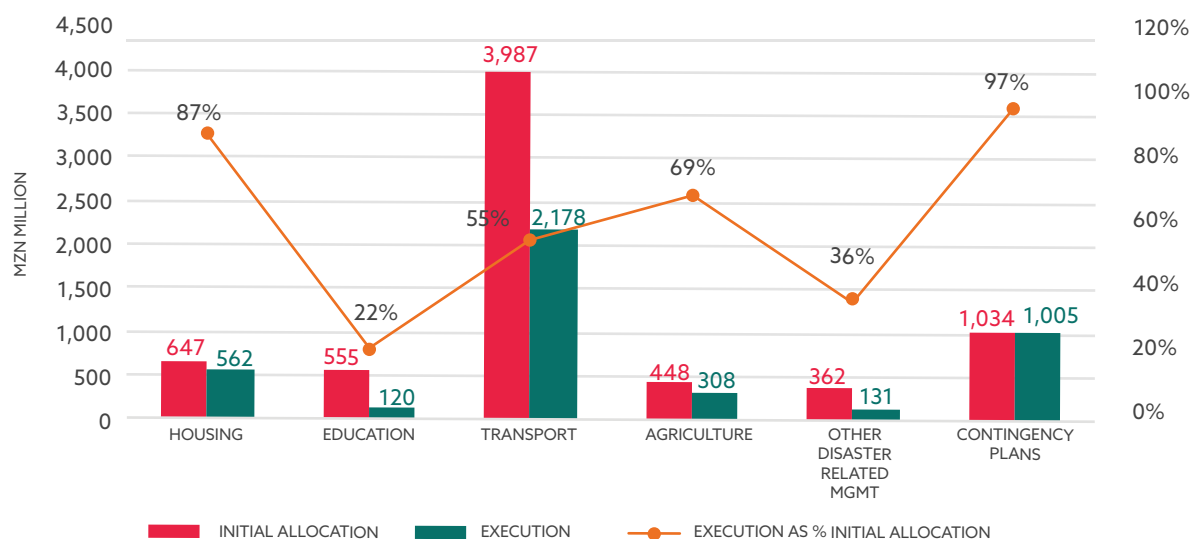
Housing is the second most heavily spending sector for recovery and reconstruction. This reflects damages from

floods and cyclones to housing units and costs associated with INGC-led resettlement programs. The high number of interventions (691) indicates that resettlement costs recur during the period considered.

In terms of disbursement capacity between 2009 and 2015, disbursement related to the agricultural sector and droughts reached almost 70 percent (Figure 8) of the initial allocation.

At the INGC, Contingency Plans' and resettlement

**FIGURE 8. ANNUAL CONTINGENCY PLANS, ESTIMATED NEEDS, AND VALUES IMPLEMENTED (MZN MILLION)**



Source: World Bank Group estimates based on Boost dataset, Ministry of Economy and Finance reports, and INGC information (2018).

