

FINANCIAL AND FISCAL COMMISSION
POLICY BRIEF
**OPTIMAL POLICY MIX FOR MANAGING
AND FINANCING DISASTER RISKS IN
SOUTH AFRICA**
BACKGROUND

This policy brief assesses alternative financing methods for reducing disaster risk in South Africa and highlights aspects to be considered in drafting a new national funding model and policy on disaster risk-management funding.

The current funding model for disaster risk reduction within government and the private sector does not provide optimally for South Africa's dynamic risk profile and diverse public financial management system. A number of challenges have emerged since 2005, when the funding mechanisms for disaster management were revised by the Financial and Fiscal Commission (the Commission). Firstly, the different spheres of government do not fully apply or adhere to current legislative, policy, institutional and funding mechanisms. Secondly, relief measures often take time to reach the victims or places affected by disaster because of lengthy bureaucratic processes for disbursing disaster funds. Thirdly, experience has shown that funding for disasters does not always adequately address the effects of a particular hazardous event or the cost incurred by provinces or municipalities. Finally, most municipalities and provinces do not make provision for risk-reduction funding in their planning and budgeting processes (Visser and Van Niekerk, 2009). The haphazard response to disaster creates perverse incentives. For example, communities expect compensation from government when a disaster occurs and so take minimal mitigating or preventative measures.



SUMMARY OF LITERATURE ON DISASTER RISK MANAGEMENT AND FUNDING

The severity (and frequency) of disasters is rising, and developing countries, including South Africa are increasingly exposed fiscally and economically (Ghesquiere and Mahul, 2007). Reasons for this include climate change, the change in weather patterns, inefficient land use, growing population and assets located in high-risk areas. The international trend is to emphasise the importance of funding disaster-risk reduction before an event occurs rather than the traditional approach of funding losses associated with a disaster after it has happened.

For disaster management to work efficiently and effectively, legislation, clear roles and responsibilities, the allocation of funding and other funding mechanisms in the form of insurance measures are critical (Olokesusi, 2005). An optimal risk financing strategy is key for both pre- and post-disaster management. International case studies indicate that some roles, functions and funding are best centralised, while others need to be decentralised. For example, in Nigeria the National Emergency Management Agency addresses and supports disaster risk-reduction measures. Similarly India has a National Institute of Disaster Management to deal with natural disaster risks and a National Disaster Fund fully funded by government that provides instant financial relief during disasters. Australia has National Disaster Relief Arrangements (NDRA) by state, to reduce the excessive financial burden of natural disasters on the national government. The NDRA provides year-on-year reimbursement to the states for expenditure incurred on eligible relief measures in defined circumstances. New Zealand has similar arrangements to that of India with a National Earthquake Commission and a dedicated National Disaster Fund. Funded by government and insurance companies, the purpose of these institutions is to assist home owners to mitigate and recover from the effects of disasters.

Apart from government-led disaster recovery measures, a number of financial tools might be considered as part of a medium to long-term financial strategy for disaster management. These include the use of integrated budgeting, sovereign insurance, risk pooling, reinsurance, index-based insurance, weather derivatives, micro-insurance, catastrophe

bonds, safety nets and government policies and regulations, private-public partnerships and other alternatives (e.g. funding through the Lottery).¹ The Commission urges caution in preferring any particular financial tool, as no evidence could be found of a developed or developing state that integrates all of the available tools into a coherent financing model. Examples of pre- and post-disaster risk financing arrangements are given in Table 1.



Table 1. Examples of pre- and post-disaster risk financing arrangements

	Security for loss of assets (households/businesses)	Food security for crop/livestock loss (farms)	Security for relief and reconstruction (governments)
	Post-disaster		
	<ul style="list-style-type: none"> Emergency loans Money lenders Public assistance 	<ul style="list-style-type: none"> Sale of productive assets Food aid 	<ul style="list-style-type: none"> Diversions Loans from World Bank and other international financing institutions (IFIs)
	Post-disaster		
Non-market	<ul style="list-style-type: none"> Kinship arrangements 	<ul style="list-style-type: none"> Voluntary mutual arrangements 	<ul style="list-style-type: none"> International aid
Inter-temporal	<ul style="list-style-type: none"> Micro-savings 	<ul style="list-style-type: none"> Food storage 	<ul style="list-style-type: none"> Catastrophe reserve funds Regional pools Contingency credit
Market-based risk transfer	<ul style="list-style-type: none"> Property and life insurance 	<ul style="list-style-type: none"> Crop and livestock insurance (also index-based) 	<ul style="list-style-type: none"> Insurance or catastrophe bonds (also index-based)

1. Sovereign risk seeks to maintain a diversified portfolio of risks and is attractive for financing disaster risks. Risk pooling is another form of risk management practised by insurance companies, where insurance companies come together to form a pool. Reinsurance is a tool for insuring large-scale disasters that spreads the risk among insurance companies on the international market. Index-based insurance differs from normal insurance in that conventional insurance is calculated against losses while index-based insurance is calculated against specific physical or economic triggers. Weather derivatives are closely linked to index-based insurance, as it provides a viable option for managing the financial impacts of disasters. Micro-insurance provides protection for low-income people against perils, in exchange for regular premium payments proportionate to the likelihood and cost of risk involved. Catastrophe bonds are a financial tool that transfers the financial risks of disasters from insurance companies to broader capital markets.

