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# Options to Strengthen Disaster Risk Financing in Pakistan





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# Executive summary

The options presented in this paper were developed at the request of the Government of Pakistan (GoP) to contribute to the country's disaster resilience and overall sustainable development. They are in line with Pakistan@100: Shaping the Future which detailed essential elements of sustainable growth for Pakistan including with disaster risk financing among them<sup>1</sup>. They aim to comprehensively address financial resilience of Pakistan to natural disasters and increase access of the country to immediate and long-term financial resources in the aftermath of a disaster.

The objective of this paper is to generate consensus on key priorities for the first national Disaster Risk Financing Strategy of Pakistan. The options presented are not exhaustive and are to be complemented with further options and potentially additional disaster risk financing instruments within an evolving strategy. This will facilitate transition towards the implementation of appropriate instruments as the associated systems and processes are set in place. The identified options were presented for consideration of the GoP during the National Consultation on Disaster Risk Finance in July 2019<sup>2</sup>. The Disaster Risk Financing Strategy and implementation plan will be

OPTIONS TO  
STRENGTHEN  
DISASTER RISK  
FINANCING IN  
PAKISTAN

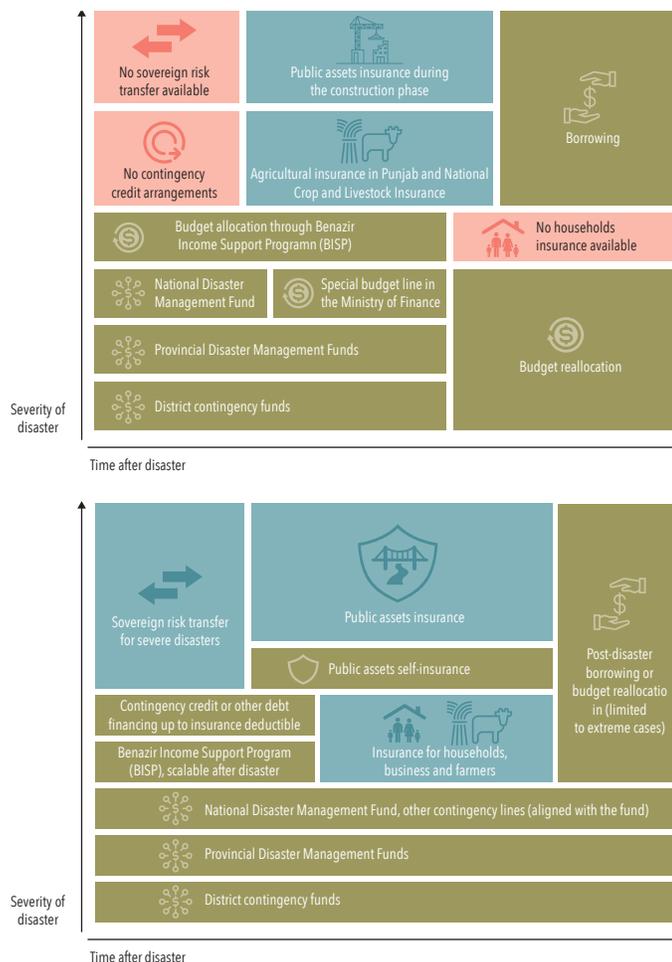
1 Pak@100: Shaping the Future 2047, 2019 - see the priority on environmental sustainability #d, <https://openknowledge.worldbank.org/bitstream/handle/10986/31335/Pakistanat100Overview.pdf?sequence=3&isAllowed=y>  
2 See proceedings of the Consultation: <https://www.financialprotectionforum.org/news/national-consultation-on-disaster-risk-financing-for-pakistan>

developed by the National Disaster Risk Management Fund (NDRMF) in coordination with the GoP leveraging this paper.

**Natural disasters are a challenge to Pakistan’s development** – damage and loss over the past decade has exceeded PKR 2,548.0 billion or US\$18 billion and affected an overwhelming majority of the population. The impacts from disasters is increasing with a growing population, increasing investments in buildings and infrastructure, urbanization and climate change. This affects the economic development of Pakistan and threatens the most vulnerable members of society and efforts to alleviate poverty. Disasters can also affect fiscal sustainability of Pakistan by exhausting limited public resources. Financial planning of and preparedness to disasters is, therefore, increasingly important.

**The GoP has implemented strategic and practical steps towards greater financial resilience to disasters.** This includes, for instance, introduction of the National Disaster Risk Reduction policy, which places disaster risk financing among the government priorities. It also includes efforts towards, for example, strengthening social safety nets to protect the most vulnerable and introduction of designated reserve funds at federal and provincial levels – among many others (see figure 1 detailing the current and proposed in this paper approach to disaster risk financing).

**Figure 1. Current vs the proposed approach to risk layering in Pakistan.**



**The GoP faces some challenges to build financial resilience against climate and disaster risk** including the need to: (i) further strengthen the availability of underlying information on contingent liabilities and disaster risks; (ii) improve coordination across different levels of the government; (iii) address the potential funding gap after major disasters, which might materialize due to insufficient resources; (iv) address excessive retention of risk on the government budget.

**This paper identifies and proposes a series of options to strengthen the financial resilience of Pakistan against climate and disaster risk in the following priority areas:**

- Quantify the funding gap for natural disasters by identifying the associated amount of fiscal risk;
- Improve the speed of disbursement to intended beneficiaries by improving financial preparedness to natural disasters across the administrative levels;
- Establish a risk retention and risk transfer strategy to build financial resilience of the government and population against natural disasters;
- Invest in resilient infrastructure via increased financial protection of the assets (social, agriculture, infrastructure) to better protect citizens.

**The paper also proposes the following steps for consideration when implementing these options.** It is fundamental to adopt a comprehensive approach towards the development of the Strategy that includes consultations with stakeholders across the government, communities and the private sector. To implement the Strategy, it is important to ensure leadership of both the National Disaster Management Authority, heading the federal disaster response and recovery, and the Ministry of Finance, playing a central role in public financial management of disasters in Pakistan; equally, it is important to ensure inter-agency coordination, including with the external stakeholders. Capacity-building on disaster risk financing for the stakeholders involved is essential for the successful implementation of the Strategy.

**This paper is structured in the following way:** (i) the background section provides information about disaster risks and impacts, as well as challenges to financial resilience of the country to disasters; it also provides an overview of existing risk financing arrangements and legal frameworks; (ii) section 2 provides an overview of potential options for strengthening financial resilience of Pakistan to natural disasters; while all options are important and some fundamental, the GoP could prioritize their implementation; (iii) section 3 summarizes the conclusions and provides recommendations on the next steps and an indicative timeline for implementation of the suggested options.



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## SECTION 1

# Background

**Natural disasters are an important challenge for fiscal sustainability and economic development of Pakistan.** The country is exposed to many natural disasters, including floods, earthquakes, droughts, cyclones, and tsunamis. Over the past decade, the damage and loss from major disasters in Pakistan has exceeded PKR 2,548.0 billion or US\$18 billion<sup>3</sup>. Disasters impact on average approximately 3 million people each year or 1.6 percent of the total population of over 200 million<sup>4</sup>.

**Floods affected an overwhelming majority of the population over the past 42 years.** According to historical disaster data since 1973, approximately 77 percent of the population affected by disasters has been impacted by floods and 13.5 percent - by drought<sup>5</sup>. A study<sup>6</sup> conducted by the World Bank in 2015 reveals that floods in Pakistan cause an estimated annual economic impact of PKR 167 billion to PKR 255 billion (US\$1.2 billion to US\$1.8 billion) - equal to about 3-4 percent of the federal budget or 0.5-0.8 percent of national gross domestic product (GDP).

3 Asian Development Bank and World Bank, "Pakistan 2005 Earthquake: Preliminary Damage and Needs Assessment" (Policy Note 34407); "Pakistan Cyclone and Floods 2007: Preliminary Damage and Needs Assessment, Balochistan and Sindh" (Urban Study 70329); "Pakistan Floods 2010: Preliminary Damage and Needs Assessment" (Board Report 58290); "2011 Pakistan Floods: Preliminary Damage and Needs Assessment" (Working Paper 84606), all published by World Bank, Washington, DC.