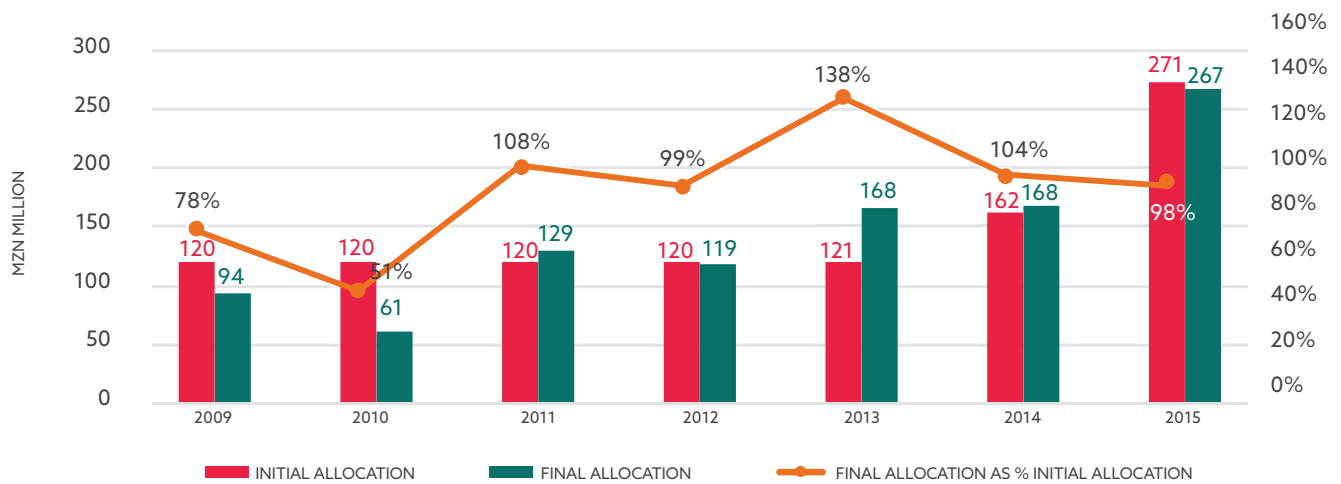
programs' disbursement was around 97 percent of initial allocations between 2009 and 2015, except in 2010 when it was only 51 percent (Figure 9). Implementation in all years corresponded to practically 100 percent of final allocation. This indicates that once authorized, resources from Contingency Plans are executed in their entirety.

Therefore, within activities calculated in the budget line of the Contingency Plan, under current conditions, the main restriction is in the availability of financial resources and

not in the INGC disbursement capacity.

In the other sectors, cumulative disbursement in the period considered was lower and could be strengthened, suggesting that the issue of technical capacity and barriers to procurement be considered. For example, 2012 to 2014 was characterized by the expansion of public spending, including upward budget revision, to accommodate and absorb extraordinary resources from the extractive sector.

**FIGURE 9. RESOURCE DEFICIT FOR POST-DISASTER RECONSTRUCTION, 2013 AND 2014 (MZN MILLION)**



Source: World Bank Group estimates based on Boost dataset, Ministry of Economy and Finance reports, and INGC information (2018).

In June 2013, sectors such as education and health canceled allocations for post-disaster reconstruction. They were not able to complete the procurement processes required for contractors to complete rehabilitation projects of the affected classrooms and health units in less than six months. Alternatively, they preferred to allocate resources for the Years 2014 and 2015.

The roads sector faces similar problems. Due to issues in obtaining a permit from the Administrative Tribunal, until 2016 it had not been able to spend resources made available in 2011 by the Pilot Program for Climate Resilience for the Zambezi Valley, and transferred in 2013 for the rehabilitation of the Limpopo Valley roads destroyed by floods in 2013.

**> Notes on the Suggested Fiscal Indicators**

It is important to emphasize that data used in the analyses above are approximations based on the information available from the BOOST database and on

interviews conducted with government representatives. Other methodologies were considered and tested, but the use of key words showed the most. This is indicated by being consistent with other specific case studies prepared by the Ministry of Economy and Finance, by allowing more detailed analyses, by providing greater clarity regarding the budget lines which are being considered, but also by relating to what could not be tracked.

The fiscal indicators can be recalculated to incorporate suggestions from representatives of the sectors involved in post-disaster spending. The analyses tested within the scope of this study involved a large volume of manual work and a case-by-case analysis. That is, the methods used here are not suitable for systematic monitoring of expenses related to disasters, although they may apprise discussions on how to monitor expenditures as the programmatic functional classification system of public expenditure is improved in the country.

In addition, the above data do not include implementation of off-budget expenditures and projects financed by international institutions involved in disaster management. Nor do they include donations of goods in-kind (such as donation of kits and tents to the INGC) that are relevant to the emergency response phase.

