

# DISASTER RISK FINANCE COUNTRY NOTE: **SERBIA**

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**APRIL 2016**

World Bank Disaster Risk Financing and Insurance Program  
World Bank Europe and Central Asia Disaster Risk Management



**GFDRR**



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Federal Department of Economic Affairs,  
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**State Secretariat for Economic Affairs SECO**



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# Preface



Following the catastrophic floods in 2014, the government of Serbia began an ambitious transformation of its disaster management system from one of response to one of prevention and mitigation. However, even with a robust disaster risk management approach, the country will remain exposed to budget shocks caused by major natural disasters. The World Bank is providing advisory services to support the government in developing a comprehensive financial protection strategy and in considering the establishment of a fiscal risk unit in the Ministry of Finance.

This Disaster Risk Financing Country Note is the first activity to take stock of existing mechanisms and instruments to finance disaster response and to lay the foundation for the development of a comprehensive disaster risk financing strategy.

A workshop to discuss the findings of this analysis and consult on the options for next steps was held in Belgrade, Serbia, March 29–30.

The workshop was attended by 40 participants from the government of Serbia, including the Ministry of Finance, Public Investment Management Office, Ministry of Interior, Fiscal Council, and international partners, including the Swiss State Secretariat for Economic Affairs (SECO), the International Monetary Fund, and the United Nations Development Programme.

This note was developed under a partnership between SECO and the World Bank's Disaster Risk Financing and Insurance Program (DRFIP) to support middle-income countries in building their financial resilience. The program provides tailored advisory services and institutional capacity building on the public financial management of natural disasters. The engagement in Serbia is jointly implemented between DRFIP and the Disaster Risk Management Team for the Europe and Central Asia Region.

# Acknowledgments



This note was prepared by a team composed of Benedikt Signer, disaster risk financing and insurance specialist; Vica Bogaerts, disaster risk management specialist; and Marija Bijelic, consultant.

The findings of this note were presented and discussed during a workshop held in Belgrade, Serbia, March 29–30, hosted by the minister of finance and with the participation of 40 officials from the government of Serbia and development partners. The note benefited greatly from the technical expertise of the participants, and the options for consideration to inform a financial protection strategy are a reflection of the discussions at the workshop.

The team gratefully acknowledges the data, information, and other invaluable contributions made by representatives of the

government of Serbia, and in particular of the Public Investment Management Office, which implemented the relief and recovery coordination following the 2014 floods and have been the driving force behind the shift to a comprehensive and proactive disaster risk management approach in Serbia. Without their skills and expertise, the compilation of this note would not have been possible. Sabra Ledent edited the report.

The team is grateful for the financial support received from the government of Switzerland, which enabled this project.

# Abbreviations



<b>CAT DDO</b>	Catastrophe Deferred Drawdown Option
<b>DPL</b>	Development Policy Loan
<b>DRCM</b>	Disaster Risk and Crisis Management
<b>DRFI</b>	Disaster Risk Financing and Insurance
<b>DRM</b>	Disaster Risk Management
<b>EU</b>	European Union
<b>GDP</b>	Gross Domestic Product
<b>GFDRR</b>	Global Facility for Disaster Reduction and Recovery
<b>IMF</b>	International Monetary Fund
<b>MoF</b>	Ministry of Finance
<b>OCHA</b>	Office for the Coordination of Humanitarian Affairs (United Nations)
<b>PDNA</b>	Postdisaster Needs Assessment
<b>RSD</b>	Serbian Dinar
<b>UNDP</b>	United Nations Development Programme

*All dollar amounts are U.S. dollars unless otherwise indicated.*  
US\$1 = RSD 110; €1 = RSD 120



# Introduction



This Disaster Risk Financing Country Note for Serbia provides an overview of the way its government currently finances the costs imposed by natural disasters.