4 World Bank, 2015. "Fiscal Disaster Risk Assessment-Options for Consideration"

5 NDMA and UNdata, <http://data.un.org/> as cited in World Bank, 2015. "Fiscal Disaster Risk Assessment-Options for Consideration"

6 Fiscal disaster risk assessment conducted based on large number of simulated earthquake and flood events taking into account hazard, exposure and vulnerability. Source: World Bank, 2015. "Fiscal Disaster Risk Assessment-Options for Consideration" <http://hdr.undp.org/en/countries/profiles/PAK>

A major flood event<sup>7</sup> could cause losses in excess of PKR 2,195.0 billion or US\$15.5 billion, which equates to around 7 percent of national GDP or almost 40 percent of the federal budget.

Pakistan receives 75-80 percent of freshwater supply during three months of the monsoon seasons<sup>8</sup>—droughts and floods in the country can severely alter the water availability throughout the year. With onset of climate change, these alternating cycles for temporal and spatial extremes of water availability are going to intensify further.

### **What is disaster risk financing?**

A growing number of governments are moving toward a proactive (and more cost-effective) approach to financial planning, one that protects national budgets as well as the lives and livelihoods of their residents from the impacts of disasters.

Disaster risk financing involves planning ahead to better manage the cost of disasters, ensure predictable and timely access to much-needed resources, and ultimately mitigate long-term fiscal impacts.

Disaster risk finance and insurance instruments aim to increase the resilience of vulnerable countries against the financial impact of disasters and to secure access to post-disaster financing before an event strikes, thus ensuring rapid, cost-effective resources to finance recovery and reconstruction efforts.

Financial resilience to disasters is complemented and reinforced by physical and social resilience – all three are core elements of disaster resilience. On difference with such measures, as physical reinforcement of buildings or strengthening coping capacity of population, financial resilience is focused on pre-arranging predictable funding for post-disaster activities to protect the fiscal balance, subnational governments, households, and businesses.

Sources: World Bank, *Disaster Risk Finance: A primer*; and, World Bank Technical Contribution to the 2019 G20 Finance Ministers' and Central Bank Governors' Meeting

**The 2005 earthquake caused a devastating economic loss estimated equivalent to 2.6 percent of GDP;** official estimates report 73,000 death toll<sup>9</sup>. The World Bank study of 2015 estimates that if this event were to occur in the present day, given the increased number of buildings, the total economic loss to residential properties would be approximately PKR 397 billion or US\$2.8 billion (approximately double the 2005 losses). An event of this magnitude is expected to occur every 26 years. Average annual losses from earthquake risk only to the housing sector are approximately PKR 145 billion or US\$1 billion and these losses are expected to exceed PKR 2,648.2 billion or US\$18.7 billion once every 100 years (according to the World Bank fiscal risk assessment).

**Vulnerability and exposure of Pakistan to natural disasters is increasing driven by the growing number of vulnerable people and asset base, as well as urbanization and climate change.** Over 200 million people live in the country, which is rated 150th on long and healthy life, access to knowledge and living standards in the Human Development Index<sup>10</sup>. With one of the highest population growth in South Asia and shrinking per capita water availability, the number of vul-

7 occurring, on average, once every 100 years

8 Pakistan Council for Research on Water Resources

9 Official estimates as reported through Pakistan Early Recovery Framework, <http://www.ndma.gov.pk/Publications/Pakistan%202005%20earthquake%20early%20recovery%20framework.pdf>

10 <http://hdr.undp.org/en/countries/profiles/PAK>

nerable to natural disasters people is projected to increase exponentially by 2030. As Pakistan's population and asset base increase, so does its economic exposure to disasters. The risk posed by natural disasters is further exacerbated by growing urbanization and climate change - Pakistan is among the top 10 countries in the world exposed to the impact of climate change in the 20 year average (from 1998 to 2017)<sup>11</sup>.

**The GoP has been spending approximately 0.9 - 1.9 percent of its total budget expenditure on natural disasters over 2014-2017 years making financial planning for natural disasters essential.**

During fiscal years 2015-16 and 2016-17 the GoP spent PKR 86.7 billion or about US\$585 million for relief and recovery<sup>12,13</sup>; for fiscal year 2015-16, disaster expenditures accounted for 1.6 percent of all the expenditures<sup>14</sup>. For fiscal years 2014-15 and FY 2015-16, the GoP spent PKR 99.7 billion or US\$673 million for relief and recovery after natural disasters<sup>15</sup>. If all disaster expenditures are accounted for (including implicit spending, such as from maintenance budget), the actual amount could be considerably higher. While smaller-scale but more frequent disasters drain carefully planned budgets, when a large-scale disaster strikes, the resulting needs can often overwhelm government resources. Disasters are an important financial challenge for governments, which need to provide emergency relief and social assistance after a disaster event as well as reconstruct public assets and infrastructure. For example, floods in 2010 and 2015, caused estimated PKR 32.6 billion (USD 326 million) losses to farmers in Punjab. To support the affected farmers, the GoP provided PKR 6.7 billion (USD 67 million) - despite such sizeable support, this amounted only to 18.5 percent of the required amount. Beyond such direct financial costs, disasters can have negative impacts on a country's long-term growth potential. Financial planning for disaster and climate risk helps to mitigate the impacts of disasters on the economy, population, and government budget.

**After the 2005 earthquake, according to the Early Recovery Framework prepared by the GoP with support from UN agencies, only early recovery costs in such sectors as inter alia education transport, agriculture were estimated at PKR 56.4 billion or US\$398 million<sup>16</sup>.**

Further assessment of the GoP, EU, ERRA, GFDRR, UNDP and World Bank reported that the reconstruction costs only for education sector were estimated at PKR 66.8 billion or US\$472 million, transport - PKR 58.9 billion or US\$416 million, agriculture - PKR 42.5 billion or US\$300 million. Reconstruction costs for private housing sector were estimated at PKR 212 billion or US\$1.5 billion. Relief, early recovery, and reconstruction costs were cumulatively estimated at PKR 736 billion or US\$5.2 billion. An additional PKR 81.6 billion or US\$576 million was estimated in indirect income losses with the recovery efforts, the GoP, for instance, provided support to over 290,000 vulnerable families with monthly allowance of PKR 3,000 or US\$21 per month for six months. After this period, the GoP continued supporting 23,000 most vulnerable families with the same allowance for six more months<sup>17</sup>.

**The National Disaster Risk Reduction (NDRR) policy of 2013 paved the way for a disaster risk financing strategy to become a core part of public financial management of natural disasters in Pakistan.** The National Disaster Risk Management Fund (NDRMF) was set up as a

11 The Long-term Climate Risk Index (CRI)

12 Includes relief, rehabilitation and resettlement, flood control, drought emergency relief assistance

13 The Ministry of Finance, PRSP Budgetary Expenditures of FY 2015-16 and FY 2016-17 (Provisional), [http://www.finance.gov.pk/poverty/PRSP\\_Expenditure\\_FY\\_2015\\_16\\_and\\_2016\\_17\\_provisional.pdf](http://www.finance.gov.pk/poverty/PRSP_Expenditure_FY_2015_16_and_2016_17_provisional.pdf)

14 The Ministry of Finance, [http://www.finance.gov.pk/poverty/Annual\\_PRSP\\_Progress\\_FY\\_2016\\_17.pdf](http://www.finance.gov.pk/poverty/Annual_PRSP_Progress_FY_2016_17.pdf)

15 The Ministry of Finance, PRSP Budgetary Expenditures of FY 2014-15 and FY 2015-16 (Provisional), [http://www.finance.gov.pk/poverty/PRSP\\_Expenditure\\_FY\\_2015\\_16provisional.pdf](http://www.finance.gov.pk/poverty/PRSP_Expenditure_FY_2015_16provisional.pdf)

16 GoP and UN agencies. 2005. Early Recovery Framework

17 GoP, EU, ERRA, GFDRR, UNDP and World Bank, Pakistan Earthquake 2005 The Case of Centralized Planning and Decentralized Implementation through ERRA [https://www.gfdr.org/sites/gfdr/files/documents/docs/Pakistan\\_April%202014.pdf](https://www.gfdr.org/sites/gfdr/files/documents/docs/Pakistan_April%202014.pdf)

government-owned not-for-profit company by the GoP with support from the Asian Development Bank with one of its objectives to develop this strategy.

