

2017 CABRI Conference



7-9 March 2017
Ouagadougou, Burkina Faso

2017 CABRI CONFERENCE

WHEN DISASTER STRIKES – FISCAL RESPONSES TO NATURAL AND MAN-MADE DISASTERS

The background is a dark green field filled with a complex network of white dots connected by thin lines, resembling a molecular or digital structure. Overlaid on this are several interlocking gears of various sizes and colors, including yellow, grey, and light blue. A large, semi-transparent gear is centered in the background.

MANAGING
BUDGETARY
PRESSURES

ACKNOWLEDGEMENTS

This report is part of a series of reports that were prepared by the Collaborative Africa Budget Reform Initiative (CABRI) following its 2017 conference. Alta Fölscher compiled the report, with support from the following co-authors: Michael Castro, Joana Bento and Danielle Serebro. Comments were provided by the CABRI Secretariat.

CABRI would like to thank the participants of the 2017 CABRI Conference, for their time and inputs, which made this work possible.



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FOREWORD



Budget managers are frequently confronted with changing circumstances during a fiscal year that disrupts even the best prepared spending plans. Some of these changed circumstances require no more than regular adjustments to plans, while others become chronic and have a significant effect on public finances. The latter are commonly referred to as extraordinary shocks, which are sudden and can pose a threat to fiscal stability and service delivery.

At the time of the hosting of the CABRI Conference in Ouagadougou in March 2017, several African countries were emerging from natural disasters and health emergencies. The best known of these is the Ebola epidemic that affected Liberia, Guinea and Sierra Leone, claiming over 11 000 lives and resulting in a significant contraction in GDP. Burkina Faso was recovering from devastating floods that were followed by unaffordable public sector wage demands; and South Africa was under pressure to increase subsidies to tertiary institutions and state-owned enterprises. Similarly, Nigeria and Lesotho were facing revenue losses from the decline in oil prices and customs revenue, respectively.

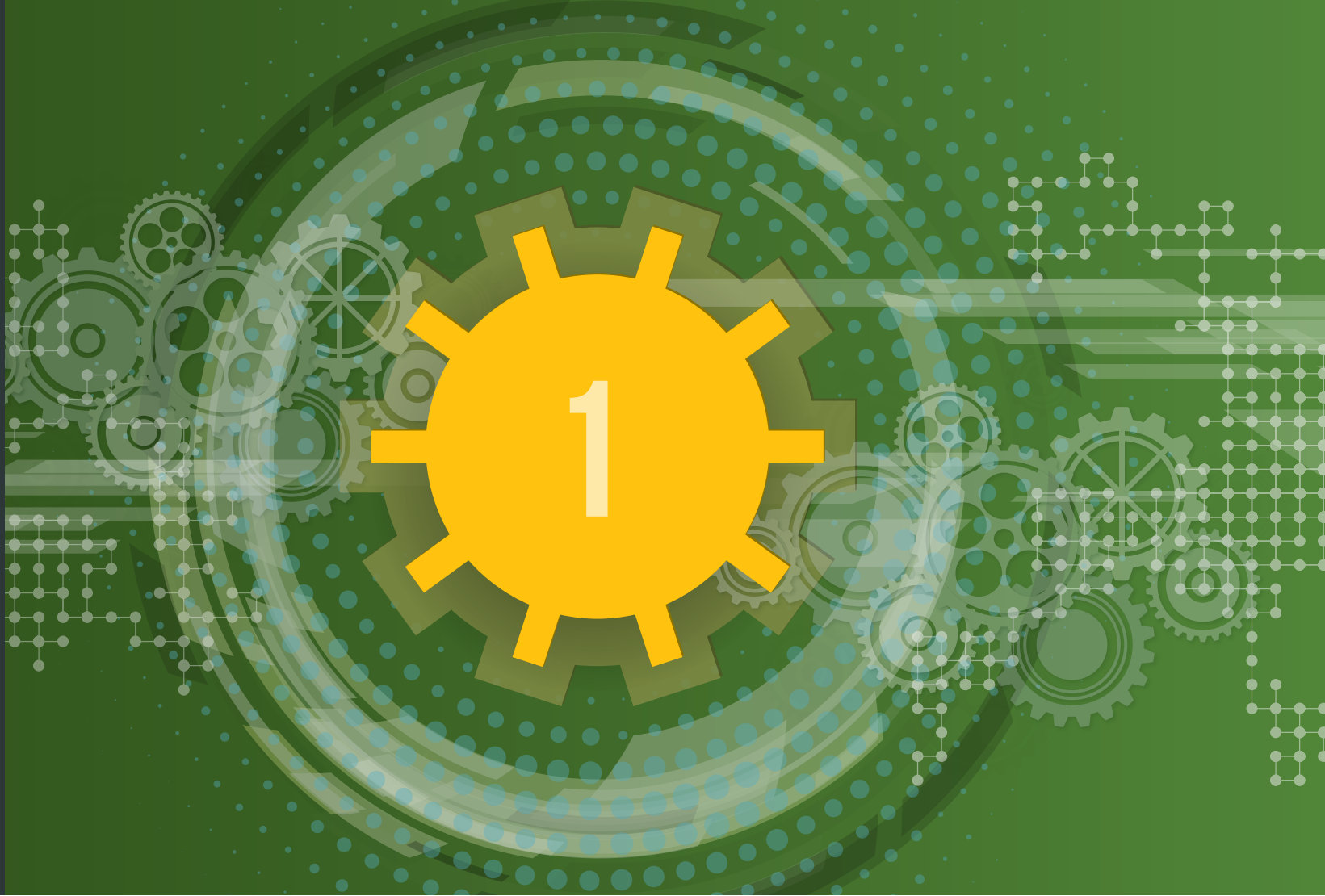
The conference in Ouagadougou provided a platform for peers from 26 African countries to share the experiences of various budgetary pressures, and how they managed in the midst of the crisis, what strategies were applied, and what they may do differently were the crisis to reoccur.

