



Financing Disaster Risk Reduction: Exploring the Opportunities, Challenges, and Threats Within the Southern African Development Community Region

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Abstract

The Southern African Development Community (SADC) region, a regional economic body comprised of 16 member states, is one of our planet's most vulnerable regions to natural hazards, and has a complex disaster risk profile. The region has sustained several disasters over the past decades. These events include annual floods in 2004–2019 and extreme droughts (1990–1993); other climate-induced disasters, such as cyclones, also have had devastating impacts, particularly on the Indian Ocean island states and east coast countries. To reduce the risk and impacts of disasters, governments must invest in disaster risk reduction (DRR). However, interventions aimed at reducing social and economic vulnerability and investing in long-term mitigation activities are often few, poorly funded, and insignificant in comparison with money spent on humanitarian assistance, disaster relief, and post-disaster reconstruction. This study investigated whether DRR is adequately funded within SADC member states in light of the high stakes in human life, infrastructure, and economic losses and the potential savings involved. The study applied a qualitative research design with data collected through semistructured interviews and focus group discussions. Respondents were selected purposefully and through snowball sampling with a total of 67 respondents from Botswana, Eswatini, Namibia, South Africa, and Zimbabwe participating in the study. The study findings reveal that DRR is inadequately funded in all the member states consulted in comparison to funding allocated to disaster response. In light of the underfunding experienced by DRR activities, this study provides a platform for lobbying and advocacy for adequate funding for DRR.

Keywords Budget allocations · Disaster impacts · Disaster risk reduction · Southern African Development Community

1 Introduction

Southern Africa is susceptible to extreme weather events with the most common being floods, large storms, droughts, and wildfires (Davies-Reddy et al. 2017). Disaster events

such as cyclone Idai (2019) that affected Mozambique, Malawi, and Zimbabwe and cyclone Eline (2000) that caused floods affecting Botswana, Zimbabwe, and Mozambique as well as droughts (1982–1984, 1991–1993, 2014–2017) have had huge human, economic, and environmental impacts in the southern African region and have contributed massively to the increasing trends in disaster losses. The Southern African Development Community (SADC) has experienced 491 recorded climate disasters (meteorological, hydrological, and climatological) that resulted in 110,978 deaths, left 2.47 million people homeless, and affected an estimated 140 million people in the period from 1980 to 2015 (EM-DAT 2016). As such, the impacts of disasters are wide-ranging and have affected multiple sectors (Davies-Reddy et al. 2017). To reduce the impacts of disasters, governments of

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the SADC member states must invest in disaster risk reduction (DRR) by allocating necessary resources.

The importance of dedicating resources, and particularly financial resources, to DRR has been emphasized in many reports and papers (Jackson et al. 2011; Kellet and Caravani 2013; Watson et al. 2015). Manyena et al. (2013) posited that failure to design and implement DRR programs is contingent upon the availability of financial, human, and material resources. Failures to adequately resource the reduction of disaster risk are also highlighted in many UN reports including the Global Assessment Report on Disaster Risk Reduction (GAR) of 2009 (UNISDR 2009), the 2011 report (UNISDR 2011a), and the mid-term review of the Hyogo Framework for Action in 2011 (UNISDR 2011b). Despite, some success in planning and development of policies for DRR, there are significant bottlenecks in making resources available for implementing DRR plans, and (in some countries) DRR financing is still heavily dependent on resources from bilateral and multilateral donors (Holloway 2003; Birkman and von Teichman 2010). While globally there is evidence of greater national investment in disaster management activities, the main concern is that most of this funding is applied to response preparedness and humanitarian actions rather than risk reduction (Hochrainer-Stigler et al. 2014; van Niekerk 2015). Gaillard and Mercer (2013) share similar views and have argued that in many countries disaster risk reduction relies on sporadic and event-related release of emergency funds, which prove inadequate to address the quotidian dimension of vulnerability and resilience. Kellet and Caravani (2013) also argued that without committing funding, national governments will not be able to reduce disaster risk.

In Article 186 of the document *The Future We Want* (UN 2012, p. 48), the United Nations (UN) “invited governments at all levels, as well as relevant sub-regional, regional and international organisations, to commit to adequate, timely and predictable resources for disaster risk reduction to enhance the resilience of cities and communities to disasters.” However, spending on measures to reduce risk, by national and local governments, remains insufficiently understood, both in scale and in effectiveness (Gordon 2013). Similarly, interventions aimed at reducing social and economic vulnerability and investing in long-term mitigation activities are often few, poorly funded, and insignificant in comparison with the money spent on humanitarian assistance and relief, as well as on post-disaster reconstruction (Fuente 2010). As such, it is important to understand the dynamics of the budget process and the linkage between plans and budgets. This is so because the budget process is the institutional means by which resources are allocated toward plans, policies, and departments (Jackson et al. 2011). This study sought to investigate whether DRR is adequately funded within SADC member states in light of

the high stakes in human life, infrastructure, and economic losses and the potential savings involved.

2 Disaster Risk Financing: Theoretical Framing

The world has witnessed a dramatic increase in the number and impact of disasters since the 1960s (Schipper and Pelling 2006; Cvetković and Dragicević 2014; Shen and Hwang 2019). Birkman and von Teichman (2010) pointed out that these increases had been most pronounced from 1990 to 2010. Much of the increases experienced have been observed in developing countries and regions, with an estimated 8500 disaster events recorded between 1991 and 2010 (Kellet and Caravani 2013). Disasters have had a noticeable impact on the physical well-being of communities across the globe, with the World Bank (2006) estimating that a total of 4 billion people were affected by disaster events in the period 1984–2003. Aitsi-Selimi et al. (2015) added that between 2000 and 2012 an additional 1.5 billion people were affected by disasters of which 700,000 people lost their lives. According to EM-DAT (2019), from 2012 up to the end of January 2019, 1.16 billion people were affected by disasters, a figure included 113,141 lives lost.