## Section 1.1: Challenges in Financial Planning of Natural Disasters in Pakistan

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While the GoP recognizes the importance of financial planning for natural disasters, prioritizing this area at the legal and policy level, it faces a number of challenges:

- I. **The GoP achieved significant progress on understanding disaster risks but lacks underlying information about the contingent liabilities - consequently the GoP has limited information to enable risk-informed decision-making**<sup>18</sup>. The GoP has taken considerable steps: The National Disaster Management Plan of 2012 sets guidelines for conducting risk assessments and sets out the needs of a country-wide risk mapping exercise. In 2018, the Project Management Unit (PMU) under the National Disaster Management Authority (NDMA) initiated the exercise of preparing a countrywide Multi Hazard and Vulnerability Risk Assessment (MHVRA) Atlas by deploying a state-of-the-art standardized methodology to meet international standards and best practices (with estimated project costs of PKR314 million (US\$2 million) for 15 districts). As of now, seven MHVRA of districts at the Union Councils level have been published by the NDMA. The countrywide exercise is expected to be completed in 2020. The NDRMF has also provided financing for conducting MHVRA to NDMA. The NDRMF has provided finance to the Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) to develop the natural catastrophe risk modeling for Pakistan.

The estimated annual average loss from earthquakes to the housing stock at PKR 145 billion or US\$1 billion and floods at PKR 167 billion to PKR 255 billion (US\$1.2 billion to US\$1.8 billion)<sup>19</sup> are likely to be an underestimate due to the paucity of data. This assessment requires further refinement with improved hazard data and information on contingent liabilities of the GoP to provide an improved assessment of potential disaster loss in Pakistan. There is also a need to broaden the analysis to incorporate additional hazards to gain a comprehensive understanding of financial risk on an all hazards basis.

While the above steps are important, the hazard and risk information in Pakistan is limited and is scattered among different ministries and institutions with no sufficient details on the probability. At present, the GoP also does not have access to integrated risk assessment tools and information on public assets to inform risk-based decision-making. Estimation of fiscal and economic costs of natural disasters requires further strengthening and more information on contingent liabilities is needed. Neither the federal government nor the provincial governments include the quantification of potential contingent liabilities arising from natural disasters as part of the broader budgetary process. None of the administrative levels of the GoP currently track post-disaster spending systematically, considering response, recovery and reconstruction costs. This can result in under-reported

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18 Contingent liabilities are government obligations that are triggered when a potential but uncertain future event such as a natural disaster occurs. They are categorized as explicit (defined by a legal commitment) and implicit liabilities (without formal legal commitment) and include disaster response, support to affected population, reconstruction of public assets, among many others. Insufficient information on contingent liabilities further complicates decision-making on ex-ante allocations, as well as investments in risk reduction.

19 World Bank, 2015. "Fiscal Disaster Risk Assessment-Options for Consideration"

expenditures and prevent from understanding the extent of GoP's spending on disasters and make the quantification of future financial needs impossible.

Current social protection programs are an important source of contingent liability, which are difficult to estimate without further understanding of the value of expected payments. The GoP has several social protection programs, including the well-known Benazir Income Support Program (BISP) that provides regular support to the poorest. However, a strengthened understanding is required on the value of expected payments or the probable maximum payments under BISP, as well as cost-sharing between federal and provincial governments. The GoP has launched a new social protection program - Ehsas - and plans to set up a Ministry for Social Protection and Poverty Alleviation Coordination for bringing all the social protection programs under one umbrella has been approved by the Cabinet. The social spending budget has also been increased by PKR 80 billion (about US\$ 500 million). The Ehsas program embodies 115 policy actions including 'Tahfuz' under which a one-time financial assistance will be provided to the poor people affected by catastrophic events. Payments through this mechanism are likely to increase in accordance with growing disaster risk in Pakistan.

- II. Coordination between the federal, provincial and district governments requires strengthening in view of varying financial and technical capacity of these entities.** The heavily decentralized approach to disaster risk financing in the provinces is a key contributor to these challenges (*see below Section 2.2 on the legal mandate*). The mechanisms through which disasters are financed vary from province to province, depending on the administrative systems in place and the ready availability of funds. In addition, roles and responsibilities of federal, provincial and district authorities in disaster risk management overlap and there is no clear demarcation on post-disaster financing responsibilities.
- III. The GoP could face a severe funding gap due to insufficient resources.** To manage the financial impact of disasters, the GoP relies mainly on supplementary and contingent budgetary allocations during the relief and recovery phases and on the annual Public Sector Development Program during the reconstruction phase. However, the Ministry of Finance works towards curtailing the flexibility of supplementary grants that allow for quick budget reallocations following disasters - this will largely reduce flexibility and available financing.

To access quick liquidity, the GoP established federal and provincial reserve funds for disaster risk management under the National Disaster Management Act of 2010. However, challenges remain with respect to the operationalization and capacity to manage them. Standard operating procedures remain to be developed at the provincial level. The total amount with the federal fund as reported by the NDMA is currently at PKR 1.5 billion or US\$ 10.6 million.

Donors play an important role in post-disaster financing in Pakistan, but their help accounts for only a fraction of total needs. The total costs of the major disasters were four to seven times greater than the donor support contributed to relief, recovery, and reconstruction. Thus, while donor financing plays an important role in financing the relief and recovery phases, it accounts for only 5-16 percent of all financing needs in Pakistan<sup>20</sup>.

**IV. High proportion of post-disaster costs is retained on the government budget due to low disaster insurance penetration.** This includes expenditure *inter alia* on immediate response, support to the population through BISP<sup>21</sup> and other social protection programs, reconstruction of public assets and infrastructure, and potentially support to recovery of the private sector. Insurance penetration in Pakistan currently stands at around 0.95 percent of the GDP<sup>22</sup>. For instance, the total economic loss to the country as a result of the 2010 floods was PKR 1,416.0 billion, or US\$ 10 billion, whereas insured losses were less than 1 percent, as reported by the Asian Development Bank (ADB)<sup>23</sup>. The low absorption capacity of the insurance sector coupled with the country's increasing vulnerability to extreme weather events underscores the urgency to develop cost effective disaster risk financing instruments for managing the country's fiscal balance.

Public assets, disaster property and agricultural insurance are nascent, meaning that reconstruction of public assets and infrastructure and support to the affected farmers remains with the GoP. All public assets are required to be insured by law with the National Insurance Company Limited (NICL) as a sole provider of the public assets insurance. However, ADB reports that only 30 percent of public assets are insured and only during the construction phase. Less than 1 percent of the residential properties in the country are insured against natural disasters - instead, after disasters, the affected population is supported by cash transfers through social protection programs. Agricultural insurance has been developing with support also from development partners, such as the German Development Bank (KfW) and the World Bank, however, there are only two agriculture insurance schemes at the national level. The latter are crop and livestock loan insurance schemes that are primarily meant for the protection of the loan portfolios of the banks and insure only the loan amount.

Although the insurance sector in the country is growing, it remains small compared to GDP<sup>24</sup>. The growth is mainly led by life insurance; non-life insurance growth stagnated at 0.29 percent for the year 2016 and 2017<sup>25</sup>. In particular, disaster insurance is underdeveloped because of a limited understanding of catastrophe exposure, lack of adequate risk mapping data, lack of discipline and underwriting guidelines for writing catastrophe risks<sup>26</sup>.