Once more, CABRI is grateful to our partners for their contribution to the conference content and financial support, as well as to those who shared their insights into both African and international experiences. And, lastly, a special thank you to the dynamic CABRI team for their willingness to go the extra mile to ensure the successful delivery of CABRI programmes. Thank you.

Neil Cole
Executive Secretary

SECTION 1

INTRODUCTION



1: MANAGING BUDGETARY PRESSURES – THE 2017 CABRI CONFERENCE

THE CONFERENCE

The ninth CABRI Conference was held in Ouagadougou, Burkina Faso, from 7 to 9 March 2017. Attended by 69 officials from 26 African countries, it examined how governments can prepare for and manage extraordinary budget shocks that threaten budget stability and the financing of service delivery.

Budgetary pressures are an unavoidable consequence of allocating scarce resources between potentially limitless societal needs. Ministries of finance routinely contend with budgetary pressures during the preparation and approval of public budgets, as well as when managing ordinary deviations from planned revenues and expenditures during the year. Countries with stronger budget institutions are better able to manage this year-to-year budgetary pressure than countries with weaker systems – that is, more fragmented budget processes and less robust revenue and expenditure forecasting, cash management, in-year control, and accounting and reporting systems.

The conference's focus, however, was neither on these routine pressures, nor on how to build the strong budget institutions needed to best manage them. Rather, the overarching question for the 2017 CABRI Conference was

how governments can better prepare for and manage extraordinary pressures that either arise suddenly or build up over several years, without veering towards unsustainable debt or disrupting service delivery. It aimed to explore successful ministry of finance strategies for managing these pressures and achieving budget credibility. Key to understanding the pressures is that context matters.

The sessions were structured to allow senior budget officials to reflect on the budgetary pressures they have faced, how they managed them and what they learnt. Almost all the conference sessions presented a country case study followed by contributions from other countries from the floor. Sessions that followed this structure focused on managing the impact of natural and man-made disasters on countries' revenues and expenditures; managing the impact of macroeconomic shocks on

countries' revenues; and managing large budgetary demands that have built up over years.

A fourth set of pressures – the pressures that result from the realisation of off-budget contingent liabilities – were discussed through a fictitious case of a large bailout for a public water utility company. Participants had to identify what their responses would be and discuss how the case reflected experiences in their countries.

These substantive sessions were bookended by an introductory panel discussion that considered why many African countries are vulnerable to budgetary pressures and the importance of managing them, and a concluding session that examined common responses and approaches to being better prepared for crises. A copy of the conference programme and all materials can be found at www.cabri-sbo.org

1: MANAGING BUDGETARY PRESSURES – THE 2017 CABRI CONFERENCE



1: MANAGING BUDGETARY PRESSURES – THE 2017 CABRI CONFERENCE

ABOUT THE CONFERENCE PUBLICATIONS



CABRI has produced four publications based on the 2017 conference. The main report, *2017 CABRI Conference: Managing budgetary pressures*, reflects on the conference discussions and conclusions. It is structured around three country case studies, each focused on a different category of pressure. For ease of use, these three case studies are also presented in separate, summarised publications.

The first of these case studies, presented here, focuses on managing the impact of natural and man-made disasters on countries' revenues and expenditures. It reflects on

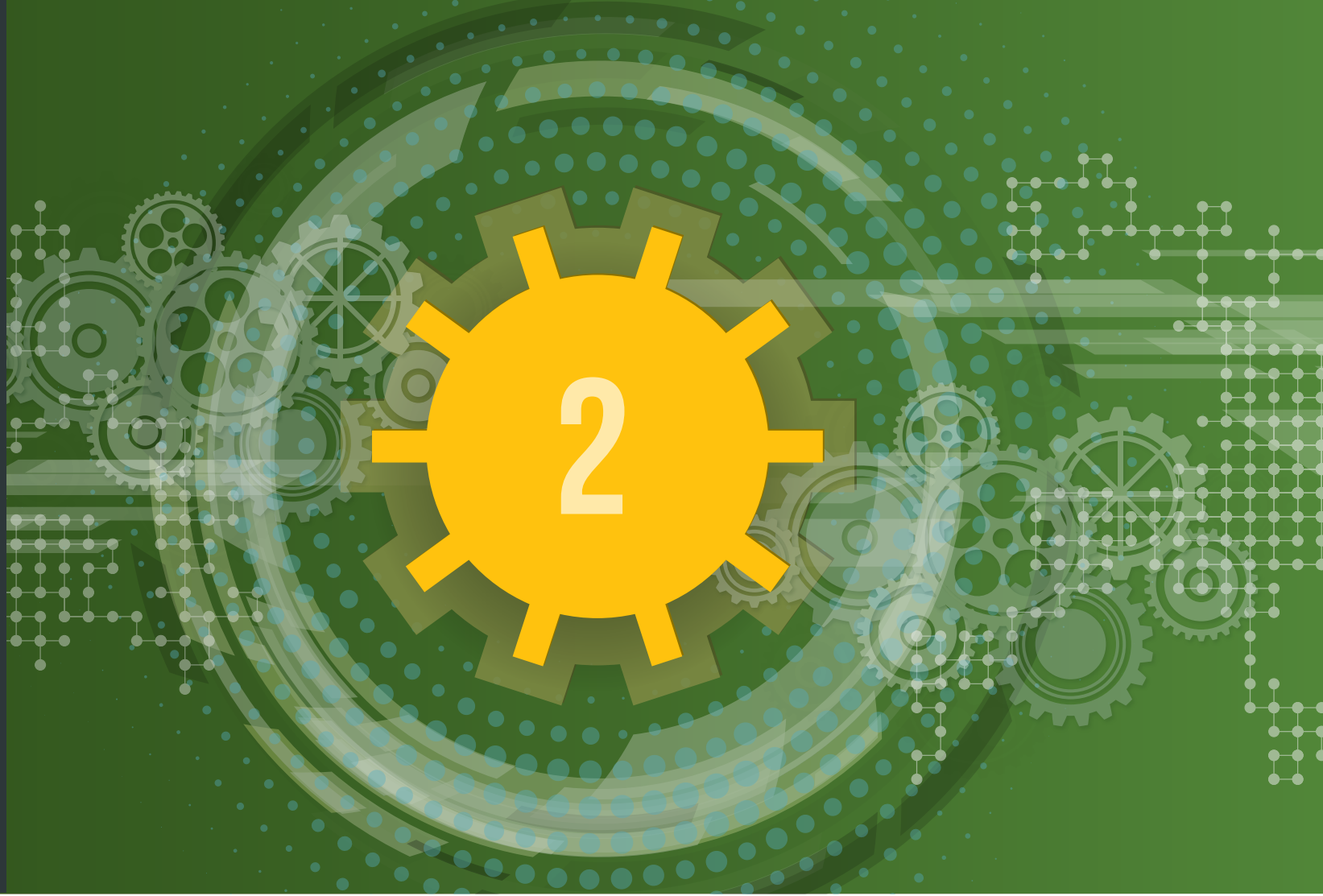
how Liberia responded to the Ebola crisis, and Madagascar to high-intensity cyclones. It also outlines the budgetary impact of the Central African Republic's political crisis, and the country's response. Moreover, it sets out options that countries should consider when faced with crises that are caused by factors outside their control.