### 3.3. Analysis of the Resource Deficit for Disaster Management: Case Studies

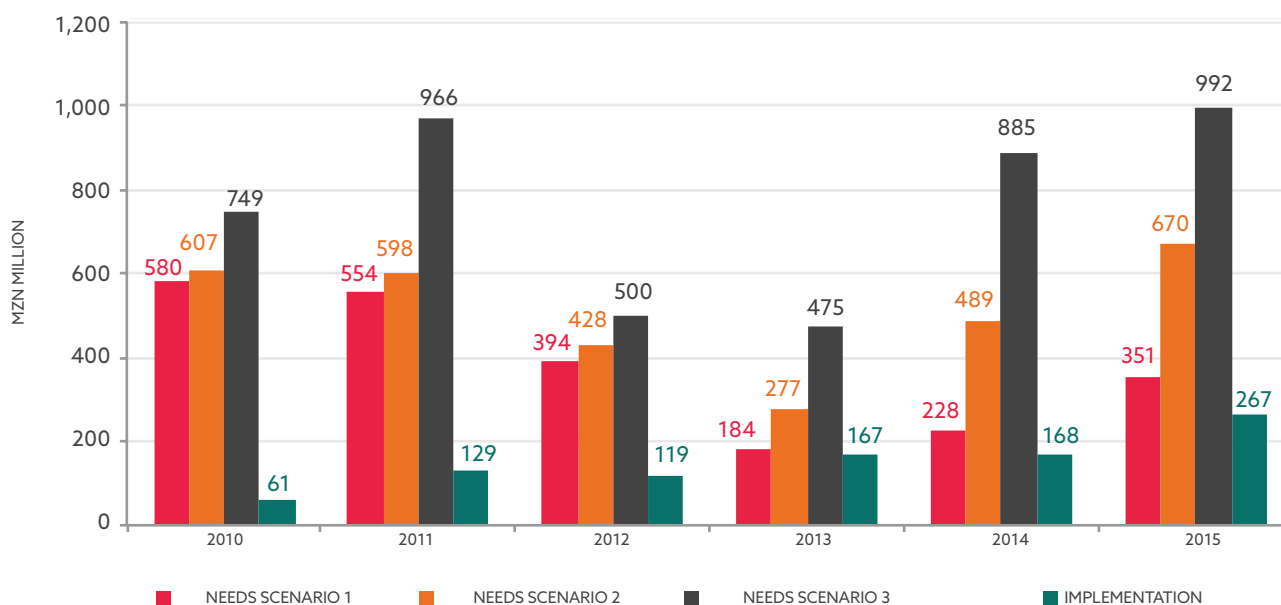
Due to the limited availability of data on the damages and losses caused by disasters and on the post-disaster public spending in Mozambique, it was not possible to estimate the disaster funding gaps for a long period. However, under the scope of this study, it was possible to carry out two preliminary case studies.

Significant funding gaps were identified during the emergency and reconstruction phases. Overall, the allocations to the State budget for emergency response is systematically insufficient to cover the needs estimated by the INGC. During reconstruction, an analysis of the 2013–2015 period indicates that post-disaster disbursement was significantly lower than public damages and losses in the same period.

#### 3.3.1. Annual Contingency Plans and Deficits in Emergency Response

As part of the annual Contingency Plans, the INGC prepares forecasts of the financial needs for the period based on three distinct scenarios, which in turn consider the possible impacts of disasters on the exposed

FIGURE 10. ANNUAL CONTINGENCY PLANS: ESTIMATED NEEDS AND VALUES IMPLEMENTED, 2010–2015 (MZN MILLION)