Recognizing the importance of risk transfer, the GoP incorporated it into the National Disaster Risk Reduction policy of 2013 that gives direction for developing a "property catastrophe Insurance system" in the country to enhance the resilience of the small-medium enterprises sector; private dwellings and public assets. It also recognizes the need to encourage programs for farmers, herders and agricultural financing institutions to increase their financial resilience to adverse natural hazards<sup>27</sup>.

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21 BISP provides support to vulnerable population and can scale up after disaster. Yet, targeting of BISP is not regularly updated - for instance, there is no option to "graduate" from the program and after disasters, support is provided throughout the entire affected area. This imposes large and explicit contingent liabilities on the GoP.

22 Annual Report 2018, SECP

23 Asian Development Bank, 2018. "Country Diagnostic Assessment on the current DRF environment in Pakistan"

24 World Bank Group, 2015. "Strengthening the Regulatory Framework for the Insurance Sector in Pakistan"

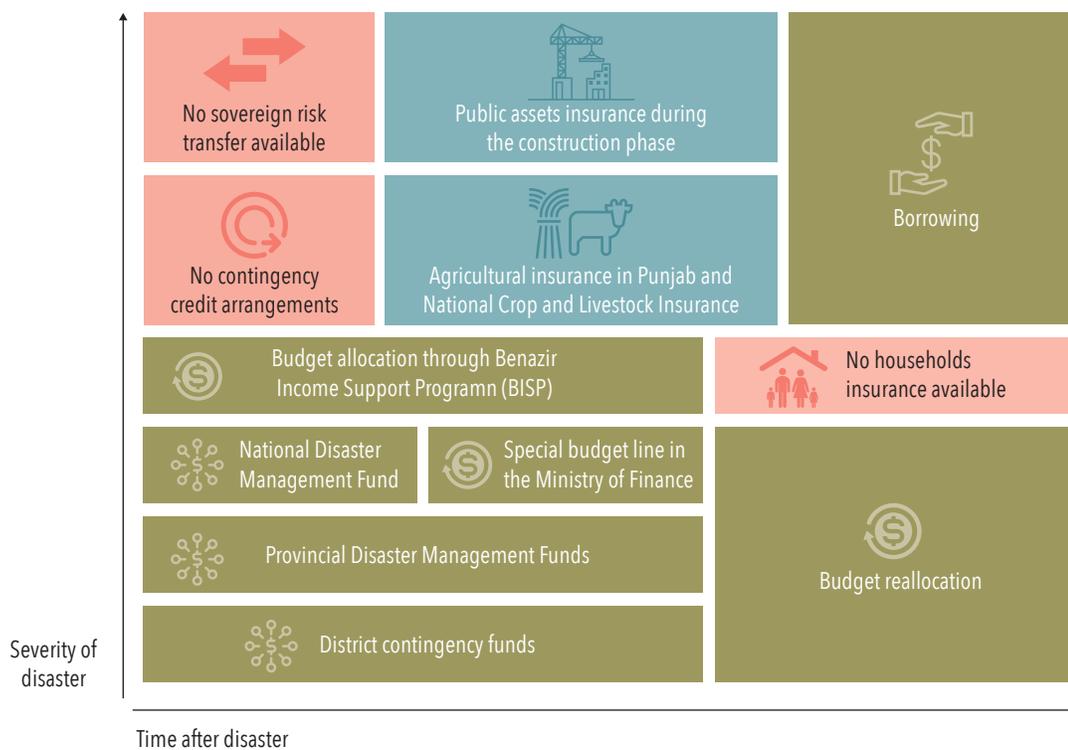
25 Annual Report 2018, SECP

26 World Bank, 2015. "Fiscal Disaster Risk Assessment-Options for Consideration"

27 It also gives directions to explore creation of a wide array of financing instruments, such as: adequate reserves for high frequency low severity losses; contingent credit facilities for the medium layer and parametric insurance or catastrophe bonds for high severity events.

Pakistan has some risk financing instruments in place, but they have been implemented in isolation and more work needs to be done to coordinate efforts to ensure that there is no duplication of coverage. For example, there are National and Provincial Disaster Management Funds and contingency funds available at national and district levels but the relationship across the management of these is unclear and could benefit from a coordinated approach to outline the roles and responsibilities of the respective funds. For disbursing the funds to the vulnerable people, the GoP has established BISP. Several agricultural insurance pilots exist, as well as some level of insurance of public assets (during their construction). However, with limited availability of funds and the above challenges, the GoP will likely have to resort to post-disaster budget reallocation and/or borrowing after major natural disasters.

**Figure 2. Current approach to risk layering in Pakistan. Note: blue - risk transfer instruments; green - risk retention instruments; gray - unavailable.**



The challenges highlighted in this paper can be addressed through the development of a comprehensive Disaster Risk Financing Strategy that moves GoP towards being a proactive risk manager, utilizing on pre-planned financing options, versus a risk responder - “firefighter”, forced to make post-disaster budget reallocations and divert resources away from key development projects. As suggested by the National Disaster Risk Reduction policy, this strategy should build on a risk layering approach. Such approach, building on data and analytics, would allow for combining cost-effective risk transfer options, such as insurance and risk retention, e.g. non-insurance options, such as reserve funds or contingency financing, to mobilize sufficient financing according to different timing of post-disaster needs and severity/frequency of natural disasters.

## Section 1.2: Legal Mandate

The following **legal and regulatory frameworks** guide disaster risk management in Pakistan:

NAME	DESCRIPTION	GAPS
<b>18th Amendment for the Constitution developed in 2010</b>	<p>I. <b>Divides responsibilities</b> between the federal and provincial governments with the Federal and the Concurrent Lists.</p> <p>II. Following an approach for decentralization <b>grants more power to the provincial governments</b>. Responsibility for a number of areas, such as agriculture, health and education is handed over to the provinces.</p>	<p><b>Disaster risk management is not included</b> either in the Federal or the Concurrent list (the National Disaster Management Act 2010 prevails on this issue).</p>
<b>The National Disaster Management (NDM) Act 2010</b>	<p>I. <b>Sets up DRM structure in the country at all administrative levels:</b></p> <p><i>Commissions for policy formulation:</i> National Disaster Management Commission (NDMC) and the Provincial Disaster Management Commissions (PDMCs) – to approve and lay down the rules for the formulation of disaster policies, guidelines and plans.</p> <p><i>Three tier authorities in disaster risk management for implementing the policy:</i> National Disaster Management Authority (NDMA) and Provincial Disaster Management Authorities (PDMAs) established to formulate, coordinate and monitor implementation of the respective policies. District Disaster Management Authorities (DDMAs) - to formulate district policies and plans in line with the relevant policies and plans and to coordinate implementation and monitoring of the national and provincial policies and national, provincial and district plans<sup>28</sup>.</p> <p>II. <b>Federal government might have to assume an executive role with a joint decision of the provincial governments.</b> Whereas the provincial governments have been made responsible to formulate, coordinate and monitor the implementation of the provincial policies and plans, Article 144 of the Constitution – which is a preamble to the NDM Act - allows the provinces to request for the assistance of the federal government thereby creating legal space for the federal government to assume an executive role. According to this Article, if needed, provinces can seek the assistance of the federal government by passing a resolution to this effect (and repeal this decision later if the support is not required). This provision addresses potential capacity constraints and their subsequent improvement.</p>	<p>I. <b>The roles and responsibilities of the authorities are identical and overlapping.</b> While this arrangement allows for flexibility, given the disparity in the financial resources and coping capacities of the provinces, regions, and districts, it also creates ambiguity.</p> <p>Close <b>coordination</b> and interaction at all levels is imperative, however, <b>is challenging</b>, especially when the government at the federal and the provincial levels is not formed by the same political party.</p> <p>II. While a number of responsibilities were passed across to provincial and district governments, there is a disparity of resources and financial capacity to effectively execute these responsibilities. Provinces might likely seek technical and financial support from the federal government.</p> <p>III. While the government allocations are mandated to the National and Provincial Disaster Management Funds, operationalization of the provincial funds is still to be completed.</p> <p>(New amendment to the NDM Act is under consideration - it proposes to make the insurance instruments for disaster risk financing exclusively a federal subject. This is an important change that might prevent adoption of effective risk financing instruments at the local level but may also facilitate better coordination if managed properly at the federal level.)</p>

28 It is presumed that the national & provincial policies & plans will have some overlapping action points to be implemented at the district level.