The two other country case study publications focus on chronic pressures and macro-fiscal shocks respectively (both available on the CABRI Publications page).

SECTION 2

WHEN DISASTER STRIKES

FISCAL RESPONSES TO NATURAL AND MAN-MADE DISASTERS



2: WHEN DISASTER STRIKES – FISCAL RESPONSES TO NATURAL AND MAN-MADE DISASTERS

INTRODUCTION

By Michael Castro¹

The best planned budgets are subject to external shocks that are at times unforeseen. Managing fiscal responses to these shocks can be challenging even for the most experienced senior budget officials.

One set of unforeseen external shocks relates to a sudden change in the level of economic activity and/or demand for public intervention due to natural or man-made disasters. The size of these events usually means that governments need to make large adjustments to in-year fiscal and budget frameworks.

The 2017 CABRI Conference devoted a session to discussing countries' choices when facing fiscal shocks over which they have little control. Liberia, Madagascar and the Central African Republic shared their recent experience of natural and man-made disasters. Alieu Fuad Nyei, Assistant Minister in the Ministry of Finance and Development Planning, presented the Liberia case; Onintsoa Harilala Raoilisoa, Director of Budget Programming in the Ministry of Finance and Budget, presented the Madagascar case;

and Jean Richard Bassanganam, Director of Budget in the Ministry of Finance and Budget, presented the Central African Republic case.

In Liberia, the West Africa Ebola outbreak halted the country's commodities-led economic growth – along with most economic activity. Madagascar's natural disaster risks include drought and cyclones that wreak havoc across all sectors. In contrast, the crisis in the Central African Republic was driven by internal armed conflict that placed a severe strain on the country's limited fiscal space.

What common approaches do senior budget officials take to deal with these unforeseen events? What role does context play in which approach works best? What are the lessons learnt and how can countries build resilience to

overcome these natural and man-made disasters? This chapter focuses on the budgetary pressures faced by Liberia and Madagascar due to natural disasters, and their response to these pressures.

Key lessons from the case studies

Natural and man-made disasters are unpredictable. Following macroeconomic and financial sector shocks, natural and man-made disasters are the most frequent budgetary pressure that senior budget officials face.² These events can be divided into two categories: external discrete events (rare events) and external continuous events (regular events). The Ebola outbreak in Liberia and the conflict in the Central African Republic can be characterised as discrete events, while Madagascar's cyclones are regular events.

¹ Michael Castro is the Programme Manager: Budget Transparency and Accountability in the CABRI Secretariat.

² CABRI (2017) Managing budgetary pressures: 2017 CABRI Conference framing paper.

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Senior budget officials commonly deal effectively with both categories of event through contingency funds, reserves and budget reallocations. Liberia and Madagascar used a combination of these mechanisms to manage their respective crises, while the Central African Republic significantly reduced its debt obligation payments to be able to reallocate funds to the expenditure budget. Countries with external continuous events can also manage these risks by using costing mechanisms to pre-empt the potential costs to the budget and include appropriate budgetary allocations. Madagascar, for example, uses several modelling techniques during budget formulation to integrate the cost of natural disasters in the budget.

Context plays an integral role in determining which mechanisms are most appropriate for a country. Key factors determining a country's options include its macroeconomic situation and fiscal space when the crisis occurs, and its ability to work with development partners to manage crises. Nevertheless, there are also similarities between countries in how these factors unfold during crises. First, natural and man-made disasters have serious implications for the macroeconomic assumptions used to determine the budget. Productivity loss in the country's

major sectors equates to a drastic drop in budget revenue. This loss of revenue led the Central African Republic, Liberia and Madagascar to apply different mechanisms. Second, these disasters cause new expenditure demands. To manage the Ebola crisis in Liberia, the Ministry of Finance and Development Planning minimised duty staff to control cost, and coordinated with subnational authorities, existing networks and development partners. The Ministry of Finance and Budget of Madagascar used reserve funds for an emergency response to cyclones. The Ministry of Finance and Budget of the Central African Republic reallocated funds to the social sectors, justice and public safety by reducing salaries, grants and pensions elsewhere.

While each context is different, there are key lessons about how to improve institutions and plan better for the future that are applicable to a variety of shocks and contexts. Commodities-driven economies like that of Liberia learnt the hard lesson of economic diversification to shield themselves from these kinds of shocks. Production in the mining sector accounted for 17% of GDP and 56% of total exports in 2014.³ Ebola brought this main economic activity to a sudden halt in 2015, resulting in a significant reduction in revenue. This led the country to invest more in

other sectors such as agriculture to be able to manage such fiscal pressures better in future. Countries like Madagascar that are predisposed to recurring natural disasters should routinely identify these risks and determine their potential impacts on the economy and budgets. Models can be used to determine the parameters of these risks and their implications on economic growth and debt. Planning for natural disasters helps develop tools to build resilience in the national budget. Institutions, procedures and guidelines can help countries better manage their response to disasters and implications for the budget. Finally, armed conflicts generally result in the loss of development partners, which is what happened in the Central African Republic (see Box 1). The loss of aid can motivate country leaders to implement reforms to improve public financial management.