Apart from the physical toll exacted by disasters on vulnerable communities, disasters have also historically had a major impact on the economic sustainability of nations. Linnerooth-Bayer et al. (2007) and Bendimerad (2003) indicated that there was a six-fold increase in the economic cost of disasters between 1970 and 2000. This upward trend in the economic impact of disasters becomes more disconcerting when figures about these losses are quantified. Kellet and Caravani (2013) indicated that between 1991 and 2010 disasters caused an estimated USD 846 billion in direct financial losses globally. An alternative estimate by Aitsi-Selmi et al. (2015) and Wamsler (2007) for the period 2000–2012 revealed that economic losses due to disasters could have exceeded USD 1.3 trillion, with some years, such as 2005, contributing a staggering USD 160 billion in direct losses. According to Mizra (2003), Linnerooth-Bayer and Mechler (2007), and Hochrainer-Stigler et al. (2014), much of these economic losses are absorbed by vulnerable communities in low to middle-income countries. Manyena et al. (2013) estimated that between 1981 and 2011, direct economic losses experienced by communities in 40 low and middle-income countries amounted to USD 305 billion. Patel et al. (2019) asserted that vulnerable communities in low to middle-income countries often have to deal with long-term economic losses such as loss of livelihood, income, and productive assets. On a macro-scale, these communities are also adversely affected by changes in GDP growth for considerable periods following disaster impacts.

According to Goes and Skees (2003), the cost of disasters to the GDP of a developing country can be as much as 20% greater than that of a developed country. This means that funds have to be diverted away from much-needed projects and programs that aim to address social vulnerability within at-risk communities such as unemployment, education, housing, and sanitation to fund response and reconstruction efforts (Bendimerad 2003; Benson et al. 2007; Jongman et al. 2014). The diversion of funds presents a serious obstacle to sustainable development and service delivery. The current status quo of disasters impacting heavily on the economies and the development trajectories of low and middle-income countries will likely be exacerbated by climate change and the resultant increase in the frequency and intensity of disasters (Birkman and von Teichman 2010; Solecki et al. 2011). Africa could bear the brunt of a changing, climate-driven risk profile, with increases in droughts, floods, sea level rise, animal disease, and subsequent pressure on food security, water resources, human health, and agricultural systems (Mizra 2003). All of these consequences could have a devastating impact on the lives, livelihoods, and socioeconomic sustainability of individuals and countries on the continent.

In light of the historic and potential future impacts of disasters, governments in the developing world cannot afford to reactively engage with disaster risk and climate change adaptation. A crucial step to ensuring that disaster risk gets reduced and climate change adaptation implemented is to ensure that national budget allocations for these activities are adequate and supported by the appropriate governance structures, human resources, and political will. International frameworks, such as the Hyogo Framework for Action 2005–2015 (HFA) and its successor the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR), give impetus to the importance of providing resources, especially finance, for DRR. For instance, the first priority for action in the HFA, among other things, encouraged governments to “allocate resources for the development and the implementation of disaster risk management policies, programs, laws, and regulations on disaster risk reduction in all relevant sectors and authorities at all levels of administration and budgets based on clearly prioritized actions” (UNISDR 2005, p. 7). Similarly, Priority 2 of the SFDRR in Paragraph 27 not only encourages parliamentarians to support the implementation of DRR by developing new or amending existing relevant legislation but also emphasizes that they needed to set budget allocations that can lead to the successful operationalization of such legislation. In Priority 3, Paragraph 30(a), the framework encourages national and local governments to allocate the necessary financial and logistical resources to support the development and implementation of DRR strategies, policies, plans, laws, and regulations in all relevant sectors (UNISDR 2015, p. 19).

Paragraph 30(b) advocates for governments to invest in risk transfer and financial protection mechanisms that would lessen the financial costs associated with disasters and help to speed up post-disaster recovery (UNISDR 2015, p. 19), while in Priority 4, enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation, and reconstruction, emphasis is placed on the funding of specific interventions to improve preparedness and response capacities within countries. Apart from the specific funding directives and responsibilities placed on national governments, the framework also recognizes that funding support can be provided through bilateral and multi-lateral channels to those nations that lack adequate financial and supporting technical and human resources to support the implementation of priority areas of the SFDRR (UNISDR 2015). The SFDRR makes it clear that disaster risk funding is a cross-cutting issue that is integral in achieving global risk reduction and resilience building priorities. An important aspect that emerges from the review of the framework is that the word “funding” is most commonly found in the sections of the framework relating to the responsibilities of national and local levels of government. This emphasizes the need for governments to take the leading role in the funding of DRR out of national budgets, instead of being largely dependent on external agencies for such funding. Although external funding is not precluded by the SFDRR, the ownership of DRR funding rests squarely with national and local governments.

Although international and national policies strongly advocate for national and local governments to fund disaster risk reduction, the reality remains that many countries, especially those in low and middle-income regions, still struggle to identify the necessary funding for DRR (Pollner 2001; Botha and van Niekerk 2013; Malalgoda et al. 2014). Crucially, the discussions that follow indicate that the issue of funding does not stand alone and that associated problems such as lacking political will, human resources, coordination between government departments, and institutional arrangements for DRR contribute to limited budget allocations for DRR activities and projects in many instances.

The availability of funds to support DRR activities remains a major problem in most developing countries and regions (Malalgoda et al. 2014). Botha and van Niekerk (2013) and van Niekerk (2015) elaborated that often the problem is not that there is no budget allocated towards disaster risk management (DRM) in developing countries, but rather that budget allocations are so minimal that it limits the ability of DRM institutions to invest in long-term risk reduction and capacity building activities. Pollner (2001) agreed that most developing countries have a tax base from which to collect taxes that can be redistributed to DRM agencies, but these tax bases are less extensive than those found in developed countries. Bendimerad (2003) and

Linnerooth-Bayer and Mechler (2007) argued that limited funding allocated means that DRR projects have very little chance to have a meaningful impact and that reconstruction and rehabilitation efforts face substantial funding gaps that need to be augmented by humanitarian aid or development loans. According to Poterie and Baudoin (2015), the lack of funding for DRR in a less-affluent-country context can be closely linked to competing focus and investment in other development issues that these countries face—for example housing, poverty alleviation, and job creation. This artificial separation between DRR and development concerns leads to unnecessary competition for financial resources. With the benefits of reducing disaster risk often not as tangible as those associated with housing and poverty alleviation, DRR struggles to be prioritized in national budgets (Kellet and Caravani 2013).