NAME	DESCRIPTION	GAPS
	<p>III. <b>Sets up the National and Provincial Disaster Management Funds</b> to be financed by grants made by the federal and provincial governments; loans, aid and donations from national and international agencies and donations received from any other source. The federal and provincial governments would also make provisions for funds in their annual budgets for the purpose of carrying out activities as laid out in the DRM plan.</p>	
<p><b>The National Disaster Risk Management Framework (NDRMF) of 2007</b></p>	<p>Provides <b>guidelines for national, provincial and district levels on disaster risk management</b> in such areas as disaster assessment, early warning, emergency response, etc. It clarifies roles and responsibilities of disaster risk management stakeholders.</p>	
<p><b>The National Disaster Management Plan (NDMP) of 2012</b></p>	<p>I. <b>Plans PKR 147 billion or US\$1 billion investments in enhancing capacity of the disaster risk management system.</b> Identifies macro level hazards, risk assessment, development of multi hazard early warning systems, roles and responsibilities at the national, provincial and district levels, and the NGOs etc.</p> <p>II. Lays out the operation plan of National Institute of Disaster Management (NIDM) for capacity building at all levels.</p>	
<p><b>The National Disaster Risk Reduction Policy of 2013</b></p>	<p>I. <b>Mandates development of a sovereign disaster risk financing strategy with a risk layering approach</b> comprising a mix of insurance &amp; non-insurance instruments to finance various layers of risk for enhancing the financial response capacity of the government.</p> <p>II. Acknowledges the need to <b>develop the private catastrophe insurance market</b> with special focus on the home owners, small-medium enterprises, micro-finance sector, small farmers and the vulnerable communities with the support of the insurance regulator.</p>	



PHOTO BY: WORLD BANK

**SECTION 2**

# Identified options to strengthen the financial resilience of the GoP against natural disasters and summary of the next steps

Below is the **summary of the identified options**, followed by a more detailed description:

PRIORITY AREA	IDENTIFIED OPTIONS
<p><b>1.</b> Quantify the funding gap for natural disasters by identifying the associated amount of fiscal risk</p>	<p><b>Option 1:</b> Identify and quantify the contingent liabilities from natural disaster, and include in the broader assessment of contingent liabilities by the Ministry of Finance to enable identification of a funding gap.</p> <p><b>Option 2:</b> Establish a centralized database to include: (i) risk database; (ii) public asset registry.</p> <p><b>Option 3:</b> Improve access for the GoP to risk assessment tools through strengthening data inputs into such assessments.</p>
<p><b>2.</b> Improve the speed of disbursement to intended beneficiaries by improving financial preparedness to natural disasters across the administrative levels</p>	<p><b>Option 4:</b> Clarify roles and responsibilities in disaster risk financing for faster and more effective disaster response and recovery.</p> <p><b>Option 5:</b> Strengthen the dedicated reserve funds at provincial level with information on disaster risks, planned annual allocations and standardized procedures for their operationalization.</p> <p><b>Option 6:</b> Review and identify an approach to strengthen the reserve fund at the federal level to place it at the center of the national Disaster Risk Financing Strategy.</p> <p><b>Option 7:</b> Improve protection of poor and vulnerable people through social safety nets.</p>

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PRIORITY AREA	IDENTIFIED OPTIONS
<p><b>3.</b> Establish a risk retention and risk transfer strategy to build financial resilience of the government and population against natural disasters</p>	<p><b>Option 8:</b> Strengthen disaster insurance:</p> <ul style="list-style-type: none"> <li>• <b>Option 8a:</b> Budgetary support for the government at federal or provincial level through sovereign insurance</li> <li>• <b>Option 8b:</b> Support to homeowners through catastrophe insurance for households</li> <li>• <b>Option 8c:</b> Support to small and medium-sized businesses through business interruption insurance</li> <li>• <b>Option 8d:</b> Support to farmers through comprehensive agricultural insurance</li> <li>• <b>Option 8e:</b> Provide financial support to the poor population through, for instance, BISP cash distribution network</li> </ul>
<p><b>4.</b> Invest in resilient infrastructure via increased financial protection of the assets (social, agriculture, infrastructure) to better protect citizens</p>	<p><b>Option 9:</b> Strengthen financial management of public assets through a combination of insurance and self-insurance measures first focusing on critical assets.</p>

Below is the **detailed description** of the identified options:

***Priority area 1: Quantify the funding gap for natural disasters by identifying the associated amount of fiscal risk***

**The GoP has access to hazard data, but its quality and length of records are limited, while data on the budgetary impacts of natural disasters is largely unavailable.** While important efforts are made on risk assessment and the first time standardized set of multiple assessment tools have been used to map Union Council (UC) wise district data on hazard, vulnerability, exposure and coping capacity (MHVRA), the data of only few districts is currently available – the assessment is planned to be completed by the end of 2020. At the same time, contingent liabilities due to natural disasters are unclear. Inaccessibility of hazard data, assessment of risk and contingent liabilities can be a major challenge for making risk-informed decisions on ex-ante budget allocation for better financial protection of Pakistan against natural disasters.

**Investing in better risk data is essential for informed decision-making on financial resilience to natural disasters.** It is fundamental for decision-makers to determine their risk appetite for absorbing the cost of disasters or to inform the design a risk financing instrument. For insurance, better risk information allows more efficient pricing of the product. Similarly, better risk information allows a government to decide on how much risk to retain on their budget books and how much to transfer to the insurance markets. High quality data on disasters is therefore, an important foundation for implementing the options on strengthening reserve funds (options 5 and 6), social safety nets (option 7) and insurance (options 8 and 9).

**Option 1: Identify and quantify the contingent liabilities from natural disaster, and include in the broader assessment of contingent liabilities by the Ministry of Finance to enable identification of a funding gap.** This is a fundamental step to make informed decisions about allocating financing ex-ante and understand potential expenditures after disasters, including how much funding could be required for disasters of different frequency and severity. This can include, for example:

- An exercise to map the location and value of both federal and provincial-owned assets and infrastructure, by structural type.
- An assessment of contingent liabilities under social protection programs that represent a material and uncertain fiscal liability for the GoP, who is by law required to support the affected population.
- Assess the level of the funding gap based on the risk assessment and information about contingent liabilities.
- A systematic tracking of post-disaster expenditure to further inform and refine the understanding of contingent liabilities of the GoP.

**Option 2: Establish a centralized database** that can include:

- **A risk database.** The information collected on hazard, exposure, vulnerability and coping capacity (e.g. for population and assets) collected through MHVRA should be integrated in to a single database, including information about exposure (e.g. for population and assets), vulnerability and hazard. This database could become a basis for developing integrated risk assessment tools (Option 3) that would ease decision-making of the GoP on risk management.
- **A public asset registry.** The database can include georeferenced information about public assets and infrastructure. A comprehensive public assets registry would centrally house information on type of asset (e.g. school, road, hospital), its location, structural characteristics and value, identify critical assets (e.g. power station) - this information can help the GoP build a strategy for improved management of the public assets and infrastructure. Specifically for insurance, such a registry could include information about the insurance of the listed assets, as well as allow the claims management module to be integrated in the database. The data collected will help to understand the contingent liabilities more systematically. It will help to refine existing and new financial instruments, such as insurance, which will be able to offer more sustainable and affordable products and will allow to improve financial protection of the public assets.

The GoP may wish to consider making the data warehouse open to all government counterparts at both national, provincial and district levels.