Serbia, which is situated in the southeast of Europe, has a population of 7.1 million (2014) and a total land area of 87,460 square kilometres. The country has undergone dramatic changes over the last 15 years. In January 2014, Serbia opened membership talks with the European Union (EU). That year, Serbia's per capita gross domestic product (GDP) was approximately \$6,181.<sup>1</sup> Its economy had been significantly affected by the impact of the international financial crisis and the many rounds of elections that had slowed down the country's necessary structural reforms. The result was a loose fiscal policy until 2014. The level of real GDP in 2014 remained at 1.9 percent below its 2008 value.

Although the 2009 recession mainly stemmed from the severe impacts of the international financial crisis, recessions in 2012 and 2014 were primarily caused by natural disasters—a drought in 2012 and severe floods in 2014. Reflecting the deteriorating fiscal balances, Serbia's public debt, including guarantees, more than doubled, from 32.4 percent of GDP in 2008 to over 70 percent at the end of 2014. Meanwhile, poverty deepened after the financial crisis and during the recessions of 2012 and 2014, mainly because of losses in employment and labor income. In an effort to overcome its fiscal challenges, the

government of Serbia adopted an ambitious fiscal consolidation and structural reform program to halt the rise in public debt and send it on a downward trajectory by 2017. This program is supported by a three-year stand-by arrangement from the International Monetary Fund (IMF). Growth in Serbia for 2015 was projected to be 0.5 percent, a small but important recovery of the economy after the severe impact of the 2014 floods, which led to a decline in the economy of 1.8 percent in 2014. More robust growth rates of 2–3 percent are forecast for the medium term.

Serbia is exposed to multiple types of natural hazards, including floods, droughts, earthquakes, and landslides. In recent years, the country has been severely affected by disasters and has suffered widespread damage from earthquakes, in particular in 1999 and 2010. An estimated 30 percent of the country is at risk of landslides. The total damage from drought is estimated at \$500 million per year (1.4 percent of current GDP), and flooding is a recurring event across the country (WMO 2012).

The losses from these disasters have high immediate and long-lasting impacts on people, livelihoods, local and national economies, as well as the government's budget. Because of the growing frequency and severity of disasters, the government has faced the rising costs of responding to disasters as well as the challenges of financing emergency response and reconstruction costs. Having sufficient access to financial instruments and resources

in order to respond to disasters is crucial for building the financial resilience of the country and minimizing the negative impact of natural disasters on Serbia's economic growth.

In this report, chapter 2 provides the background and country context, including the recent economic impacts of disasters. Chapter 3 reviews the current institutional and legal framework for disaster risk management and

financing. Chapter 4 is a review of the public financial management of disasters in Serbia, including ex ante and ex post disaster risk financing and insurance (DRFI) instruments currently in use for budget mobilization, and it looks at the 2014 floods in more detail. The chapter concludes with a summary of financial resources available and a look at the potential resource gaps. Options for consideration are given in the final chapter.

## ENDNOTES

- 1 World Bank, <http://www.worldbank.org/en/country/serbia/overview>.

# Economic Impact of Natural Disasters

Serbia is exposed to various natural hazards, including floods, landslides, earthquakes, storms, hail, and droughts. Beyond the human impact of such disasters, this exposure has led to significant financial and economic costs.

Table 2.1 provides a summary of the number of people affected by and the total damage from recent major disasters in Serbia, as recorded in the Desinventar database.