The following sections provide an overview of the disasters in Liberia and Madagascar, their context-specific mitigation strategies, and how they now plan better for future disasters.

³ United Nations Development Programme (2014) *Assessing the socio-economic impacts of Ebola virus disease in Guinea, Liberia and Sierra Leone: The road to recovery*.

2: WHEN DISASTER STRIKES – FISCAL RESPONSES TO NATURAL AND MAN-MADE DISASTERS

BOX 1

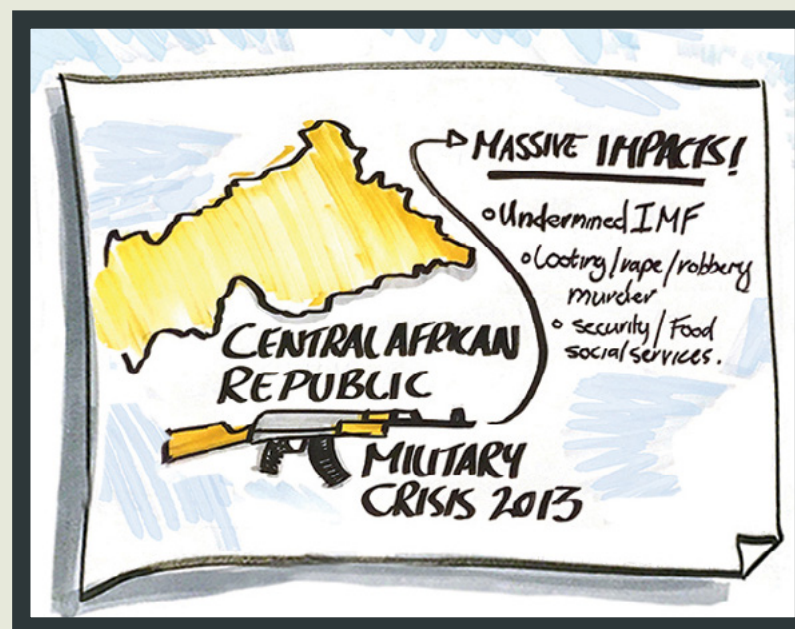
SHOTS FIRED: CONFLICT IN THE CENTRAL AFRICAN REPUBLIC

The conflict in late 2013 in the Central African Republic severely damaged the country's economy, security and social fabric. Conflicts have a major impact on budget formulation and execution, and the Ministry of Finance and Budget had an enormous task on its hands.

To address the issues caused by the armed conflict, the ministry reallocated funds and reduced domestic debt repayments by 50%, increasing the deficit by default in 2014. Reducing debt payments ensured that resources were aligned to the country's priorities following the conflict.

In addition to reducing its debt repayments, the Ministry of Finance and Budget of the Central African Republic reduced salaries, grants, infrastructure and pensions to be able to increase spending in the social sectors and in justice and safety post-conflict.

Conflict essentially stops all economic activity. Macroeconomic assumptions used



to develop the budget no longer hold. In the Central African Republic, the real GDP growth rate forecast for 2013 was 4.3%. Updated estimates from the Ministry of Economy, Planning and International Cooperation revised growth to -11.1%. The decline in the real GDP growth was due to a decline in revenue from exported goods, including the suspension of oil and mining exploratory work. As a result, revenue from taxes and customs were well below estimates, affecting government's cash flow.

Conflict in the Central African Republic also stopped the flow of development aid to the country. Development assistance accounted for almost 40% of the revenues in the country's budget. While the cut in development assistance constrained the country's fiscal space, senior budget

officials viewed this as an opportunity. Loss of aid can motivate leaders to implement reforms to promote good economic governance. This is key to being prepared for future disasters.

2: WHEN DISASTER STRIKES – FISCAL RESPONSES TO NATURAL AND MAN-MADE DISASTERS

MANAGING THE BUDGETARY IMPACTS OF THE EBOLA CRISIS IN LIBERIA

THE CALM BEFORE THE STORM: LIBERIA'S CONTEXT AND FISCAL SPACE

Civil conflict dominated 14 years of Liberia's recent history, leaving the country with poor infrastructure (including poor health facilities), high poverty rates, and internal displacement. The post-conflict, democratically elected government sought to reverse this trend and tackle these developmental challenges. With the help of development partners, the government implemented various programmes to build Liberia's health infrastructure, educational systems and the many other sectors neglected during the conflict. Yet, the country's healthcare infrastructure still lacked inputs necessary to provide basic healthcare, let alone manage an epidemic.

The stability after the civil war allowed Liberia to focus on its economy, which mainly comprises mining (iron ore, diamonds and gold), agriculture and agroforestry (palm oil and rubber), and services. The rise of commodity prices between 2010 and 2014 drove Liberia's real GDP growth up to 8.7% in 2013. This expansion of the economy increased government revenue, allowing the government to invest in infrastructure projects.