**Option 3: Improve access for the GoP to risk assessment tools through strengthening data inputs into such assessments.** The World Bank developed tools that provide a visual and clear understanding of disaster risks, post-disaster financial capacity and benefits of different financing instruments. These tools go beyond the assessment of physical damages to buildings and determination of replacement costs providing financial information needed to design an optimal combination of financial instruments. This financial information is computed through cost-benefit and dynamic financial analysis. Strengthening data inputs into such instruments will allow to refine their results.

***Priority area 2: Improve the speed of disbursement to intended beneficiaries by improving financial preparedness to natural disasters across the administrative levels***

**In Pakistan, the relevant institutes for disaster risk management exist at all administrative levels, but their capacity differs significantly and sharing of responsibilities between federal and provincial levels after a disaster could be more clearly defined.** The legal frameworks in

Pakistan assign sizable responsibilities to local governments both at provincial and district level, but many roles overlap. The federal government might likely be requested to provide technical and financial support by some provinces, complicating quantification of its potential contingent liabilities and financing requirements. This also makes coordination after disasters challenging.

**Provincial governments currently lack a broader financial strategy to manage the fiscal consequences of disasters and reserve funds are not operationalized.** There is a disparity of resources across the administrative levels and all provinces have limited ex-ante financing available for disaster response. While dedicated reserve funds for disasters were created at both federal and provincial levels, further efforts are required on operationalization of these funds and ensuring that financing mechanisms are appropriately provisioned in the context of potential future needs. The mechanisms for disaster risk financing vary by province with no standard procedure in place for using the established reserve funds – the mechanisms vary due to the availability of finance and type of administrative system. In addition, there are significant financial and technical constraints different across provinces and districts.

**Option 4: Clarify roles and responsibilities in disaster risk financing for faster and more effective disaster response and recovery.** This includes clarifying roles and responsibilities at the different public administration levels in disaster response, recovery and reconstruction and also disaster risk financing to ensure efficient use of resources. This is especially important in view of the new amendment of the NDM Act, which proposes to shift the responsibility of disaster risk financing to the federal level. It is important to ensure that provincial and national disaster risk financing are coordinated and complement one another. The need for better coordination between the different levels of governments is highlighted by Pakistan@100. This option is fundamental for the coordinated approach to risk financing.

**Option 5: Strengthen the dedicated reserve funds at provincial level with information on disaster risk, planned annual allocations and standardized procedures to enable operationalization.** Provincial funds to large extent rely on federal budget allocations, however, these have so far been low and insufficient. For the federal government (and other entities that can contribute to the funds) to have more confidence in allocating the resources, the provincial funds require a clear governance structure, procurement rules aligned with the federal requirements and clear disbursement procedures, as well as transparent reporting structure. Going further, it could also be possible to link these funds to finance the cost of insurance premiums and contingency plans.

**Option 6: Review and identify an approach to strengthen the Federal reserve fund to place it at the center of the National Disaster Risk Financing Strategy.** This may include clarifying operational procedures of the fund, estimating adequacy of the allocations to the fund based on the contingency liabilities of the GoP (priority area #1) and exploring potential linking of the fund to other disaster risk financing mechanisms and / or provincial funds. This could also include the consolidation of some of the contingency funds to prevent overlapping financing and lack of transparency.

**Option 7: Improve protection of the poor and vulnerable members of society through social safety nets.** This may include: (i) strengthening scalability criteria / adaptation of the social safety nets after natural disasters; (ii) estimating provision of cost-efficient financing for the instrument; (iii) reviewing targeting and fund allocation for efficiency; (iv) reviewing appropriateness of using social safety nets given country disaster profile and the most affected regions; and, (v) consider, as an alternative, the introduction of an (micro)insurance program to help meet the needs of the poorest members of society. It is important to build on the existing technology, such as mobile

banking and money transfer system EASY PAISA to help improve disbursement of funds to beneficiaries. Moreover, the GoP can consider creating enabling mechanisms to alleviate poverty and build financial resilience of the poor to future disasters (e.g. using the funds under 'Tahufuz' for purchasing disaster insurance for the poor)<sup>29</sup>.

**Priority area 3: Establish a risk retention and risk transfer strategy to build financial resilience of the government and population against natural disasters**

**At present, the GoP relies primarily on budgetary instruments to finance post-disaster needs, retaining most of the risk on its budget books with very limited risk transfer.** Insurance market growth has primarily been driven by life insurance, while non-life insurance growth has stagnated in 2016 - 2017. Insurance penetration is estimated at 0.95 percent of GDP. Uptake of disaster insurance in Pakistan is severely limited - after 2010 floods, insured losses were not more than 1 percent. While public assets are required to be insured by law, only 30 percent are insured and only during the construction phase. There are several pilot programs in agricultural insurance, but this type of insurance is still nascent. Crop (CLIS) and livestock insurance (NLIS) schemes managed by the State Bank are offered at the national level but insure only the loan amount. The total exposure of the farmers is not covered and the non-borrowers are excluded from these schemes. Challenges to development of disaster insurance include limited understanding of catastrophe exposure, lack of adequate risk mapping data, lack of discipline and underwriting guidelines for writing catastrophe risks.

Recognizing the importance of risk transfer, the GoP included development of disaster insurance into its National Disaster Risk Reduction policy of 2013.

**Option 8: Strengthen disaster insurance.** Risk transfer is an important part of the risk layering approach, because disaster insurance helps increase funding after disasters and thereby reduce the post-disaster funding gap. It can also speed up economic recovery after disasters. Depending on the design, for example, sovereign parametric insurance could pay out within the first weeks after disaster, which may be faster than reallocating government funds. The speedier disbursement of such types of insurance facilitates faster recovery of the affected people, farmers and businesses. The insurance industry can also underwrite loss at a scale not feasible for donors and governments.

**Disaster insurance could be arranged towards achieving different goals:**

- **Option 8a:** Budgetary support for the government at federal or provincial level through sovereign insurance
- **Option 8b:** Support to homeowners through catastrophe insurance for households
- **Option 8c:** Support to small and medium-sized businesses through business interruption insurance
- **Option 8d:** Support to farmers through comprehensive agricultural insurance

<sup>29</sup> For instance, the Government of Kenya has been working with the World Bank on strengthening its Hunger Safety Net Program - a social protection program that also has a capacity to scale up after droughts, providing cash transfers to the affected vulnerable households through bank transfers - <https://www.hsnp.or.ke/>. Substantial technical work within this program was dedicated to ensuring all targeted population has ATM cards and banks are accessible for these people to be able to withdraw cash soon after droughts.

- **Option 8e:** Provide financial support to the poor population through, for instance, BISP cash distribution network

To better understand what the most appropriate risk transfer solution is (including the best combination of risk retention and transfer within the risk layering approach), it is important to build on the results of the priority area #1 through strengthening disaster risk information and information on contingent liabilities of the GoP.

**Sovereign parametric insurance could help the GoP protect the budget from severe, but infrequent disasters.** Payout from such an insurance are disbursed based on a parametric trigger. The introduction of such an instrument could be linked to the existing National Disaster Management Fund, providing payouts into the Fund in case of major disasters. These payouts could be then used to ensure fast response to disasters, as well as to restore the affected public services. It could also link to the existing social protection programs, e.g. BISP, to ensure funding is available for their scalability mechanism for major disasters. The identification of disbursement mechanisms is as important as the financial instrument itself to ensure funds reach the beneficiaries as quickly as possible.

**Supporting households through catastrophe insurance could require major efforts and sizeable legal changes, because these programs often work only if tied to compulsory measures.** This could include making catastrophe insurance for households compulsory to either some defined areas (e.g. urban dwellings) or country-wide. Alternatively, this could include indirect enforcement mechanisms, for instance, establishing check points that require such insurance (e.g. requirement of the insurance policy when taking up mortgage or accessing utilities). These measures, being unpopular, however, require strong political will and determinacy to enforce correct mechanisms and structure of such a program, while also providing financial support to first years of existence of such a program.