## CHAPTER

# 2

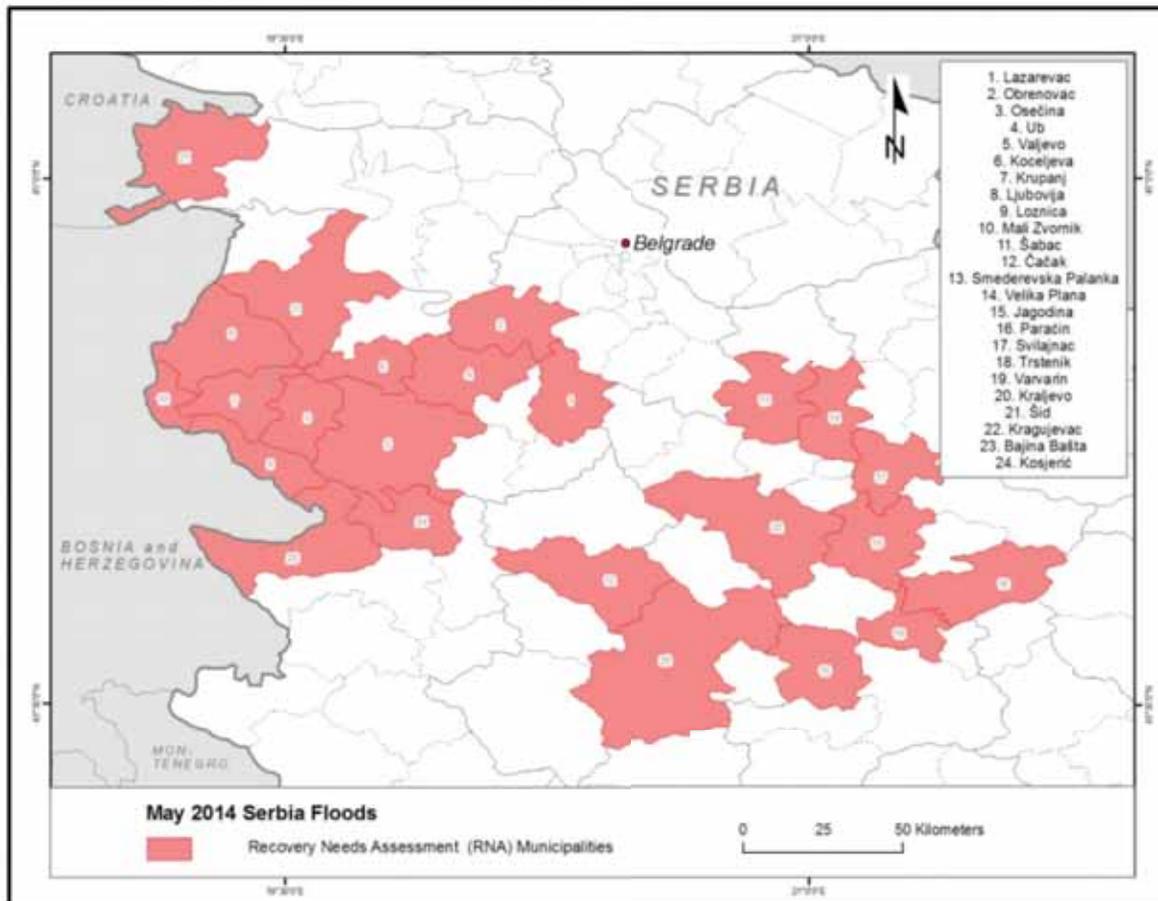
**Table 2.1: Number of People Affected and Total Damage from Major Disasters, by Type of Hazard: Serbia, 2000–2013**

Type of hazard	No. of events	No. of deaths	No. of people affected	Total losses (RSD)
Contamination	4	0	2,650	0
Drought	45	0	9,100	90,084,246
Earthquake	1	3,106	9,164	10,900,000
Epidemic	12	0	2,230	0
Explosion	21	4	15,353	218,110
Fire	261	228	1,536	1,755,753
Flash flood	6	188	6,986	240,322
<b>Flood</b>	<b>234</b>	<b>2</b>	<b>122,151</b>	<b>2,556,320,236</b>
Forest fire	490	0	1,947	48,758,957
Frost	13	0	0	356,853
Hailstorm	134	0	46,652	74,949,701
Landslide	42	50	1,502	21,345,545
Leak	12	0	100	0
Snowstorm	106	12	140,275	3,455,169,637
Storm	24	0	101,953	1,071,405
Other	16	0	5,950	6,500
<b>TOTAL</b>	<b>1,421</b>	<b>3,590</b>	<b>467,549</b>	<b>6,261,177,265</b>

Source: Desinventar database, [http://www.desinventar.net/index\\_www.html](http://www.desinventar.net/index_www.html).