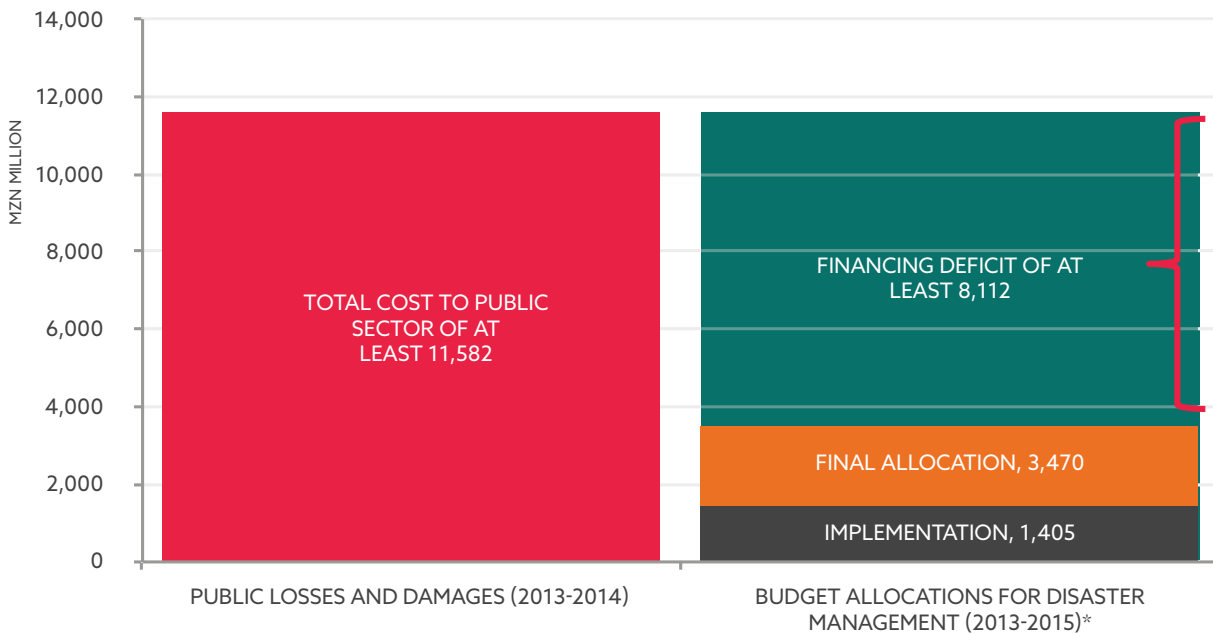


Source: World Bank Group estimates based on Boost dataset, Ministry of Economy and Finance reports, and INGC information (2018).

population and the response to be provided by the government and partners. In Figure 10 below, budgets are presented for Scenario 3 (more serious), Scenario 2 (average scenario – the most likely scenario), and Scenario 1 (less severe), as well as amounts implemented under the Contingency Plan.

The disbursements are significantly lower than the needs pointed out in the plans (Figure 11). The difference between that amount disbursed by the INGC through the Contingency Plan budget line and the estimated needs cannot be considered directly as an estimate of the financing gaps for emergency response. Because, in

**FIGURE 11. RESOURCE DEFICIT FOR POST-DISASTER RECONSTRUCTION, 2013 AND 2014**



Source: World Bank Group estimates based on Boost dataset, Ministry of Economy and Finance reports, and INGC information (2018).

addition to the above needs being an approximation, the amounts implemented by the INGC are added to those made available by the national and international partners. However, the chart above shows the importance of the partners and the State's limited risk retention capacity if considering only the use of its own revenues.

For example, according to data from the Rain Season Balance Reports between October 2013 and March 2014,

partners mobilized about MZN 283 million for emergency response (considering goods in-kind and monetary donations). In August of 2014, the INGC requested MZN 45 million in addition to the initial allocations to cover deficits and due balances. This marks a significant increase of available resources, as disbursement of the Contingency Plan in 2013 was MZN 167 million.

The available quantitative information is not sufficiently

detailed to enable a thorough analysis of the financing gap for emergency response. But the available data and the qualitative information from the Rain Season Balance Reports provide evidence that the State's financial capacity to finance emergency response and post-disaster recovery in Mozambique is far below the needs of the affected population, limited only to small- to medium-scale emergency response.