For DRR to attract funding, institutional and funding structures should form the foundation for successful DRR activities (Schiper and Pelling 2006; Botha and van Niekerk 2013). The institutionalization of DRR relates to all policies, legislation, and governance structures put in place to ensure disaster risk reduction is operationalized successfully at national, district, and local government levels (Goes and Skees 2003; Zuma et al. 2012). A crucial pattern that emerges from the literature is that many countries have since the early 1990s taken steps toward creating policies, legislation, and governance structures to guide the implementation of DRR. However, Jones et al. (2014) and Gailard and Mercer (2013) alluded to the fact that countries, especially those in the developing world, either still need to formulate detailed DRR policies and structures or still have to change the emphasis of existing structures and policies from a disaster response orientation to a DRR orientation. The lack of clear policy and governance structure with an emphasis on response directly affect how DRR is funded. For instance, an interesting dichotomy brought on by the lack of policy clarity often leads to a situation where policies talk the language of DRR, but funding prescripts in the policy remain mostly geared toward disaster response. Consequently, proactive DRR remains underfunded and not mainstreamed, especially at the local government level (Jones et al. 2014; Poterie and Baudoin 2015; Ezenyilimba et al. 2018). A knock-on effect of this is observable in local government-level disaster risk management entities where the attention of officials remains mostly focused on using limited funds to purchase equipment and supplies for disaster response rather than funding DRR initiatives (Manyena et al. 2013). A clear direction on how to promote the institutionalization of DRR is also important to facilitate improved coordination between disaster risk management agencies and line departments. According to Holloway (2003), clear changes in DRR policy and legislation allow line departments to incorporate DRR activities into their existing core functions. If DRR

is not elevated to the level of a core function within line departments, it often remains an unfunded mandate (van Niekerk 2015).

Equally important is the availability and competency of officials to be able to spend allocated budgets (Cummins and Mahul 2008). Manyena et al. (2013) highlighted how adequate human resources are crucial to ensure that financial and material resources are effectively applied within DRR interventions. For instance, a country might have sufficient funds and materials to implement a DRR intervention, but a lack of human resources would severely hamper the ability to scale interventions down to the local government level where most officials are needed to serve a community. Van Niekerk (2015) agreed that these human and skill shortages often extend into line departments that need to play a role in disaster risk management. This leads to a situation where there are not only officials who cannot integrate DRR into their day-to-day activities, but also staff that cannot spend existing budgets or advocate for greater budget allocations towards risk reduction activities. According to Bendimerad (2003) and Fekete et al. (2014) if the resilience of communities is to be built, it is not enough to provide the necessary financial resources without supporting material means with the appropriate investment in human resources.

Knowledgeable and committed political leadership also plays a crucial role in the allocation of financial and human resources and the development of risk reduction biased policies and legislation (Hagelsteen and Becker 2019). However, DRR is often bedeviled by its lack of political visibility. According to Schiper and Pelling (2006), governments and politicians tend not to invest in DRR due to the concern that it can potentially remove an electoral advantage in election time. Holloway (2003) elaborated on the political risk of investing funds in preparation for an apparent risk that will subsequently not manifest into a disaster before elections, as opposed to providing funding for other priorities such as houses, schools, and sanitation, which voters can observe. The uncertainty of disaster timing is often just too high for politicians to put their weight behind DRR. This situation is problematic, since politicians often serve on or advocate to budgeting committees for funds to be allocated to development projects. Without political champions for DRR, funding for the activity will remain constrained, especially at local government levels (Botha and van Niekerk 2013). Another problem that commonly bedevils efforts to secure political buy-in for the funding of DRR is the lack of cost-benefit analysis of investment in DRR. According to Benson et al. (2007), cost-benefit analysis is a crucial tool to stimulate interest and encourage policymakers to create budgets that fund DRR activities and interventions. However, these types of analysis either do not exist at all in developing countries or only focus on certain regions like Southeast Asia. These types of analyses have to become more focussed on

other regions like SADC or individual countries to stimulate improved budget allocation towards DRR.

Finally, in the absence of a sufficient internal budget for DRR, most developing countries depend on external donors to augment budgets (Pollner 2001; Hochrainer-Stigler et al. 2014; Jones et al. 2014). However, as Kellet and Caravani (2013) pointed out, the external funding support has historically been slanted towards response. For instance, from the period of 2002–2012, international aid for disaster-related issues amounted to USD 106.7 billion globally. Of this amount, only USD 13.5 billion was allocated to DRR while USD 93.2 billion was allocated to response activities including reconstruction and rehabilitation (Kellet and Caravani 2013). Klein et al. (2019) and Linnerooth-Bayer and Mechler (2007) posited that this dependence on external funding for disaster response has created a situation where the government has become discouraged to invest in DRR, because response funding can be used to address other developmental issues such as housing and sanitation. Van Niekerk (2015) has elaborated on the fact that reliance on international aid and development funds makes it increasingly difficult for developing countries to budget for DRR.

Literature reveals that the lack of funding for DRR is only the “tip of the iceberg” and that it is a multifaceted problem that has to be understood holistically if it is to be addressed successfully by national governments and donor agencies. Consequently, it would not be effective for governments or donor agencies working in developing regions such as SADC to increase funding for DRR without addressing the associated governance and resourcing deficiencies outlined above. Arguably, the biggest strides in solving some of the aforementioned issues could be made by amending existing legislative mechanisms that direct the funding of DRR within member states in SADC. However, at this stage, it is important to interrogate the current status quo of legislative directives for funding DRR in selected SADC member states.

3 Legislative Context: Disaster Risk Financing in the Southern African Development Community Member States

Many countries within the SADC region have taken the initiative to emphasize funding for DRR, even before the formulation of the SFDRR in 2015. The prescripts for the funding of DRR as per national disaster legislation and policy in Botswana, Eswatini, Namibia, South Africa, and Zimbabwe are reviewed. Upon a review of key policy and legislative documents directing disaster risk financing in the selected SADC countries, a pattern emerges in the weight given to disaster response funding versus funding for risk reduction. In four of the five countries, that is, Botswana,

Eswatini, Namibia, and Zimbabwe, legislation codifies arrangements for the funding of disaster response activities, while sparse reference is made to funding for DRR. Specifically, in the case of the four countries, all policies and legislative documents contain substantive sections detailing the establishment, structure, and operationalization of a Disaster Management Fund. The stated goal of the Disaster Management Fund in each instance relates almost exclusively to providing funds for response and relief efforts and leaves little room for interpretations that could funnel funding towards risk reduction. For instance, Eswatini’s Disaster Management Act, 2006, in section 35[2]¹ states the objective of the Disaster Management Fund as “to provide funding for the national disaster management plan, emergency relief, restoration of infrastructure and services directly linked with relief operations and compensation for volunteers and other persons engaged in disaster management in terms of the Act” (Eswatini Government 2006, p. s27).