Note: The Desinventar database contains only information up to 2013. These figures do not include the catastrophic 2014 floods. RSD = Serbian dinar.

Map 2.1: Serbian Municipalities Affected by May 2014 Floods



Source: Government of the Republic of Serbia 2014b.

As a result of extraordinary rains in May 2014, Serbia was affected by the most severe flooding in 120 years (see map 2.1). The disaster affected 1.6 million people (22 percent of the total population), in more than two-thirds of the country's municipalities. The floodwaters destroyed and damaged property, crops, and national and local infrastructure (including schools, hospitals, roads, bridges, and water management infrastructure). In the immediate aftermath of the disaster, the government conducted a postdisaster needs assessment (PDNA) with support from the European Union, the United Nations Development Programme (UNDP), and the World Bank.

This assessment focused on estimating the damages and losses caused by the event, as well as the financial needs related to recovery and reconstruction. The total value of the effects of the disaster was estimated at €1.7 billion, which was equivalent to 4.8 percent of Serbia's gross domestic product (GDP)—see Government of the Republic of Serbia (2014b). As a result of the ensuing recession, the Serbian economy contracted by 1.8 percent in 2014 rather than growing by 0.5 percent as previously projected.

According to the PDNA, the energy and mining sector received the most extensive damage,

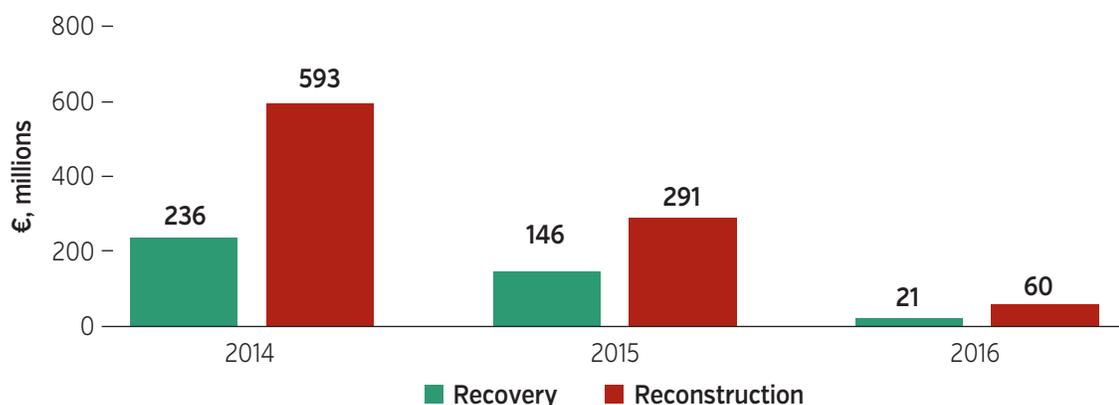
accounting for €494 million or 32 percent of the total disaster effects—110,000 customers faced interruptions in their electricity supply and two-thirds of Serbia's coal production was lost when open-pit mines were flooded. This damage was accompanied by impacts on housing (€231 million, or 15 percent of total disaster effects), agriculture (€228 million, 15 percent), trade (€225 million, 15 percent), and transport (€167 million, 11 percent). After the floods, an estimated 125,000 people fell below the poverty line, an increase of almost 7 percent compared with the level of the previous year. The Human Development Index also fell, pushing Serbia back to 2012 levels (Government of the Republic of Serbia 2014a).

The concentration of disaster effects on the productive activities of energy and agriculture and the damage to housing have impaired economic growth, with a corresponding subsequent impact on livelihoods, income, and employment, plus a significant decline in the living conditions of the population. Furthermore, the vast destruction in the mining sector has required alternative sources of energy and electricity. As a direct consequence of the floods, about 51,800 people temporarily

lost their jobs because of the interruption in production activities. Fortunately, the damage to education facilities was not extensive, and because the disaster occurred at the end of the school year, the disruption in the education sector was limited. In the health sector, a number of clinics were partially destroyed, and medical equipment and supplies were damaged, but no increase in morbidity rates due to flood-related disease has been observed.