While these much-needed investments spurred economic growth, Liberia remained a poor country, relying heavily on development partners and remittances. Specifically, the resulting increases in government revenue were not enough to bridge the infrastructure gap, including repairing hospitals that were damaged in the civil conflict and, importantly, generating a reliable power supply throughout the country. The private sector, public healthcare and educational facilities relied on generators, resulting in rising operational costs as the price of petrol rose. This severely limited private-sector diversification, including the expansion of manufacturing. In addition, Liberia's lack of paved roads constrained its most promising sectors – agriculture and agroforestry – by limiting local, regional and global market access. All of these factors meant that before the pandemic struck, government revenues still relied heavily on the mining sector.⁴

MONROVIA: CALM TURNS INTO A STORM

The Ebola outbreak in West Africa started in Meliandou, Guinea. Liberia's first two cases of Ebola were confirmed in March 2014 in the Foya district of Lofa county, near the border with Guinea.⁵ As more cases of the Ebola virus

were reported in Monrovia and other parts of the country, officials turned to the country's only large referral hospital: the John F. Kennedy Medical Centre. Unfortunately, this hospital was heavily damaged during the civil conflict and never repaired. The country did not have the necessary facilities to deal with Ebola. As the World Health Organization reported: "No hospital anywhere in the country had an isolation ward. Few medical staff had been trained in the basic principles of infection prevention and control. Facilities had little or no personal protective equipment – not even gloves – and virtually no knowledge about how to use this equipment properly."⁶

The lack of capacity to handle the first reported cases of Ebola created the conditions for multiple chains of transmission. Healthcare staff, patients, visitors, relatives who cared for patients, ambulance and taxi drivers, and neighbours became transmitters of Ebola, affecting entire neighbourhoods. The number of cases grew exponentially, putting severe stress on already strained resources. By September 2014, Ebola had reached a critical level, having infected almost 2 000 people and claimed the lives of over 1 000. "By that time, 14 of the country's 15 counties had

⁴ Ibid.

⁵ World Health Organization (2015) *One year into the Ebola epidemic: A deadly, tenacious and unforgiving virus*, <http://www.who.int/csr/disease/ebola/one-year-report/liberia/en/>.

⁶ Ibid.

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reported confirmed cases. Some 152 healthcare workers had been infected and 79 of them had died, representing a significant loss of talented and dedicated doctors and nurses at a time of immense need.”⁷

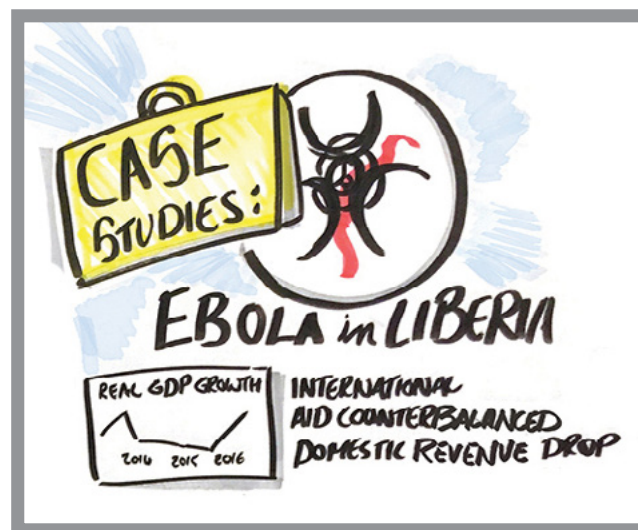
Given these circumstances, with their revenue implications and expenditure demands, how did the Liberian government manage the crisis?

NATIONAL EBOLA RESPONSE STRATEGY: COPING WITH THE EBOLA CRISIS

On 26 July 2014, President Ellen Johnson Sirleaf declared Ebola a national emergency and established the Ebola National Task Force.⁸ The taskforce comprised representatives from the health sector and the national security forces, as well as officials from the Ministry of Finance and Development Planning. To stem the outbreak, this National Task Force instituted the following:

- Borders were closed.
- A curfew was instituted from 9:00 PM to 6:00 AM.
- Compulsory health screening was introduced for people entering and leaving the country.
- Communities affected by Ebola were quarantined.
- Cremation of people who died from Ebola was made mandatory in Monrovia.

The government viewed the public health crisis as a matter of national security. Managing the risk of the crisis was



essential to the country’s economic and social fabric. What were the fiscal measures that the Liberian government needed to implement to manage the risks posed to the public finances as a result of the crisis?

THE FINANCE MINISTRY’S ROLE IN MANAGING THE CRISIS

The biggest pressures on the budget started before the 2014/15 National Budget was passed. To respond to the Ebola outbreak immediately, the Ministry of Finance and Development Planning submitted the 2014/15 Budget to

the National Legislature much earlier than expected. This budget increased allocations to health, infrastructure and security to address the immediate demands to manage the Ebola outbreak. On-budget expenditure increased by 60% for staff, medication and equipment. Additionally, the government issued an executive order that suspended duties on imported supplies related to Ebola. Infrastructure spending increased by 111% to provide roads for healthcare workers to reach the most remote parts of the country. Spending in the security sector increased by 26% to enforce the curfew and secure quarantined areas. Overall, total government expenditure increased by 24% in the fiscal year.

The Ebola outbreak in Liberia severely affected the country’s revenues. Production in the mining, agriculture, agroforestry and services sectors declined by 8%. How was the Ministry of Finance and Development Planning able to manoeuvre in this severely constrained fiscal space? It minimised costs by suspending all capital investment projects, except those directly linked to the Ebola fight. This was also done to avoid the meltdown of the country’s financial sector. Government contractors seek financing from banking institutions prior to receiving payment from the government. If all projects were suspended, the risk of government contractors not paying the financial institutions would have been high: this was a factor in protecting infrastructure spending. Furthermore, the ministry reduced the recurrent operational costs of ministries, agencies and commissions to only salaries by

⁷ Ibid.

⁸ Ministry of Finance and Development Planning (2014) *The government of Liberia and development partners’ contributions in response to the Ebola crisis*.

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having civil servants stay at home. Ministries, agencies and commissions involved in the response effort were not affected by this policy directive. While these measures compensated somewhat for the loss of revenue, they were insufficient to meet the scale of the crisis.

To meet the costs of the Ebola response, the Liberian government worked with development partners. External revenue in the form of grants allowed the government to increase Ebola-related public spending. The Ministry of Finance and Development Planning established the National Ebola Trust Fund to “pool resources from the Government of Liberia, corporate and development partners, as well as ordinary citizens and friends of Liberia, to effectively combat the Ebola outbreak.”⁹ At the height of the crisis, the Ministry of Finance and Development Planning operated out of the Ministry of Health to cost the response, monitor expenditure, and be able to respond better to constantly changing demands. Regular meetings with the Cabinet, the Economic Management Team, as well as the budget and finance officers in the ministries, agencies and commissions allowed the ministry to provide fiscal updates, adapt/review existing policy measures and monitor policy measures.