In the case of Zimbabwe, section 31 of the Civil Protection Act (Act 5 of 1989) states that “the object for which the fund is established shall be the development and promotion of civil protection (Government of Zimbabwe 1989, p. 9). Meanwhile section 2 of the Civil Protection Act defines civil protection as “any service provided or measure taken for the purpose of preparing for, guarding against or dealing with any actual or potential disaster” (Government of Zimbabwe 1989, p. 2). This pattern is similar in the four countries mentioned above and forms the bulk of the legislative directives on the funding of disaster risk management. However, the situation is different in South Africa in that its National Disaster Management Framework of 2005, specifically in “Key Enabler 3: Funding arrangements for disaster risk management,” gives detailed descriptions of funding principles, recommended funding arrangements (for all levels of government) and funding of key disaster risk management activities such as risk reduction, response, recovery, and training and awareness (Republic of South Africa 2005). This is over and above provisions of Chapter 6 of the South African Disaster Management Act No. 52 of 2002 (Republic of South Africa 2002), which focuses only on funding procedures and processes for response and recovery. As reflected in the few examples provided above, the detailed description of the funding process and mechanism for various activities associated with disaster risk reduction is unique within the countries selected for this study.

Another concerning trend that emerged from the legislative review is that only South Africa’s legislation alludes to the importance of conducting cost-benefit analysis for

¹ The number appearing in the bracket in regional legal documents refers to a subsection within a larger section. For example, section 36 subsection 2 is written as 36[2].

budget advocacy purposes. The National Disaster Management Framework of 2005 argues that cost-benefit analysis should be done regularly to inform future budget allocations (Republic of South Africa 2005). Cost-benefit analysis is a crucial activity to ensure political commitment and funding allocation towards risk reduction, which seems to be overlooked in most participant countries.

A positive pattern that arises from the review of the policies, legislation, and frameworks from most of the countries is the provisions that highlight the importance of different levels of government (national, provincial, local) and line departments to allocate budgets to perform prevention, preparedness, and mitigation activities within their jurisdiction or area of responsibility. For instance, in sections 6.5 and 6.6 of Namibia's National Disaster Risk Management Policy (Government of the Republic of Namibia 2009), line departments, regional councils, and local authorities are implored proactively to incorporate disaster risk reduction measures into their annual budget. In Botswana, the National Disaster Risk Reduction Strategy—2013–2018 directs the Ministry of Finance to ensure that “ministries/departments make provision for prevention, mitigation, and preparedness programs in National Development Plans and budgets” (Republic of Botswana 2013, p. 38) while in South Africa the Disaster Management Act, 2002 emphasizes in sections [15], [30], and [44](1)(e) that national, provincial, and municipal disaster management centers should take leading roles in funding disaster management in South Africa by initiating and facilitating the availability of funds. Furthermore, to ensure that budgets are allocated, the South African National Disaster Management Framework urges different levels of government and line departments to integrate DRM into existing integrated development planning or line department budgets. Zimbabwe is the only country whose current legislation does not emphasize the investment into disaster risk reduction activities by other levels of government and line departments. Instead, the focus is on their investment in response capacity. It is important to note that the Zimbabwean Civil Protection Act Chapter 10:6 (Government of Zimbabwe 1989) predate much of the proactive, global risk reduction policies that emerged in the 1990s and 2000s, which could explain this response focus.

The review of current regional disaster management policies, frameworks, and legislative acts indicates that much still needs to be done on a legislative level to give clear direction on the funding of disaster risk reduction. The current status quo of these documents places a great deal of emphasis and detail in explaining how to fund response but remains mostly vague on the particulars for funding risk reduction. The importance of cost-benefit analysis to drive DRR budget allocations is also not widely emphasized in the legislative documents reviewed. Arguably, these legislative shortcomings present one of the biggest obstacles to funding

DRR in the SADC region and will need to be addressed to ensure adequate and sustainable investment into DRR. The sections to follow look at this and other problems underlying the funding of DRR from the perspective of DRR, nongovernmental organizations (NGOs), and finance officials from participating countries. The methodology followed in the study is outlined first.

4 Methodology

This article forms part of a larger research project commissioned by the World Bank. The focus of the research has been to identify five key focus areas that are to be prioritized by the SADC disaster management unit and disaster management entities within member states to improve the effectiveness of DRR in the region. Southern African Development Community is a Regional Economic Community (REC) in southern Africa comprised of 16 member states: Angola, Botswana, Comoros, Democratic Republic of Congo (DRC), Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zambia, and Zimbabwe. One of the priority topics identified from an initial scoping study is that of DRR financing. Participants in the scoping study from Botswana, Eswatini, Namibia, South Africa, and Zimbabwe most strongly indicated the need to address DRR funding. Based on this preliminary finding, these countries were selected to form the focus of this article.

A qualitative research design was applied to the study. This design was selected as it would allow the research team to interact with participants in a way that could convey their own experiences relating to the funding challenges and opportunities for DRR in participating countries (Denzin and Lincoln 1994). To attain an adequate sample, purposive and snowball sampling was implemented. Rubin and Babbie (2005) argued that purposive sampling targets a group containing the ideal set of characteristics and is most representative of the population that serves the purpose of a study best (Shaheen and Pradhan 2019). The purposive sample of this study consisted of a selection of national officials from disaster risk management centers, government departments, local and international nongovernmental organizations (INGOs), and academia that have extensive experience and insight into the economic implications of disaster and the financing of DRR within participating countries. Snowball sampling was also utilized to identify additional experts previously unknown by the research team. A total of 67 respondents from Botswana, Eswatini, Namibia, South Africa, and Zimbabwe participated in the study. To obtain information from the sampled participants, open-ended questionnaires were formulated and administered through face-to-face interviews or focus group discussions. The interview questions were

aligned with the three main focuses of the research topic, that is, financing DRR, cost-benefit analysis of DRR, and impacts of disasters on national economies.

The collected responses were analyzed by organizing them into categories or topics to bring order, structure, and meaning to the mass of collected data (Tesch 1990). This data organizing process was guided by the eight steps as described by Tesch (1990). These include familiarization with the topic, distinguishing between topic and content, clustering topics, referring back to data, categorizing and comparing data, coding data, grouping data according to categories, and recording of data. Through this process, the research team was able to align responses to the main focuses of the research topic.

5 Findings

The literature review has shown that there is an urgent need for greater state-led investment in disaster risk reduction in developing regions to ensure that safe and resilient communities are built. However, moving from theoretical notions to practical funding realities remains difficult in regions such as SADC. This section examines the DRR funding status quo in the region and some of the main obstacles that stifle funding efforts.