The financial requirements for recovery and reconstruction were estimated for all sectors of social and economic activities in both the public and private domains. Postdisaster needs were valued at €1,346 million, of which €403 million (30 percent of the total) was needed for recovery<sup>2</sup> activities and €943 million (70 percent) for reconstruction requirements.<sup>3</sup> The needs assessment report indicated that the country does not have the capacity to carry out reconstruction in a single calendar year (Government of the Republic of Serbia 2014b). Financing needs for recovery and reconstruction were estimated to spread into 2016 at least (figure 2.1) but will have to be extended because of slower than expected implementation.

**Figure 2.1: Schedule for Recovery and Reconstruction Requirements: Serbia, 2014–16**

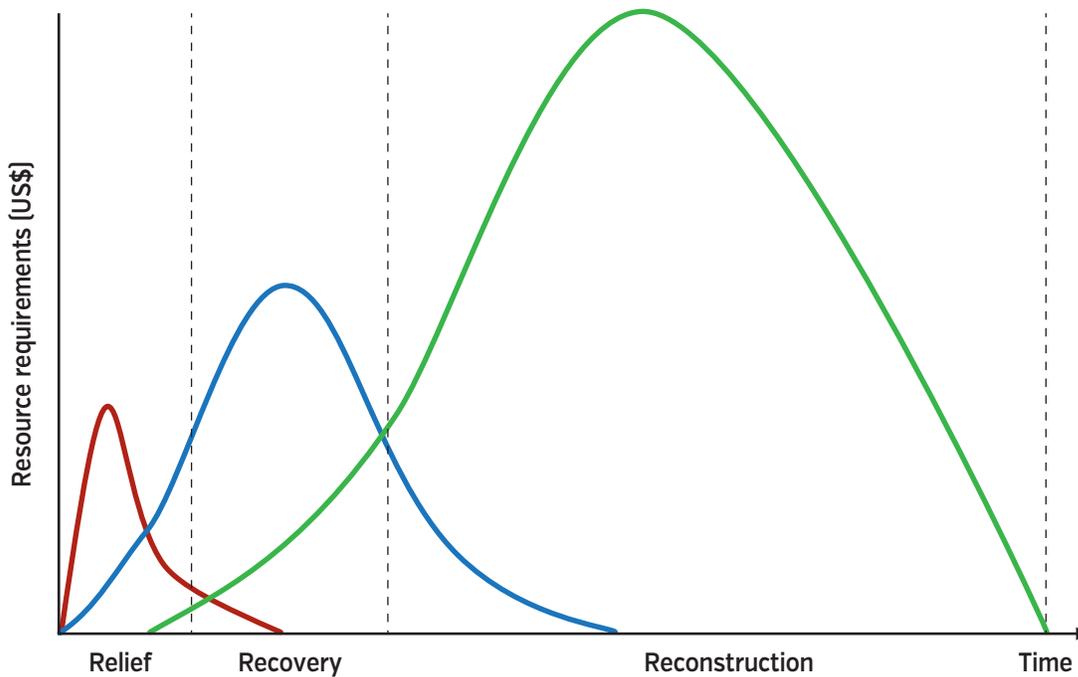


Source: Government of the Republic of Serbia 2014b.

Such a time distribution reflects that while it is critical to have rapid access to the required resources for response and early recovery,

not all funds are needed at the same time. Figure 2.2 shows the usual timing of resource requirements.

**Figure 2.2: Timing of Needs and Execution of Financial Instruments**



Source: World Bank 2014.

### ENDNOTES

- 2 "Recovery needs" refers to the financing required to help affected people recover their predisaster level of household income, to restore the supply and access to basic services—health, education, water, sanitation, and so forth; and to ensure recovery of production in sectors such as agriculture, industry, commerce, and tourism.
- 3 "Reconstruction requirements" refers to the financial resources needed to repair and rebuild destroyed or damaged assets and infrastructure under disaster-resilient standards and conditions.