**Business interruption insurance could strengthen the resilience of small and medium enterprises to natural disasters.** Such insurance could be largely made available through the local insurers. The GoP could facilitate better access of the local insurance market to risk information and ensure sound legal and regulatory frameworks in place. Given high risk accumulation, however, it should also ensure solvency requirements are met by the local insurers, while creating enabling environment for the local insurers to access international reinsurance markets. (If local insurance companies are facing challenges in retaining risks, then the GoP could consider ensuring legal frameworks allow for fronting such types of insurance or address reinsurance market failure by providing direct support to reinsurance). This option could be further detailed in coordination with the Small and Medium Enterprises Development Authority (SMEDA) of Pakistan and Securities and Exchange Commission of Pakistan.

**Efforts on strengthening agricultural insurance and supporting the poor population could build on the existing programs - agricultural pilot in Punjab and GoP's NLIS, as well as the BISP existing network.** Within the latter, the GoP could consider working towards a better targeting of the population after disasters with aim of limiting its explicit contingent liabilities (see more details in option 7 on social safety nets). For agricultural insurance the efforts might be first targeted towards the provinces with prevalence of agricultural production but high exposure to disasters, such as Punjab (where the GoP could support scaling up of the insurance pilot). These efforts are particularly relevant given importance of agriculture that is employing over half of the labor

force in Pakistan<sup>30</sup>. The GoP might also want to consider how to ensure protection of smallholder farmers (in Pakistan, over 64 percent of farmers have less than 2 hectares of land)<sup>31</sup> against disasters exploring such instruments as area yield index insurance or social protection programs.

Insurance relies on adequate risk information, which is, however, limited in Pakistan. Below is a non-exhaustive list of data that could be required for different insurance solutions.

TYPE OF INSURANCE	EXAMPLES OF THE REQUIRED DATA
<b>Sovereign insurance</b>	<ul style="list-style-type: none"> <li>Country-wide probabilistic modelling acceptable for international insurance markets</li> </ul>
<b>Catastrophe insurance for households</b>	<ul style="list-style-type: none"> <li>Household income level to determine acceptable premiums</li> <li>Disaster risks and probabilistic modelling, more granular data</li> <li>Type of residential construction and their vulnerability to disasters</li> </ul>
<b>Business interruption insurance</b>	<ul style="list-style-type: none"> <li>Disaster risks and probabilistic modelling, more granular data</li> <li>Economic impacts model, including impact of business disruption on income of medium and small enterprises</li> <li>Current insurance penetration for businesses</li> <li>Type of medium and small enterprises and their vulnerability to disasters</li> </ul>
<b>Agricultural insurance</b>	<ul style="list-style-type: none"> <li>Crops and their exposure / vulnerability to disasters</li> <li>Farmers paying capacity</li> <li>For index insurance, availability of satellite data, weather stations and so on, depending on the selected index</li> <li>For area yield index insurance, availability of government extension services to measure area impact of disasters on agriculture</li> </ul>

**Priority area 4: Invest in resilient infrastructure via increased financial protection of the assets (e.g. social, agriculture, infrastructure) to better protect citizens**

Damage to public assets and infrastructure is one of the largest drivers of disaster losses according to the Organization for Economic Cooperation and Development and the World Bank<sup>32</sup>, while disruption to public services paralyzes the affected population and livelihoods. While improving functionality and availability of public assets and infrastructure is among the GoP’s priorities, a number of issues persist. In relation to disaster risk financing, uptake of the public assets insurance in the country is sporadic. Primarily, insurance is obtained during the construction phase. Low penetration of public assets insurance means longer time for post-disaster reconstruction and augmented disaster impact for the affected population and economy overall.

**Improving protection of public assets is complicated by the unavailability of georeferenced information and disaster risk assessment of public assets (priority area #1).** The GoP does not have access to a georeferenced registry of public assets, which would include a comprehensive

30 GoP Bureau of Statistics, <http://www.pbs.gov.pk/content/agriculture-statistics>

31 According to 2010 Agricultural census, GoP Bureau of Statistics, [http://www.pbs.gov.pk/sites/default/files/aco/publications/agricultural\\_census2010/WRITE-UP%20AGRI.%20CENSUS%202010.pdf](http://www.pbs.gov.pk/sites/default/files/aco/publications/agricultural_census2010/WRITE-UP%20AGRI.%20CENSUS%202010.pdf)

32 OECD and World Bank, 2018. “Boosting Fiscal Resilience: Managing Disaster Related Contingent Liabilities in Public Finance Frameworks.” Technical Contribution to the APEC Finance Ministers’ Process.

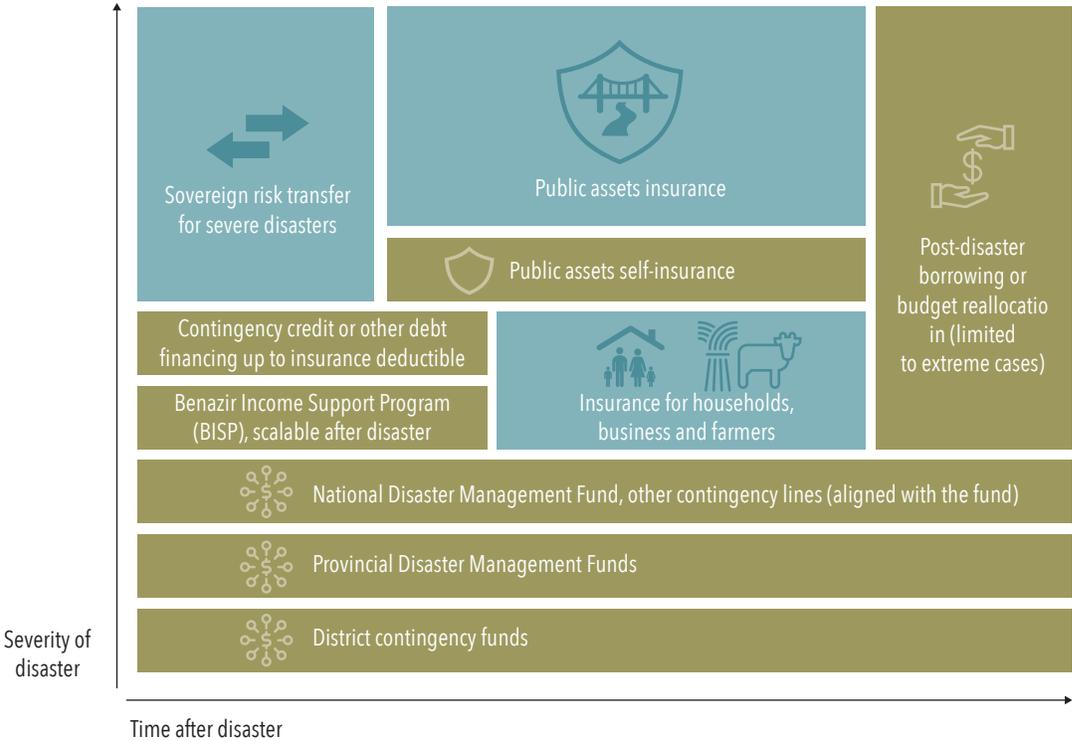
map of public assets and infrastructure with their structural characteristics and insurance policies obtained. There is also lack of clarity on how disasters can impact the assets and infrastructure, because no comprehensive disaster risk assessment has been carried out for public assets. The GoP therefore faces challenges in making an informed decision about risk reduction, further mobilization of risk transfer instruments. In addition, the law does not make it obligatory for non-life companies to charge actuarial rates for property insurance. Due to the above, the NICL is not able to charge actuarially calculated rates for public assets and infrastructure and, as such, no expertise is available within the company.

**To avoid a continued increase in disaster-related contingent liabilities from public assets, the GoP must continue to invest in high-quality resilient infrastructure, developing financial risk management mechanisms for relief and rehabilitation phases, and ensuring sufficient investment in operations and maintenance throughout the life of the assets.** Insurance is among the instruments that help smooth government expenditures on asset rehabilitation and reconstruction, and to increase transparency and discipline in government spending.