### 3.3.2. 2013 and 2014 Events: Deficits in Reconstruction

Limited data and information on the economic costs of disasters and on public expenses for disaster management restrict possibilities for a more detailed study of the financing deficits for disaster management in recent years. Yet, the events of 2013 and 2014 illustrate the difficulties faced by the government in mobilizing resources to finance emergency response and post-disaster recovery and reconstruction.

According to the Post-Disaster Reconstruction Plans prepared by the then Ministry of Planning and Development (MPD), the damages and losses to the public sector after the events of 2013 and 2014 were estimated at MZN 11,582 million. In 2013, the public damage and losses amounted to MZN 10,602 million while the private damages were estimated at MZN 4,916 million. Due to the severe impact of the 2013 events, for example, a revision of the State Budget was prepared to partially accommodate necessary expenses for recovery and reconstruction. A significant part of these costs was transferred and accommodated in the budgets of 2014 and 2015 (see above Figure 11).

In fact, these efforts are reflected in the fiscal indicators presented in the previous section, where 2014 and 2015 are the years with the highest budget for post-disaster spending. Considering that the implementation of post-disaster reconstruction may involve medium- and long-term activities (such as, reconstruction of housing units, roads, or bridges), calculation of budgetary allocations for the 2013 and 2014 post-disaster programs included all funds allocated and disbursed in 2013, 2014, and 2015.

In this period, the final allocations totaled MZN 3,470 million and the amounts executed reached MZN 1,405 million. The total amounts allocated and implemented for post-disaster recovery and reconstruction in Mozambique were well below the estimated public losses and damages observed in the same period, denoting a public financing deficit.

Considering the disbursement levels observed, the funding shortfall for these events exceeds MZN 10 billion. Even considering the value of the final allocations, the deficit would exceed MZN 8 billion (see above Figure 11). And this does not consider impacts from the 2015 events, which added to the initial pressure in the 2015 budget to accommodate reconstruction costs inherited from the 2013 disasters.

That is, even with the credit operations contracted to finance reconstruction and with budgetary reallocations carried out during the period considered, the amounts made available for post-disaster recovery and reconstruction still fell far short of the financing needs of affected sectors. Of course, difficulties in determining public expenditure for disaster management mean that the amounts allocated to this area may be underestimated. Given the magnitude of the estimated deficit, even considering the measurement errors of fiscal indicators, the financing deficit remains high.<sup>13</sup>

Based on the case studies above, the financial capacity of the State for post-disaster response, recovery, and reconstruction is systematically and significantly lower than the funding needs for the adequate post-disaster response and reconstruction interventions. Even for the emergency response the resources allocated to the Annual Contingency Plans are not enough and the support from the donor community is still corresponds to a major share of the resources available. During the reconstruction stage, the difficulties in raising the funds are also evident and recurrent. That is, even in the absence of detailed information on the size of the disaster funding gaps, it is possible to conclude that the gaps are significant and that it is of paramount important strengthening the State's fiscal response capacity.

<sup>13</sup>The first version of fiscal indicators was presented and discussed with Government representatives, according to which the estimates of post-disaster spending were overestimated. The methodology was adjusted according to analysis of the budget lines carried out by several Government specialists. Thus, there is no evidence that the volume of resources allocated for response and reconstruction is underestimated.





# 4. Insurance against Disasters

Through international best practices, policy, and planning the government is driving change. Currently, insurance coverage of disaster damage and losses is still very low in Mozambique, an issue that has received concerted attention from the government in the recent years. Its Multi-Year Plan 2015–2019, states that “encouraging the use of insurance against disaster and climate risk” is one of the key actions of the strategic objective for reducing vulnerability.

Further, various efforts are being made to develop the private insurance market and the use of sovereign insurance in the country. Risk transfer instruments for disasters are being tested in the agricultural sector and designed in other areas.

## 4.1. Overview of the Private Insurance Market against Disasters

In Mozambique, market penetration of non-life insurance is low (0.69 percent of GDP) compared to the average in Africa (1.11 percent of GDP). But in 2015, this segment had an 81.9 percent share of total market output, according to the Mozambique Insurance Supervisory Institute (ISSM).<sup>15</sup> Property insurance accounts for a small portion of the total non-life insurance market. Market penetration of private insurance against disasters, even compared to other African markets, is very low.