5.1 Disaster Impacts and Climate Change

Most respondents indicated that disaster impacts experienced within the SADC member states and across the region are multifaceted. The respondents acknowledged that most of the disasters that affected the region are of hydrometeorological origin (floods and droughts) and therefore are influenced by climate change. The major impacts identified by the respondents are loss of lives and livelihoods as well as infrastructural damage. Consequently, disasters were said to often retard development in the member states as resources for developmental projects, such as housing, sanitation, and job creation, are redirected to finance costly relief and response activities when disasters strike. In addition, respondents identified longer-term economic impacts, including loss of productive labor, disruptions in agricultural production capacity, a slowdown in economic growth, and loss of socioeconomic development gains. The following statements provide insights into the respondents' perspectives on the economic implications of disasters.

[...] the 2014/15 drought caused the Eswatini government in the region of E3.6 billion, which is equivalent to about 7% of the country's GDP, in economic costs. (Government official, Eswatini)

Economic losses due to the impact of disasters have increased in recent years [...] public finances are jeopardized, poorest communities and large segments of the population are disproportionately affected. (Senior official, Botswana)

Respondents elaborated on the disproportionate impacts of climate change, especially within the agriculture sector that is affected by hydrometeorological and biological (pests and disease outbreaks) hazards. Both large-scale commercial and subsistence agricultures are negatively impacted by droughts and floods, most often in cases where farmers are not equipped to minimize the impacts on their livelihoods.

Most importantly, respondents indicated that currently there seems to be minimal consideration of climate change and the risk that it poses in risk reduction and infrastructural development projects. For example, in major road rehabilitation, the materials used do not seem to cater to future climate variations, such as above-normal temperature levels or flooding. Consequently, such development projects are at risk of being damaged or destroyed by climate-related hazards. This would lead to significant losses in economic investment and trade related to development projects.

5.2 Creating an Evidence Base for Disaster Risk Reduction Investment

All respondents opined that there are clear benefits to investing in ex ante DRR interventions. Most respondents confirmed the propositions that funds spent on mitigation, preparedness, and resilience would lead to an eventual decrease in the cost of response to future disasters. Respondents also suggested that where DRR forms part of development planning, sectors would not need as much education on DRR issues, and this would enhance opportunities for possible economic investment in the region, including the increased resilience of various sectors. The following perception exemplifies how the respondents understand the benefits of DRR investment.

There is an obvious need to emphasize investment into DRR adaptation and mitigation [...] for maximum benefit, DRR needs to be integrated into other sectors, such as housing, ensuring development is sustainable and future risks mitigated. (Government official, South Africa)

It was further suggested that in pursuit of DRR investment, the engagement process would bring together different institutions, thereby promoting a highly coordinated system with improved information sharing. Respondents also indicated that there was a poor evidence base from which to make a case for DRR investment funding in the respective member states. Specifically, cost-benefit analysis in the

context of DRR financing was generally not undertaken. However, the importance of conducting cost-benefit analysis for advocacy purposes, and to create an evidentiary base that informs DRR financing decisions, was widely acknowledged. Respondents indicated that the results of DRR cost-benefit analysis could change perceptions, especially for political leaders who are involved in the budgeting process. In this regard, the evidence from such analysis would guide investment decisions, physical planning, capital expenditure, and maintenance programs. Apart from cost-benefit analysis, respondents also identified the state of disaster reports and disaster (risk) management plans as possible sources of evidence that could guide decision making. Ultimately, this would advocate for DRR mainstreaming in the sustainable development context of SADC member states, since many of their economies are struggling. The following statement illustrates the common views held by the majority of the respondents.

There is a dearth of information to inform proactive disaster planning and prevention, including a lack of cost-benefit analysis. Furthermore, the national disaster plan should include a state-of-disaster report to help inform funding decisions. (Public finance official, South Africa)

Participants also alluded to the usefulness of comprehensive pre- and post-disaster recovery studies in creating an evidence-based body of knowledge to support adequate funding for DRR. In some instances, the respondents indicated that although there were studies that were conducted, a gap remained in how findings from completed studies, such as annual vulnerability assessments, and post-disaster reports that were used to inform budget planning for mitigation of future risks and hazards.

5.3 Perceptions on Disaster Risk Reduction Funding in Member States

The study also explored what provisions for DRR funding existed in SADC member states as outlined in the following subsections: risk reduction funding; budgetary allocations; funding mechanisms and systems; and spending allocations.

5.3.1 Sources of Disaster Risk Reduction Funding

The main sources of DRR-related funding were national governments, NGOs, and bilateral/multilateral development agencies. The capacity of local government to provide funding for DRR is limited in all participating countries, as in some instances local government is mostly dependent on the central government for their budget allocation, and in others limited budgets collected through local taxation are diverted towards priority development activities (housing, water, and

sanitation). In some member states, DRR-related funding from the government was enshrined within the particular member states' legislation, for example in Namibia. In other cases, such as in Zimbabwe, government funding was still said to be biased towards response.

Namibia has a National Disaster Fund as provided for by the NDRM Act 12 of 2012. This fund is centralized in the Office of the Prime Minister and regional and local governments can request funds. Local governments may also budget for DRR but their DRR activities are coordinated by the Regional Council, through which they can request funds from the Disaster Fund. (Government official, Namibia)

We do have external DRR funding from NGOs, but this is usually for small, short-term projects [...] DRR funding for long-term projects comes from the government but is implemented through various government sectors, for example, large dam construction. (Government official, Zimbabwe)

A general trend across SADC member states was that there was no specific source of DRR funding and that when funds were identified for DRR, it was always severely limited. An additional challenge that emerges in determining the amount of funding availed to DRR activities within the SADC member states is the lack of reporting by line departments of funding allocated to DRR-related projects. Line departments often do not report some of their day-to-day activities, such as dam construction, as DRR investment as they are not sure which activities constitute investment in DRR and which do not. Thus, it remains a challenge to gain a holistic picture of funding sources and total investment into DRR.

5.3.2 Budgetary Allocations

In several SADC member states, the respondents stated that DRR was neither adequately nor consistently budgeted for, and they attributed that to the bad economic situation in their respective countries. Some respondents indicated that a larger percentage of the budget allocated for disaster management is committed to operations. Within this "operations" budget a high percentage is allocated towards administration. It was further stated that in most member states, budgetary allocations for disaster risk management were mainly contingency funds towards response, with little allocated for prevention, preparedness, and mitigation. Some participants indicated that in some instances they believe that 95% of the disaster management budget is allocated to response, as captured in the following statement.