FINDINGS

The current funding model for disaster risk reduction within government and the private sector does not provide optimally for South Africa's dynamic risk profile and diverse public financial management system. For instance, municipalities in South Africa (specifically districts municipalities) have difficulty implementing the provisions of the Disaster Management Act (South Africa, 2002) and the guidelines provided in the National Disaster Management Framework (DPLG, 2005). One of the main reasons for this is a lack of funding (or a lack of understanding of funds allocation) from national and provincial governments. Municipalities also fail to make provision for such funds in their budgets and, in some cases, allege that mandates from national government are unfunded. Instead of improving disaster-risk reduction within local government, the lack of policy implementation leads to higher levels of vulnerability and increases the likelihood of hazardous events leading to disasters. As a result, funding for disaster relief often puts severe strain on public finance resources and government's ability to respond effectively. When available, funding takes time to reach the victims or areas affected by disaster because of lengthy bureaucratic processes for disbursing disaster funds. The following gaps and bottlenecks hamper sustainable financing of disaster management:

- Local government focuses on disaster relief and recovery funding when a disaster occurs, with limited efforts on other categories such as disaster risk-reduction measures.
- The delay in the release of funds (between when a disaster occurs and when funds are released).
- The unclear roles and responsibilities between provincial and local government in classifying and declaring disasters, which result in duplication of efforts.
- The general lack of capacity in critical areas such as engineering and other professional skills.
- Long lead times in transferring the Municipal Infrastructure Grant (MIG) because of the conditions that need to be met before funding can be channelled from the national budget to the Department of Cooperative Governance (DoCG) and eventually to the MIG fund.
- The lack of incentives and punitive measures (e.g. incentive-based grants).
- Problems with monitoring and evaluating facilities (e.g. rehabilitation projects).
- The lack (and in some instances the absence) of disaster risk-reduction measures.
- A lack of involvement of the private sector.
- Limited community-based funding.
- Low political will concerning the crucial role of disaster risk management, with funding for disasters risks being taken seriously only once an emergency or disaster occurs.

POLICY OPTIONS

The following recommendations for managing, funding and financing of disasters are proposed:

The National Disaster Management Centre (NDMC) should develop a municipal vulnerability index and risk modelling tools to help municipalities assess their vulnerability to climate change and non-climate change

disasters and determine associated contingent liabilities. A standardised vulnerability index can be the basis for:

- identifying and monitoring municipal jurisdictions and municipalities that are most vulnerable to disasters,
- coordinating and providing targeted support by national and provincial governments to vulnerable municipalities, and
- enabling improved planning and risk management by all municipalities.

Such a vulnerability index should take into account the *exposure*, *sensitivity* and *adaptive* capacity of an area with regard to vulnerability to disasters. Also useful would be to standardise and use disaster risk-modelling techniques to project the potential damage of disasters on human life, livelihoods, infrastructure and property. For example, estimates of the number of people who are likely to be made homeless, the number of buildings that will have to be rebuilt and the cost of reconstruction operations.

The minister for cooperative governance and traditional affairs should streamline guidelines and gazette uniform standards governing and guiding the classification, declaration, assessment and response to disaster events in terms of the Disaster Management Act and National Disaster Management Framework. The absence of a standardised and coordinated approach for assessing damage and the relief needs of people affected by disasters results in unnecessary duplication and funding across spheres of government and delays in response and rehabilitation efforts.

The DoCG should, through the Disaster Management Act, require the Integrated Development Plans (IDPs) of municipalities, starting with the most vulnerable, to incorporate disaster risk-reduction evaluations, strategies and measures. These include developing and enforcing *land-use planning* and management measures, *buildings standards* (or retrofitting requirements) to ensure adequate robustness against earthquakes or cyclones, and engineering interventions to mitigate the degradation of environmental assets (such as soil erosion) through the creation of *dams for flood control*, *fire breaks*, and *sea walls* to break storm surges.

Government should develop a policy framework for municipal disaster-risk financing that differentiates between municipalities based on their vulnerabilities and fiscal capacities, leverages private resources to fund long-term disaster risk management needs and encourages and incentivises, where appropriate, the use of innovative market-based financing of disaster relief and recovery. Instruments that can be considered include sovereign insurance, risk pooling, reinsurance, index-based insurance, weather derivatives, micro-insurance, and catastrophe bonds.

The National Treasury should require environmental management and vulnerability objectives to be explicitly incorporated into the design of existing key municipal grant programmes. For example, the Integrated Housing and Human Settlement Development Grant, the Urban Settlements Development Grant, the Municipal Infrastructure Grant, the National Electrification Grant, the Public Transport Infrastructure and Systems Grant and the Regional Bulk Infrastructure Grant. These objectives should promote disaster risk-reduction methods and enhance municipal resilience to climate change through mitigation and adaptation methods. They need to be incorporated into municipal IDPs and should be accompanied by capacity support.

RECOMMENDED READING SOURCES

DPLG (Department of Provincial and Local Government). 2005. *National Disaster Management Framework for South Africa issued in terms of the Disaster Management Act 57 of 2002*. Pretoria: Government Printer.

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