The legal framework has changed in just over a decade. The 2003 Insurance Law does not include provisions on insurance against disasters, while the Disaster Law 15/2014 provides for government policies to promote the use of insurance against disasters and specifically has annulled all clauses in force in insurance policies that exclude the liability of insurers in the event of formally declared disasters. For example, since 2014, car insurance must cover damage caused to vehicles by disaster, provided that the disaster situation has been officially declared.

The ISSM views the low interest of insurers in offering this type of service, along with the population’s almost non-existent demand, as the basis for the low market penetration of disaster insurance, not the absence of specific regulations in the current Insurance Law. That is, while the Law 15/2014 intends to extend insurance coverage for goods and assets against disasters, the consequences of this legislation on the market (in terms of prices and products offered since then) are still unclear. This could

be the subject of a detailed study on how to foster the private disaster insurance market in Mozambique.

## 4.2. Microinsurance in the Agriculture Sector: Pilot Projects in Mozambique

### > First Phase

Since 2007, the government of Mozambique has been developing agricultural insurance. In 2012 (campaign 2012/13), it started implementing pilot projects. For the first test phase, the government selected cotton and a partner with the Cotton Institute. According to information from the ISSM, the pilot’s first stage was carried out between 2012 and 2013 and had financial losses. In the second round of tests (campaign 2013/14), the models were adjusted, and the results were better. A new round of pilot tests was prepared, this time more comprehensive.

This pilot phase was financed by international partners and applied to a crop subject to price control by the State and oriented to an exclusive, fixed market. In addition, during the first phase, pilot schemes were carried out in only two districts. Expanding insurance coverage to the whole sector and country will be the major challenge for the next phases. They will have to determine how the pilot results apply (or do not apply) to other areas and crops, the implications for the global insurance market, and the resulting fiscal burden for the government.

### > Second Phase

The project proceeded to a new round in 2017 (2017/18 campaign). It is partnering with the International Finance Corporation (IFC), which will finance a portion of the insurance premiums. It is expected that this new phase of testing will be implemented over five years and that the National Forum of Cotton Producers will co-participate in the premium payments. The insurance should be indexed to climate and other crops (such as, corn, soybeans, and beans) will be considered. At the time of this study, the design of the compensation payments was still under development and the area covered and number of producers participating in the pilot still being defined.

The project will include financial education modules for small farmers to foster participation in the program and, more generally, to raise demand for agricultural insurance. This agenda reflects the agricultural sector’s interest in the use of insurance to mitigate risks of food

<sup>15</sup> ISSM, 2016. Insurance Market 2015 Annual Report. Maputo: Mozambique Insurance Supervision Institute. [http://www.issm.gov.mz/images/RelatoriodeMercado\\_de\\_Seguros2015WEB2.pdf](http://www.issm.gov.mz/images/RelatoriodeMercado_de_Seguros2015WEB2.pdf)

crops and income losses due to natural hazards. Although still under discussion, it is expected that the Agriculture Development Fund will manage the insurance program once it is implemented.

### 4.3. Sovereign Insurance in Mozambique

Since 2011, the government of Mozambique has been working in partnership with African Risk Capacity (ARC) to develop sovereign insurance against cyclones, droughts, and floods. ARC is an agency of the African Union (AU). Its mission is to provide solutions for managing sovereign risks, including the provision of insurance to member countries since 2013. In 2014, the first ARC group was launched, offering insurance policies against droughts to four countries. In 2015, another five countries joined the group, expanding the coverage from US\$130 million to US\$192 million.

Timely intervention against the negative impacts of disasters is one of ARC's main objectives. Insurance indemnity payment take two to four weeks to disburse to the Treasury. This is shorter than the time necessary for formalizing an appeal to donors and receiving resources from the donor community.