Our annual budget for 2019 is 2 million dollars, of which USD 1,000,000 is allocated for the flood man-

agement program which is the core of our DRR work for the year. (Government official, Zimbabwe)

There is no adequate funding for DRR at all, the government usually budgets for disaster response but when those allocated funds are not utilized, a portion may be re-channeled to support DRR. (Government official, Botswana)

Inadequate budget allocations for DRR were not only unique to the national government level but were said to also exist at subnational levels (that is, provincial, district, local). Apart from struggling national economies, inadequate budget allocations for DRR were also attributed to a lack of knowledge and understanding of how DRR forms part of and should be integrated into everyday functions at both national and subnational government levels.

Personnel from the Ministry of Finance who were interviewed in this study explained that to them DRR financing is an emerging issue that still needs to be championed through advocacy so that it gains importance on the national development agenda. They argued that this advocacy will assist in incorporating issues of disaster risk into capital and infrastructure projects.

While the budgetary allocations of most member states were said to be inadequate, the case was different for South Africa. In South Africa the respondents stated that at the national level there was a DRR Unit that had a specific budget allocated to it. Hence, the respondents noted that at the national level, they faced no challenges with the adequacy of DRR budgets, with limitations encountered only at lower provincial and district levels. The major challenges cited in DRR funding in South Africa were operationalization of allocated DRR budgets and financial management of allocated funds. Similar challenges that ultimately hindered the delivery of DRR services to communities were also highlighted in the rest of the participating member states.

5.3.3 Funding Mechanisms and Systems

This study also sought to assess the kind of DRR funding approaches that are used or preferred in the SADC member states. Respondents understood the need for DRR to be mainstreamed in different sectors and for those sectors to budget for DRR because a centralized budget in the ministry or department responsible for DRR will not be sufficient. Respondents indicated that sectoral budgeting would be the best approach to DRR funding, with disaster management institutions having a general oversight in terms of coordination and monitoring of DRR activities. Respondents also stated that sectoral budgeting for DRR would ensure line departments and local authorities had ownership of DRR and there would be increased implementation of funded DRR activities.

Each ministry must have a budget line for DRR, this way disaster risk reduction will become a reality as more financial resources will be directed towards prevention, preparedness, and mitigation. In this regard, the role of the disaster department will be to coordinate the activities of the different departments. (NGO respondent, Eswatini)

Different departments should integrate DRR activities into their normal activities. As a consequence, the normal budget for that department will also be geared toward DRR. This is better than a central DRR fund that will cover a limited number of activities. (Government official, South Africa)

In most member states there were no existing funding mechanisms and systems specifically for DRR, although general financial management systems exist to guide government departments. Monitoring and evaluation mechanisms for DRR funding were not clearly articulated. Respondents referred to the application of public finance management systems to monitor general budget expenditure. Respondents acknowledged that a sectoral approach to DRR funding required a robust monitoring and evaluation mechanism that would track DRR investment and expenditure and needed to be spearheaded by national disaster (risk) management institutions. The benefits of a robust expenditure and investment tracking system were stated as the provision of evidence required by disaster (risk) management institutions to advocate for increased DRR funding from the national treasury where necessary. Additionally, respondents shared that monitoring and evaluation of DRR funding could help member states accurately report on DRR investment under the SFDRR. Respondents alluded to the fact that the monitoring mechanism is currently lacking in some countries, and the following statement captures the existing scenario in the region.

Although programs budget for DRR, there are no systems in place at a national level to track if budget allocation leads to tangible DRR, for example, it is difficult to show how building infrastructure such as schools and flush toilets contributes to DRR. This monitoring mechanism is crucial as it will help us to motivate to the treasury for increased funding as we would be able to show investing in DRR is a safe investment. (Government official, South Africa)

5.3.4 Capacity to Spend Allocated Funds

Participants from all participating member states identified that some government institutions critical for DRR financing lacked the necessary capacity to spend their funding allocations. Some of the capacity gaps identified across member states included project management skills, DRR

mainstreaming knowledge, and human resource allocations and management expertise. For example, in Eswatini the respondents shared how there had been instances where relevant government departments had to return unspent funds to Treasury that had initially been allocated for DRR. The statements below encapsulate the sentiments of the majority of the respondents in the study.

Human resources and quality assurance form part of the problem. Funds have to be managed [...] you also need to have the right people with the right skills to do high-quality work in DRR. (NGO sector, South Africa) If the department or agency cannot spend the funds, this creates more problems for DRR as funds that are not spent must be returned to Treasury. It is therefore important that the disaster management officials have project management skills. (Senior official, Eswatini).

Consequently, these capacity gaps were cited as contributing also to an inability of staff within disaster (risk) management institutions to ensure that DRR funding allocations are spent on initiatives to the benefit of targeted vulnerable communities.

5.4 Institutional Provisions for Disaster Risk Reduction Funding

To fully comprehend DRR financing in the SADC region, this study also assessed the institutional provisions for DRR financing in member states. In that regard, the study explored what institutions were mandated with DRR funding at the central and local government levels.

5.4.1 National Institutions for Disaster Risk Reduction

The study established that different institutional scenarios are driving the DRR funding mandate in the member states. Some countries such as Eswatini have both a Disaster Management Agency and a Department, while others have either an Authority, Agency, Center, or Department, or still rely on Civil Protection institutions. Each institutional structure was said to have a bearing on DRR funding. For example, countries that were still using the Civil Protection approach, such as Zimbabwe, indicated that the main focus of their disaster (risk) management mandate was on response, and funding corresponded with their mandate. Some respondents emphasized the need for the establishment of semiautonomous organizations for DRR, to circumvent governmental bureaucratic inertia. This group of respondents argued that disaster risk management issues are sometimes time sensitive and therefore with the head of organization having decision-making powers, it is easy to implement risk reduction and response programs.

I would recommend that disaster risk management be located in the highest office or a semiautonomous institution for efficiency and decision-making reasons. (Government official, Eswatini)

In line with sentiments raised by respondents on sectoral budgeting for DRR, respondents also emphasized the importance for disaster (risk) management institutions to play an active coordination role in harmonizing plans for all stakeholders directly or indirectly funding DRR projects. For example, institutions for physical planning and infrastructural development were identified as key in championing DRR financing in integrated development planning, especially given that in most instances they received funds for DRR-related projects directly from the national treasury.