Despite these measures to contain non-Ebola expenditure and increase external revenue to meet Ebola-specific demands, the government’s debt increased to 36% from 27% of GDP as a result of the crisis. The government

had to request supplementary budget allocations from the National Assembly, which were granted, including a US\$20 million emergency allocation in 2014.

LESSONS LEARNT: HOW BEST TO PLAN FOR FUTURE CRISES?

Managing budgetary pressures like the Ebola outbreak in Liberia provides an opportunity to evaluate how best to mitigate risk in the future. The Ministry of Finance and Development Planning started this process immediately after Liberia was declared Ebola-free in June 2015. The Economic Stabilization and Recovery Plan outlines the Liberian government’s approach to better plan for future crises. The approach has two broad strategies: economic diversification to recover economic growth, strengthen resiliency and reduce vulnerability; and strengthening public finances and ensuring service delivery.

Liberia has identified various ways to diversify its economy and revitalise economic growth that is inclusive and creates jobs. These include building an enabling environment for the agricultural and agroforestry sectors. While budgets can still promote tax incentives in the mining sector to maintain existing investments, adding value in the agriculture sector is imperative to reduce Liberia’s reliance on mining revenues. To spur innovation and growth in the services and manufacturing sectors, Liberia plans to

increase electricity generation and distribution. Addressing road infrastructure needs is also vital to maintaining investors’ current investments in the mining sector.

The 2015/16 financial year highlighted the need for economic diversification to strengthen service delivery, and fiscal resilience to reduce vulnerability to external factors. In the aftermath of the crisis, Liberia had to reduce its expenditure by US\$13 million in 2015/16 compared to previous estimates, including a reduction of recurrent expenditure by 35%. This was because two factors lengthened the Ebola-associated revenue shortfalls. First, the foreign aid that was so crucial to increase public spending in 2014/15 was reduced by half in 2015/16, before economic activity fully recovered. This showed that assistance provided by development partners is not permanent, and could be considered as a contingency or reserve fund. Second, the Ebola outbreak in Liberia highlighted the vulnerability of revenue from commodities to changes in the global market. Changes in the global price of iron ore and rubber reduced the royalties from minerals by 67% for the 2015/16 financial year. Despite occurring well after Liberia was declared Ebola-free, it served to continue the revenue shortfall caused by Ebola. Thus, budgetary pressures in a country like Liberia are not solely a result of external discrete events like an Ebola outbreak. Economic diversification is crucial protection against these events and other fiscal risks over the long term.

⁹ *Ibid.*

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Furthermore, the Liberian government realised that improving the health system and addressing other human capital needs was also important to reduce the effects of shocks like the Ebola outbreak. Prior to the crisis, healthcare workers in Liberia were mostly funded by development partners. In Liberia's long-term interests, the government started to place these workers onto government payrolls. While this added additional pressure on already scarce resources in the short term, the intent was to build resilient health systems in the long term. This allows government to have more control over the number of health personnel and to help build stability in the system. Government also realised that reliable energy supply and roads will help improve access to quality health services, and thus help contain future viral outbreaks and limit their cost to public budgets.

Improving healthcare systems can also change cultural attitudes and norms. Traditional burials in Liberia contributed to the spread of the Ebola virus through rituals that include touching the infected cadaver. Public education efforts explaining why these traditions could not be observed during times of crisis helped change traditional practices.

To efficiently meet these additional expenditures, the Liberian government aimed to strengthen public finance by:

- Improving revenue administration to increase tax compliance.

- Enhancing economic governance to ensure accountability in the use public finances.
- Prioritising public expenditure to ensure efficiency in the use of limited resources.

These objectives were highlighted during the Ebola outbreak. According to Alieu Fuad Nyei, Assistant Minister for Expenditure in the Department of Fiscal Affairs, Ministry of Finance and Development Planning, the need for decentralisation is one of the key lessons learnt during the Ebola outbreak. "A higher concentrated government is an inefficient one," he argued during the conference. It is also slow to respond. Decentralised services can respond to crises like an Ebola outbreak faster than the central government, because they are located where the needs are. In the future, improving the coordination with subnational authorities and existing networks will be imperative to fill gaps in service delivery and promptly address crises.

In summary, the Ebola outbreak in Liberia highlighted that the sector service delivery shortfalls that allow crises to balloon are often not solely the result of deficiencies in one sector. Healthcare is not just a health issue. During the Ebola crisis it became clear that the weak healthcare system was compounded by the lack of infrastructure (in health and other sectors), insufficient human capital, weak public education systems and poor central/regional coordination.

“Decentralised services can respond to crises like an Ebola outbreak faster than the central government, because they are located where the needs are.”

2: WHEN DISASTER STRIKES – FISCAL RESPONSES TO NATURAL AND MAN-MADE DISASTERS

BUDGETING BETTER FOR NATURAL DISASTER IN MADAGASCAR

UNDER CONSTANT THREAT: CYCLONES AND THE ECONOMY

Madagascar is rich in natural resources. The island includes tracts of arable land that sustain agriculture, a sizeable coastline for its fishing industry, and vast forests for its logging industry. These industries still account for a quarter of the country's GDP and employ about 80% of the population, even though deforestation and soil erosion are increasingly constraining revenues and jobs in agriculture and logging. In addition to agriculture, fishing and agroforestry, the Malagasy economy is made up of textiles, mining and tourism. Exports of textiles and apparel boomed after the country gained duty-free access to the United States and European markets in the early 2000s. The rise in prices of commodities such as nickel, titanium, cobalt, iron, coal and uranium helped attract foreign mining firms that invested billions of dollars in the country. Madagascar's vast coastline and forests attracted tourists, doubling the contribution of tourism to GDP in 20 years.