**Option 9: Strengthen financial management of public assets through a combination of insurance (risk transfer) and self-insurance (risk retention) measures first focusing on critical assets.** Leveraging the information gathered under option 2 (the establishment of the public asset registry) the GoP could build a strategy for improved financial management of public assets and infrastructure through a combination of insurance and self-insurance measures. This could include developing innovative solutions for enhancing infrastructure resilience through both restoration and rehabilitation phases, e.g. exploring government financing for the restoration of the public services and insurance for the temporary repair and reconstruction phases (e.g. consider accessing public-private partnerships to provide an insurance in a more cost-effective way). The registry could help the GoP to first identify the critical assets to focus these solutions on. With high quality information in the public asset registry, the Securities and Exchange Commission of Pakistan (SECP - financial regulatory agency) can facilitate the industry to review and minimize the demand and supply constraints which are restricting the growth of disaster insurance in the country. At the same time, the GoP could explore how to establish a self-sustaining financial mechanism for the assets (exploring a potential of these assets to cover the insurance premiums from their revenues). The GoP could clearly outline its risk appetite, i.e. it could establish clear guidelines on how much risk it is willing to retain on the budget books and how much should be transferred to the insurance markets. Based upon this, it could explore how to cover the retained risk through funds and at the could align the attachment point of any insurance policy to align to the ceiling of any such funds. Analysis can be undertaken to ascertain the optimal amounts to retain and transfer and also whether additional instruments such as contingent credit should be considered.

The below Figure 2 presents the potential risk layering of different instruments proposed above.

**Figure 3. Suggested risk layering. Note: blue - risk transfer instruments; green - risk retention instruments.**



**SECTION 3**

# Conclusions and Considerations for Implementation of the Strategy

These options were developed to address the need to strengthen financial resilience of the GoP to natural disasters, whose impact is expected to increase with growing exposure and vulnerability of the country, and with such factors as climate change.

The GoP has taken efforts towards ensuring its financial preparedness against natural disasters, but gaps remain. It has commenced a risk assessment exercise at the national level to be complemented with details at the district level. The GoP also employed a number of risk financing instruments: establishing reserve funds at federal and provincial levels; mandating public assets insurance; developing comprehensive legal frameworks for disaster risk management; and etc. However, several gaps need to be further addressed, including low penetration of disaster insurance, improvements needed to the reserve funds including capacity-building, unavailable quantification of contingent liabilities, etc.

Development of the Disaster Risk Financing strategy could help addressing these gaps comprehensively, putting the ongoing efforts under one strategic umbrella following a risk layering approach. Such a strategy could help ensuring improved coordination across the administrative levels and, building on better data and analytics, gradually introduce adequate disaster risk financing instruments to address different layers of disaster risks.

### 3.1. Proposed Steps for the Development and Implementation of the Strategy

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It is recommended to consider the steps below if the GoP decides to proceed with the development and implementation of the Disaster Risk Financing Strategy. These steps are not exclusive and aim to provide a generic guidance to the overall process. These steps should be also complemented with a detailed implementation plan:

- **Ensure a comprehensive approach in the Strategy and address the different needs through conducting stakeholder consultations.** Such consultations could be conducted both across the ministries and agencies, but also include communities (to explore community-based solutions) and private sector. For instance, to develop an insurance solution while addressing the existing challenges of the insurance market in Pakistan, an insurance forum could be convened consisting from the public and private sector, the regulator, the Ministry of Commerce and Ministry of Finance. Such a forum could help design the practical solution and a sound action plan for this solution to be developed.
- **Ensure stakeholder engagements and leadership of both NDMA and MoF.** Many stakeholders across the government will have to be involved in implementing the national Disaster Risk Financing Strategy, because of its multisectoral nature. This includes both government and non-governmental organizations, as well as development partners. A strong leadership of the process is required for the efforts to be well-coordinated. In other countries, design and implementation of such initiatives are often led by ministries of finance, because of their convening power, regular oversight of financial practices across the government and role in post-disaster funding allocation. In Pakistan, NDMA also plays a critical role as an agency first hand addressing disaster response and recovery needs. NDMA is also responsible for National Disaster Management Fund, which could take a place at the core of the government risk layering approach.
- **Systematize the understanding of disaster risk financing in Pakistan through clear articulation of responsibilities and risk financing instruments mapping.** Mapping key institutions and existing financing arrangements (and their financial and technical capacity) through a collaborative process will help building understanding among the key stakeholders about the relevant challenges and how to address them. The mapping could build on the information collected by such stakeholders as the NDMA, NDRMF, ADB and World Bank.
- **Ensure sustainable implementation of the strategy through programmatic capacity building.** It is important to provide a capacity building to the stakeholders in disaster risk financing according to the identified priorities to sustain their implementation. Such capacity building should be programmatic at both policy and technical level, it also should support better coordination between the federal, provincial and district governments specifically on disaster risk financing, but also more broadly on disaster risk management. Capacity-building should also target improved inter-agency coordination at all levels of the GoP, as well as capacity of different agencies to manage existing and newly introduced risk financing instruments.
- **Monitor and evaluate the progress of the Strategy implementation.** Develop monitoring and evaluation frameworks to follow the progress of the Strategy. This will help ensure the Strategy is applied and facilitate the GoP oversight over the progress including any refinements that may be necessary.
- **Strengthen the implementation of the Strategy through coordination across administrative levels, the GoP and with external stakeholders.** To ensure a comprehensive approach, the Strategy could be developed in close collaboration with the NDRMF Synergy Group

tasked with development of such a strategy and main government stakeholders including NDMA and Ministry of Finance, but not limited to them.

### 3.2. Timeline for implementation and criticality of options

Indicative timeline for implementation of the above options and their criticality for financial resilience are summarized in the table below. This timeline is to be further agreed with the GoP.

IDENTIFIED OPTIONS	TIMELINE	SEQUENCE / IMPORTANCE FOR FINANCIAL RESILIENCE
<b>Option 1:</b> Identify and quantify the contingent liabilities from natural disaster, and include in the broader assessment of contingent liabilities by the Ministry of Finance to enable identification of a funding gap.	Medium term (3-5 years)	Fundamental for deciding on risk financing instruments
<b>Option 2:</b> Establish a centralized database to include: (i) risk database; (ii) public asset registry.	Medium term	Fundamental for public asset insurance
<b>Option 3:</b> Improve access for the GoP to risk assessment tools through strengthening data inputs into such assessments.	Short term (1-2 years)	Fundamental for deciding on risk financing instruments
<b>Option 4:</b> Clarify roles and responsibilities in disaster risk financing for faster and more effective disaster response and recovery.	Short term	Fundamental for coordinated risk financing
<b>Option 5:</b> Strengthen the dedicated reserve funds at provincial level with information on disaster risks, planned annual allocations and standardized procedures for their operationalization.	Short term	Part of risk layering strategy for consideration
<b>Option 6:</b> Review and identify an approach to strengthen the reserve fund at the federal level to place it at the center of the national Disaster Risk Financing Strategy.	Medium term	Part of risk layering strategy for consideration
<b>Option 7:</b> Improve protection of poor and vulnerable people through social safety nets.	Medium term	Part of risk layering strategy for consideration
<b>Option 8:</b> Strengthen disaster insurance: <ul style="list-style-type: none"> <li><b>Option 8a:</b> Budgetary support for the government at federal or provincial level through sovereign insurance</li> <li><b>Option 8b:</b> Support to homeowners through catastrophe insurance for households</li> <li><b>Option 8c:</b> Support to small and medium-sized businesses through business interruption insurance</li> <li><b>Option 8d:</b> Support to farmers through comprehensive agricultural insurance</li> <li><b>Option 8e:</b> Provide financial support to the poor population through, for instance, BISP cash distribution network</li> </ul>	Medium term Long term (5 - 10 years) Medium term Long term Short term	Part of risk layering strategy for consideration Part of risk layering strategy for consideration
<b>Option 9:</b> Strengthen financial management of public assets through a combination of insurance and self-insurance measures first focusing on critical assets.	Medium term	Part of risk layering strategy for consideration



12.3