5.4.2 Local Governance Structures for Disaster Risk Reduction Financing

This study also probed the provisions for DRR financing at subnational levels. This phase of the project identified the fact that subnational governments are required to specifically include DRR or DRR-related activities in their plans and corresponding budget allocations given that disaster impacts are mainly felt at local and community levels. Respondents identified local authorities as having the mandate to finance DRR at the local level. In some instances, local authorities were said to generate the bulk of their income from revenue collection from rate-payers (especially in bigger urban centers). In such instances, rate-payers seemingly have a stake in the local-level budget processes, with legislative requirements for budget consultative processes clearly outlined in some member states. Respondents highlighted how local governments need to be transparent and accountable in their budgets as rate-payers demanded to see value for their tax money. In instances where rate-payers perceived poor governance and inadequate service delivery, they were likely to discontinue payments for services even though this is unlawful. Ultimately, this meant that income to local authorities was reduced, a scenario that was said to likely “affect service delivery components, some of which could also be addressing DRR, such as waste collection” (Government official, Zimbabwe).

Although major DRR activities were described as being centralized at the national government level, respondents acknowledged that at the subnational level, local and regional authorities should be the source of funds for DRR. Examples were shared on how functions of local authorities, such as improved water and sanitation services and storm-water drainage systems, addressed and funded DRR even though this was rarely mentioned as DRR work. However, respondents in the member states registered concern that information on disaster risk funds remained centralized at a

national level where the funds were often channelled towards disaster response activities.

Given that government sectors are guided by legal documents in the form of Acts of Parliament, there is a need for the coordination role to be supported by an appropriate legislative framework on DRR. Such legislation can also guide policy formulation and strategy development that will ensure that there is a mandatory provision for DRR financing in the national budget.

5.4.3 Importance of Legal Frameworks for Funding Allocations

Respondents indicated that legislation is important in making sure that DRR is adequately funded. They argued for the critical need to develop relevant legislation, policies, and frameworks that are aligned with international frameworks. This study established that, in general, existing legislation did not have specific provisions for DRR funding in the participating member states. Respondents stated that existing legislation mainly focused on the provision of Disaster Funds or Civil Protection Funds, which often seemed to cater to disaster response. For example, in Zimbabwe, the respondents estimated that current funding for proactive DRR activities is less than 10% of the country's overall budget for Civil Protection. However, a draft Disaster Risk Management Bill was in place that made specific provisions for DRR funding. Although this could be a good starting point, the respondents lamented the time it is taking for the Bill that was last revised in 2011 to be enacted. Some participants cited "bureaucratic fatigue chasing something that is taking so long to be put in place." From these views, it is apparent that legislative gaps currently inhibit DRR funding in some member states.

Respondents also highlighted the need for legislation to give a clear outline of how DRR is to be funded at all levels of government. These participants stated that legislation needed to clearly articulate the importance of sectoral involvement in DRR and funding provisions for DRR. In addition, some respondents argued that current DRR legislation was not clear or extensive enough to ensure sustained funding for DRR. This lack of clarity in legislation contributes to diminished political will and "bureaucratic bundling" of DRR funding. The following statement exemplifies some of the shortcomings of current legislation on DRR financing in the member states.

Legislation is necessary because it enforces the implementation and action of the policies. Namibia has the NDRM Act, there is a Disaster Risk Management Policy, the National Development Plan 5 as well as the NDP5 Implementation Plan. However, these do not

make provisions for the allocation of funding. (Government official, Namibia)

Respondents further stated that existing or future legislative frameworks needed to reinforce the need for DRR to be aligned and integrated into other developmental activities at the international, regional, and local levels.

5.4.4 Political Buy-in

Respondents identified political buy-in as critical in addressing DRR financing in the member states. Political buy-in was also said to be essential in addressing identified legislation gaps that hindered DRR financing in the member states. Most respondents from across the region emphasized that there was currently little political buy-in for DRR funding. This lack of buy-in was attributed to either politicians' lack of knowledge of DRR, or a deliberate bias towards response activities that often attract publicity. Countries such as Namibia and Zimbabwe emphasized the need for political leaders who enact national policies, and technocrats that implement them, to comprehensively understand DRR. It was stressed that with improved knowledge of DRR, funding commitments could be improved.

If political leaders understand what DRR entails, they may be more willing to provide funding for DRR activities. The problem is that politicians understand the need for funding preparedness and response activities, but not the need for DRR funding. (Regional government official, Namibia)

Sentiments were also echoed by technocrats that knowledge of DRR would address challenges encountered with certain political decisions that often create hazards, and increased risks. For example, low-cost housing provision for the urban poor that often lacked accompanying service delivery, giving rise to public health hazards, was cited repeatedly. Respondents recommended that creating awareness and engaging political decision makers and policymakers would require lobbying and advocacy by various players, such as DRR practitioners, civil society, and grassroots communities who were at the frontline of disaster impacts. Ultimately, such engagement would contribute to improving DRR funding.

6 Discussion

Findings from the study show that SADC member states face a myriad of challenges that altogether interact to result in inadequate financial provision for DRR both at a national and a subnational level. Findings on disaster impacts and climate change also were consistent with previous studies

(Bendimerad 2003; Kellet and Caravani 2013). Furthermore, this research effort established the same concerns that Hochrainer-Stigler et al. (2014) and van Niekerk (2015) alluded to in their studies, where they articulated long-term socioeconomic losses, especially among vulnerable communities. In addition, findings on provisions for DRR funding in SADC member states are consistent with submissions made by other similar studies. Poterie and Baudoin (2015), Kellet and Caravani (2013), and van Niekerk (2015) are some of the authors whose research established inadequacy of budget allocations for DRR in a highly competitive financial context where countries pursued diverse development projects that required funding from the national treasury. Bendimerad (2003), Cummins and Mahul (2008), and Manyena et al. (2013) also underscore the importance of having financial and human resources, as well as a developed skills capacity in institutions mandated with DRR financing and implementation. Based on the findings of our project, this article asserts the importance of a multipronged approach to address challenges and improve DRR financing in SADC member states. Efforts to address DRR financing challenges will need to target various actors at different levels of government.

Our findings also expose capacity gaps in DRR knowledge among politicians and technocrats, especially those who are in nondisaster risk management institutions. Lack of knowledge of DRR was identified as a challenge that hindered financing for DRR. Thus, we suggest that capacity development and enhancement could be a good starting point for improving DRR financing. A robust capacity development program targeting especially ministers and parliamentarians could be explored. A meaningful DRR capacity development program would need to spread across government levels, that is, from national to subnational levels. Ultimately, the authors propose that this would usher in a critical DRR mainstreaming agenda for SADC member states and the region at large.