The 2009 coup halted the country's economic growth and productivity. The departure of development partners, foreign mining firms and other investors left the government

cash-strapped and with few resources to keep the economy growing and meet development challenges. This economic stagnation exacerbated poverty and the poverty gap. Extreme poverty rose from 68.7% in 2001 to 80% in 2010, declining slightly in 2012 to 77.8%.¹⁰ The poverty gap (the average shortfall from the poverty line) is about 40% (2010 figures), which is substantially worse than the average for sub-Saharan Africa of 16.5%. This reflects the depth of Madagascar's poverty.¹¹

The political instability following the coup limited the country's ability to keep its most productive sectors growing. Power outages limited the productivity of the textile industry. Moreover, Madagascar's failure to comply with the requirements of the United States' African Growth and Opportunity Act led to the termination of the country's duty-free access to the United States in January 2010. Delays in issuing mining permits coupled with the fall of commodities prices crippled the mining sector. Poor infrastructure and a limited airport network in the country constrain growth in the tourism sector. Overall, the longer-term development challenges, combined with political instability, have weakened the country's economy and public finances, and

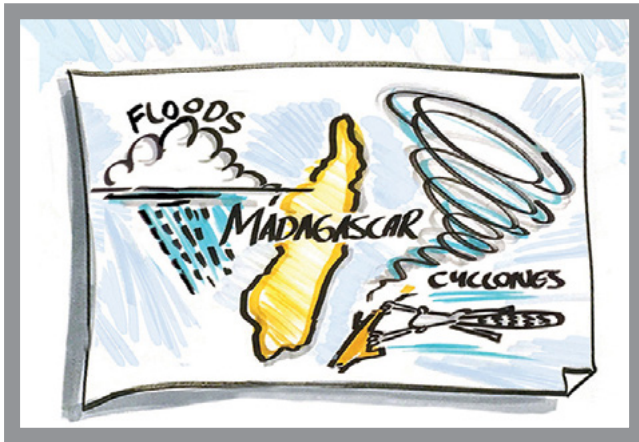
left it ill-equipped to be resilient to natural disasters.

As an island nation, Madagascar is one of the African countries most exposed to natural disasters such as cyclones and droughts. Its location in the Indian Ocean makes the country vulnerable not only to low-intensity, more frequent cyclones, but also to high-intensity, rare cyclones. On average, three to four cyclones reach Madagascar per year. In addition, between now and 2100 the most intensive cyclones are expected to steadily increase in strength by up to 46%, according to Madagascar's Meteorology Department. This intensification increases Madagascar's exposure to rising sea levels and storm surges. Cyclones also have a devastating effect on the country's infrastructure (such as schools, health centres and roads), but the country cannot afford to rebuild infrastructure after every storm. Citizens and businesses are forced to use sub-standard techniques to rebuild, increasing the vulnerability to future cyclones. Cyclones, through their direct impact on infrastructure and resulting effects on economic activity, and the cost to the public purse, impede economic growth, reducing revenue and increasing vulnerability.

¹⁰ World Bank (2016) Programme Document for the Madagascar Public Finance Sustainability and Investment Development Policy Financing Operation.

¹¹ Ibid.

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CYCLONES GALORE: FAME, IVAN, JOKWE AND CHEDZA

The cyclone season in Madagascar is from mid-November to April. In 2008, three major consecutive cyclones reached Madagascar. Cyclone Fame was a Category 2 cyclone that hit the island in January 2008. Cyclone Ivan, a Category 4 cyclone, struck in February 2008. Cyclone Jokwe, a Category 3 cyclone, reached Madagascar in March 2008. These cyclones affected 17 of Madagascar's 22 regions and caused damages and losses of about US\$333 million. The farming, livestock and fisheries sector, which employs the majority of Malagasies, lost US\$103 million. The housing and public administration sectors were left with damages and losses totalling US\$127.6 million, while the transportation sector

had damages and losses totalling US\$45.7 million.

The combined effect of these storms accounted for 4% of GDP in 2008. Real GDP growth dropped by 0.3% in 2008. Due to lower agricultural exports, lower tourism revenue and increased imported goods, the balance of payments account dropped by 38% in the same year. The damages to public infrastructure such as public schools, health centres and ministries also severely hampered the government's ability to respond to these storms, while their repair placed additional demands on the budget. The overall budget deficit increased from 4.9% to 5% of GDP in 2008.

Cyclone Chedza in 2015 also had a significant negative economic impact on the country. Tourism was significantly affected, exacerbating already suppressed economic growth in the country. In addition to the cyclone, strikes in Air Madagascar halted the sector. As a result, real GDP growth declined from 3.3% to 3.1% in 2015. With a constrained fiscal space, the Malagasy government had limited options to respond to the constant threats.

MADAGASCAR DISASTER RISK REDUCTION PLAN: FROM DISASTER RESPONSE TO PREVENTION

The Ministry of Finance and Budget had few options to deal with the impact of cyclones. In the short term, budget reallocations were the first step that the ministry took.

However, they were nowhere near sufficient to cope with the storm damage and aftermath, and the constrained fiscal space left little room for additional expenditure. Disaster relief from development partners helped the Ministry of Finance and Budget with humanitarian assistance, but this was limited to short periods after the disasters. Due to its constrained fiscal space, as well as a lack of capacity to assess what would be appropriate cover, the Ministry of Finance and Budget had not included disaster risk management in budget formulation prior to the 2014/15 series of storms.

To fill this capacity, the ministry received technical support from development partners such as the World Bank, the United Nations Office for Disaster Risk Reduction, the Central European Initiative, and the Indian Ocean Commission to develop and implement models that assess the impact of natural disasters so as to adequately cost the risk they pose into the budget formulation process. Several models are used to accommodate the complexity of budgeting and planning for natural disasters. With the help of the United Nations Office for Disaster Risk Reduction, the Ministry of Finance and Budget now uses the CATastrophe SIMulation model (CATSIM)¹² to simulate the effects of potential natural disasters on the country and undertake cost-benefit analyses of different responses and their implications for economic growth and the country's debt. The CIVEMPert model allows the ministry to assess the country's risk profile to better plan for natural disasters. Both of these models allow

¹² International Institute for Applied Systems Analysis: <http://www.iiasa.ac.at/web/home/research/researchPrograms/RISK/CATSIM.en.html>.