ARC uses risk forecast model Africa RiskView (ARV). This software converts satellite rainfall data into estimates of risk and vulnerability parameters and estimates the number of people affected and the costs of responding to the hazard events. To acquire an insurance policy, an ARC member state must calibrate the Africa RiskView for the local context, prepare Contingency Plans to implement emergency responses, and receive approval for the plan by ARCs and ARC member states.

The country receives compensation when the financial response needs estimated by the model exceed a predefined threshold. Indemnity payments, which should be guided by pre-approved Contingency Plans, are audited after disbursement.

Between 2011 and 2014, the INGC interacted with ARC teams to prepare a drought model and a draft policy. It was finalized in 2014, but difficulties in finalizing the required institutional arrangements delayed the contracting of insurance.

The dialogue resumed in 2016, this time under the leadership of the Ministry of Economy and Finance and covering floods and cyclones as well. The dialogue is still ongoing, but the maximum coverage allowed by ARC is estimated at US\$30 million per hazard. In other words, contracting insurance for droughts, floods, and cyclones may offer coverage of a maximum of US\$90 million should insurance be contracted for the three hazards. It is expected that payment of the premium and the management of any indemnity payment to the government will be made through the Disaster Fund.

The geographic area and hazards covered will vary from year to year, based on the models calibrated to the Mozambique context. This exercise will be done by the government's technical teams in partnership with ARC. Negotiation and acquisition of insurance policies will only be decided by the government after the accuracy of the ARC models has been proved satisfactory.

However, for this stage of the technical work to be initiated, a Memorandum of Understanding between ARC and the Ministry of Economy and Finance still needs to be signed. This step is pending because it depends on the ratification of the Accession Treaty to ARC by the Council of Ministers. This can happen once the African Union has set the contribution quota for each ARC member state.

In short, alone, sovereign insurance cannot transfer the entire risk of disasters to the private sector. Other financing instruments should be considered as part of a broader strategy to protect the financial position of Mozambique against disasters.

## 5. Main Conclusions and Options for Consideration

The burden of disasters on the public sector in Mozambique is substantial and the government still faces significant difficulties in mobilizing the resources for financing post-disaster emergency response, recovery, and reconstruction.

Government estimates indicate that in 2013 and 2014, public damages and losses totaled MZN 11,582 million. The available fiscal data indicate that between 2013 and 2015, the government allocated MZN 3,470 million for post-disaster recovery and reconstruction. This represents a funding gap of at least MZN 8 billion. In addition, disbursements only reached MZN 1,405 million, equivalent to about 40 percent of the allocated resources. In a context of limited availability of resources and low disbursement, the total disbursements reached about 12 percent of total public damages and losses.

It follows that Mozambique's main sources of financing for post-disaster response, recovery, and reconstruction are ex-post. Thus, the financial instruments in place also limit access to immediate liquidity, causing delays in recovery and reconstruction. These delays, in turn, have the potential to amplify the negative effects of disasters on the welfare and economic performance of the affected sectors.

However, it is important to emphasize the: (i) the establishment of a Disaster Management Fund in July 2017 with an initial allocation of 0.1 percent of the State Budget and the progress in the work for its operationalization; (ii) the advances in contracting contingent credit; and (iii) the ongoing initiatives for developing catastrophe insurance, both sovereign and microinsurance against disasters. Together, these initiatives indicate the government's interest in pursuing a holistic approach while offering an encouraging sign that in the medium and long term, Mozambique could strengthen its financial capacity to manage disasters and increase its financial resilience against natural hazards.