Furthermore, the findings presented in this article support earlier insights by Linnerooth-Bayer et al. (2007) that up-to-now DRR financing was not a priority agenda both at the national and subnational levels and is often carried out in an ad hoc and response-orientated manner. Some respondents even stated that in the absence of advocates to champion the cause for DRR financing, it was likely to remain unconsidered. Based on these findings, this article submits that there is a critical need for lobbying and advocacy in DRR. Lobbying and advocacy could be targeted at national and local levels by diverse actors, especially civil society that is at the frontline of disasters. A good starting point for lobbying and advocacy for DRR financing would be the creation of evidence-based DRR. Our findings show that there was little to no evidence from studies that were being used to present a good case for DRR financing.

Where studies or assessments were being undertaken, for example, vulnerability assessments, these were mainly said by survey participants to inform response instead of including DRR as well. In a similar study reported by Benson et al. (2007), the findings highlighted the existence of a weak evidentiary base, especially in developing countries where even cost-benefit analysis in the context of DRR was rarely conducted. Therefore, there is an apparent convergence of findings from this study with such previous studies.

Member states of SADC need to conduct cost-benefit analysis for post-disaster recovery and development projects and the findings from such studies need to inform DRR financing. Providing evidence for the status of DRR financing in member states also requires that there are systems in place to track budget allocations and expenditures. Our research suggests that while this may not necessitate the creation of entirely new systems, governments may consider how DRR is specifically included in their public financial management systems. Such an approach could improve record keeping and reporting on the SFDRR monitoring framework (van Niekerk et al. 2020).

Schipper and Pelling (2006) and van Niekerk (2015) stressed that institutions should form the anchor of DRR funding. Emphasis on local-level institutions for DRR financing converges with the findings by Zuma et al. (2012) who stated the importance of getting DRR operational at a local level. Consistent with Botha and van Niekerk (2013) and Malalgoda et al. (2014), the findings of this study have established that governments struggled with DRR funding, especially where there were concerns about governance issues at a local level. This study has shown that at the national and subnational levels there was provision for DRR financing, which is in line with the SFDRR (UNISDR 2015), although other constraints explained in other subsections remained responsible for challenges in DRR financing.

Holloway (2003) emphasized that policy and legislation amendments were necessary to enable relevant institutions to conduct DRR-specific and related work. Given that for some member states such as Zimbabwe, legislation amendments have been protracted, this article suggests that lobbying and advocacy by civil society to push for the enactment of relevant enforceable legislation is essential.

Concerning issues of political buy-in, deliberate bias in favor of a reactive response to disaster, because it enabled politicians to garner political mileage, rather than proactive preparation and mitigation, was also established by Hagelstein and Becker (2013) and Schipper and Pelling (2006). This bias remains a challenge to DRR financing commitments in the SADC region. Propositions made by respondents that may help alleviate this challenge, such as the identification and use of champions especially at the grassroots level are similar to suggestions made by Botha and van

Niekerk (2013). This could potentially open new frontiers for DRR mainstreaming.

There is thus a need for a deliberate drive towards DRR mainstreaming and DRR-sensitive budgeting in the SADC region, especially given the disasters the region has to contend with and the corresponding harsh economic conditions in some member states. It is high time that DRR mainstreaming and DRR-sensitive budgeting are explored; this could be a new approach to DRR worth pursuing in the region. Pilot studies in a cross-section of the member states could be considered.

Regional entities such as the SADC DRR Unit will also have to play a guiding role in ensuring that the DRR financing agenda progresses among its member states. Although regional organizations such as the SADC DRR Unit have no real authority and power to direct increased funding for DRR in member states, such units can focus on strengthening processes and relationships that could facilitate elevated financial support. Specifically, the SADC Secretariat should focus on spearheading how governments and civil society promote and champion DRR financing in individual countries and across the region. They should also make reporting on key processes such as cost-benefit analysis compulsory for the disaster (risk) management entities of all member states. Simultaneously, all member states might provide avenues for peer oversight at a national scale such as the DRR peer review mechanism proposed by the Southern African Development Community's Regional Resilience Framework (SADC 2020). The secretariat should also provide policy development support and inputs to ensure alignment between the need for DRR and the actual detailed financial and budget mechanisms to operationalize DRR. While these modest interventions by the SADC Secretariat will not solve all the issues relating to public sector funding of DRR in member states, they would give a solid foundation from which to move towards more holistic and sustainable modes of DRR financing.

7 Conclusion

The findings of this study indicate that there is a myriad of challenges that subsume the funding of DRR activities within countries in the SADC region. Major issues raised by participants alluded to a lack of institutional DRR funding mechanisms, absent human resources to implement funded DRR activities at subnational levels, deficient intergovernmental budgeting for DRR, and deficient political will to fund and support DRR activities. As indicated in our theory and analysis presentation, these issues all have the potential to derail the effective funding and subsequent implementation of DRR within the SADC region.

Member states must initiate legislative reforms that clarify specific mechanisms and actions that inform the funding of DRR. Specifically, legislative amendments should focus on clarifying issues of funding DRR at subnational levels where disasters occur. Disaster risk reduction legislative reform would be a crucial first step in ensuring that the existing philosophical orientation towards DRR contained in legislative documents in the region is realized through appropriate DRR funding provisions in those legislative documents. Due to chronic budget shortages faced by national disaster risk management entities in the region, legislative reforms should also mandate line departments to budget for and integrate DRR into their day-to-day activities. Mandating line departments to budget for DRR could also facilitate greater buy-in and understanding of the importance of DRR from such departments. Cost-benefit analyses should be conducted by disaster risk management entities in the member states on an annual basis. Such analyses would be a useful tool in advocating for annual increases in budget allocations for DRR. Importantly, cost-benefit analyses would provide a scientific base for the benefits of investing in DRR, which in turn can be used to lobby political actors to buy into and invest in DRR activities. Political will is needed to facilitate investment in DRR. Apart from the use of cost-benefit analysis to lobby for increased political support for DRR, the member states should launch extensive awareness and capacity-building programs focusing on stimulating the involvement of political office bearers in DRR activities at the national and subnational levels. Human resources (numbers and capacity) need urgent attention. Budget allocations should make provision for the increased employment of qualified disaster risk management professionals, especially at subnational levels. In conclusion, institutions responsible for disaster risk management must develop a monitoring system to identify all sources of DRR funding within each member state. This will enable them to effectively coordinate all DRR activities.

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