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the government to consider other natural disasters such as earthquakes, floods and droughts.

In addition to investing in better forecasting models, the government undertook an extensive Post Disaster Risk Assessment in 2010. This assessment focused on designing a cyclone-resistant construction code. It divided the country into four zones depending on the level of risk each one faced (based on codes from Reunion and Tonga) and then revealed the weaknesses of existing disaster response mechanisms by zone.

Finally, with a US\$1.2 million grant from the Global Facility for Disaster Reduction and Recovery, Madagascar developed a National Disaster Risk Reduction and Climate Change Adaptation Plan. The plan includes measures to build resilience to cyclones in the sectors most often affected, including through the establishment and implementation of climate-proof infrastructure codes, making existing on-budget spending climate-sensitive, establishing a disaster contingency fund and improving emergency planning capacity.

ENSURING THAT FUNDS ARE AVAILABLE WHEN DISASTER STRIKES

Better understanding of the long-term costs and average annual impacts of cyclones did not, however, resolve the issue of constrained resources. In addition to the tools to cost the risk of exposure to disaster appropriately, the Malagasy government has instituted several mechanisms to ensure that the funds are available when needed.

The first mechanism is a contingency fund, which was set up more recently following support from the Global Facility and others. It replaced or supplemented the use of a general

reserve fund/planning margin, which was inadequate or unavailable to cover disaster response needs when disasters occurred.

BOX 2

THE USE OF CONTINGENCY AND RESERVE FUNDS IN BUDGETS

Contingency and reserve funds are funds that are set aside from a country's own resources to manage risks. A contingency/emergency fund is usually allocated to a special account for a limited set of pre-identified risks, to be accessed when these risks occur. Contingency or emergency funds usually have a legal basis, either in countries' constitutions or in the foundation budget law. This is because the funds are established as an earmarked account next to the central revenue account. Contingency funds require strategic planning to ensure that these funds are replenished and/or financed: in effect, they are about "saving for a rainy day". Contingency funds require a commitment from the finance ministry and the executive, as well as the legislature, to ensure that they are only spent on the purposes for which they were set aside. They can build up over many years. Ministries of finance should set up institutions, procedures and guidelines on how these funds are spent, if this is not specified in law.

Reserve funds (or planning margins) represent a margin that is set aside at the time of planning the budget to manage as yet unidentified external risks, revenue shortfalls and/or unavoidable and unforeseen expenditure demands that arise during the planning period (or fiscal year). It is another form of "rainy day" planning. Similar to contingency funds, reserve funds require discipline from the executive and legislature to ensure these funds are not spent without sufficient cause, leaving the fiscal space for later years.

In most cases, while funds such as contingency funds and reserve funds can help countries reduce the effects of natural disasters, these funds are insufficient to tackle the impact of a natural disaster.

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The contingency fund, a special treasury account, is managed by the National Office of Risk and Disaster Management, which was established in the Prime Minister's Office to coordinate disaster risk and response management in government. This mirrors disaster management practice worldwide (see Mozambique example in Box 3).

In practice, funds from the account are mostly used to fund subsidies and ensure food security during natural disasters.

Another factor in Madagascar is that even if funds are allocated in the budget, the actual transfer of cash to the fund's special treasury account can occur only later in the year. The fiscal year in Madagascar is from January to December. During the first quarter of each fiscal year, tax revenue is still low. The first quarter of each year is when cyclones tend to occur. Thus, it may happen that when a cyclone occurs there is not yet cash available to finance response actions. Sound cash management in the fund is integral to having resources available to use the special contingency and general reserve funds.

Cash may also be unavailable because the fund is not replenished from the budget in years that disasters do not occur, even when the budget line is available. In practice, this means that the fund's function, namely to save up for when disaster strikes, is not fulfilled. A regular actual transfer to the contingency fund is needed to ensure that it is funded to be used when disaster strikes.

A second mechanism is the World Bank Immediate Response Mechanism, which is an allowance granted to selected countries to access US\$5 million or 5% of their existing undisbursed contracted World Bank support (whichever is the largest) to finance disaster responses in emergencies. This allows funding to flow within weeks rather than months of an emergency.

A third mechanism is the African Risk Capacity facility, which provides insurance against disaster risk. The Malagasy government asked the facility to develop country-specific insurance policies to cover losses and damages caused by natural disasters. The country risk profile developed by the ministry helps the government include the insurance premiums as expenditure line items in the budget. Good practice also suggests that in addition to including the costs of insurance premiums, the budget should include information on the purpose of the contingent liability and the gross exposure of the contingent liability.

LESSONS LEARNT: MADAGASCAR'S RESPONSE TO FREQUENT NATURAL DISASTERS

Under constant threat, the government of Madagascar made a significant effort to include the risks from natural disasters in its budget formulation process. It understood that it could no longer only focus on disaster response, but also needed to plan better for the future. Given the multiple natural disaster risks that Madagascar faces throughout the fiscal year, it is imperative to identify the risk and its potential impact on the economy and budget. The government developed models to determine the parameters of the potential negative effects and conducted a cost-benefit analysis of different mitigation and adaptation strategies, and their implications on economic growth and debt. The country's National Disaster Risk Reduction and Climate Change Adaptation Plan includes strategies to make existing budgetary spending climate-sensitive, and the country put in place three key mechanisms to finance response efforts, should disaster occur.

BOX 3

THE MOZAMBIQUE INSTITUTE FOR THE MANAGEMENT OF DISASTERS

Immediate response mechanisms are central to natural disaster management. African countries often use a centralised office to manage and coordinate the government's response to a natural disaster. In Mozambique, the Institute for the Management of Disasters (Instituto Nacional de Gestão de Calamidades) manages the country's response to natural calamities. Resources are centralised to respond quickly to such disasters. However, the institute may not always be well funded to respond to the full extent of the disaster.



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