Successful implementation of this agenda will require a review of the institutional and technical issues. Following are possible options to help promote the government's agenda for financial protection against disasters:

- > **Developing and formalizing a National Financial Protection Strategy against Disasters.** The development of instruments and criteria for the combined or alternate use of the various mechanisms
- > **Carrying out more detailed analysis focused on the implementation of the Disaster Fund (FGC) and its complementary regulations.** Among the activities required to implement the FGC are establishing the criteria for access and use of fund resources and defining the processes for the procurement of goods and services. The institutional arrangements will be crucial to the performance of the Disaster Fund in terms of disbursement, the timing of response, and the impact of the FGC on the well-being of the affected populations. In this sense, more detailed studies of the international experience in the management of disaster funds and exchanges with other countries may be useful to the INGC.
- > **Considering the use of contingent credit operations.** Among the issues emphasized by the government institutions involved in disaster management, the lengthy processes for mobilizing the financial resources (which may take up to two years) for recovery and reconstruction significantly delay the implementation of these projects. In addition, during the emergency response, it is also important to ensure access to the financial resources needed for rapid response. Preparation of contingent credit operations prior to the occurrence of a disaster event could guarantee access to liquidity and allow for the timely mobilization of resources for all phases of disaster management.
- > **Exploring risk transfer through disaster insurance.** Given the limited risk retention capacity of the public sector, continuing the dialogue with Africa Risk Capacity to develop sovereign insurance could limit

currently being considered should reflect the priorities identified by the Ministry of Economy and Finance and the National Institute for Disaster Management. These priorities can be communicated to the institutions involved in disaster management through a comprehensive financial protection strategy. The strategy could be updated as information accrues on Mozambique's risk profile and the instruments' performance. Given that the Disaster Fund may not meet the sectors' funding needs, continuing the dialogue on the use of alternative sources of financing will be essential for Mozambique to strengthen its response capacity and financial resilience in the medium and long term.

the fiscal burden from disasters in the medium and long term. Regarding microinsurance, the results from the pilot projects will inform the expansion of its use and the possibility of coverage for different crops and regions of the country.

- > **Improving the systems for collection and management of data on the occurrence, magnitude, and impacts of disasters** would allow for more detailed studies on the frequency, severity, and spatial distribution of the impacts of disasters in the country. A methodology and processes to assess the economic impacts of disasters in Mozambique need to be developed. Such information is extremely important to establish the country's risk profile and can be used, for example, in the calibration of stochastic models of financial losses from disasters.
- > **Considering alternative risk assessments of financial losses from disasters.** The disaster fiscal risks could be integrated into the risk assessments prepared by the Fiscal Risk<sup>14</sup> Unit. The historical data on occurrences and impacts of disasters in Mozambique currently available are insufficient for a statistical analysis of disaster financial losses. Alternatively, it is possible to consider preparing probabilistic catastrophe models focused on the hazards relevant to the country's profile, as well as
- a forensic reconstruction of the historical series of economic losses based on the available information, administrative records, and other sources. Combining the two types of analysis, Mozambique could obtain a better assessment of the distribution of financial losses caused by disasters.
- > **Improving the monitoring of public expenditure related to disaster management.** In the context of implementing a program-based public accounting system, establish indicators that allow systematic monitoring of public spending related to post-disaster response and reconstruction. Easy access to disaster management fiscal indicators could facilitate monitoring the performance of an established financial protection strategy and the Disaster Fund. And thus allow for the improvement of these instruments over time.
- > **Establishing a mechanism or platform to coordinate resources from the donor community.** In the context of the operationalization of the Disaster Fund, establish a mechanism to improve the predictability of the resources provided by donors as well as performance in terms of allocation and disbursement. And facilitate the planning of public spending on post-disaster reconstruction in specific sectors.

<sup>14</sup>The Fiscal Risk Unit is an organic unit of the Ministry of Economy and Finance, created by the Resolution 27/12015 of 4th of December. The Fiscal Risk Unit has as its main functions: (i) to analyze financial, fiscal and other risks to the national economy; (ii) to analyze the vulnerability of the national financial system; (iii) to propose preventive and corrective measures on potential risks to the national economy; (iv) to prepare and monitor the fiscal map; (v) to evaluate the sensitivity of the fiscal results in relation to the principal macro-economic variables; and, (vi) monitor the effect of long-term social policies on the national social protection system.

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