# Overview of Institutional Arrangements for Disaster Risk Management and Financing

## CHAPTER

## 3

In Serbia, the Ministry of Finance (MoF) is responsible for designing financing strategies to optimize the allocation of government funds and resources.

The MoF does not currently have a strategy in place to meet the financial costs imposed by disasters. A major problem with collecting any substantial amounts for disaster risk financing and insurance (DRFI)—and in general for disaster risk management (DRM) activities—lies in the current budgetary accounting system of Serbia. The Budget System Law does not allow for the accumulation of resources over a multiyear period. Based on the cash accounting principle, all the funds not spent during one year elapse at its end and therefore cannot be rolled over to the next period and accumulated. In addition, the current lack of fiscal space resulting from ongoing fiscal consolidation efforts pursued by the government means it is difficult to set aside considerable amounts of budgetary resources for contingencies.

In addition to sustaining a budget shock from the May 2014 floods, Serbia was caught without an adequate system in place to respond to the overwhelming social and infrastructure needs in a coordinated fashion. In May 2014, immediately after the floods, the government established the Government Office for Reconstruction and Flood Relief as an ad hoc operational and

technical body to conduct all work related to the coordination of aid and financing, reconstruction, and rehabilitation. Two and a half months after being founded, the office became completely operational and began coordinating and implementing 17 sectoral National Recovery Programs passed by the government. The programs were designed to ensure the predictability of financing, as well as to balance overwhelming social needs with infrastructure needs, thereby ensuring proportional allocation of limited resources across sectors. The office had relatively modest budgetary resources and was used primarily to coordinate reconstruction efforts and channel international and domestic grant funds that were placed in a dedicated government account.

In recent years, Serbia has taken important steps toward moving from an emergency response to proactively managing and reducing the risk from disasters. The country is enhancing its legal and institutional DRM framework, focusing on actions to build resilience in the context of the Hyogo Framework for Action 2005–2015 and the Sendai Framework for Disaster Risk Reduction 2015–2030. During the recovery process after the May 2014 floods, the government began to develop a systemic approach toward prevention and disaster risk management. The first step

was to extend the mandate of the Government Office for Reconstruction and Flood Relief to cover prevention in addition to recovery. In December 2014, the government approved establishment of the National Disaster Risk Management Program, a comprehensive program for disaster resilience, intended to be used as an umbrella framework to coordinate, channel funds, and implement activities related to reducing and managing risks in Serbia.

The specific purposes of the program are to build a national disaster risk management system with clear responsibilities and the capacity needed to reduce the existing risks, to avoid the creation of future risks, and to respond more efficiently to disasters. The action plan for implementation of the national DRM program, currently under development, is in full accordance with the Sendai Framework's four priorities for action. Component 5 of the DRM program deals specifically with disaster risk financing and insurance solutions. Activities within this component include technical studies to understand contingency liabilities; capacity building for the Ministry of Finance on disaster risk financing; support for the potential establishment of a fiscal risk unit to analyze administrative, legislative, and operational mechanisms in postdisaster phases; and development of a risk financing strategy that includes financial instruments for sovereign financial protection and further development of risk transfer mechanisms such as insurance.

The Government Office for Reconstruction and Flood Relief was established for one year and extended until the end of 2015. Lessons learned during the 2014 floods led the government to identify some important gaps in the system, such as a need to design and pass a framework

law (a strategic and institutional framework for natural disaster risk management) as soon as possible (Nedeljkovic et al. 2015). Consequently, the office led the preparation of two new pieces of legislation: the Disaster Risk and Crisis Management Law and the Law on Reconstruction Following Natural and Other Hazards, with support from United Nations Development Programme (UNDP) and the World Bank.

The Law on Reconstruction was passed in December 2015.<sup>4</sup> It established a permanent body within the government as the legal successor to the Government Office for Reconstruction and Flood Relief. The mandate of the Public Investment Management Office includes, among other things, all future postdisaster reconstruction activities.

The Law on Disaster Risk and Crisis Management (DRCM) is likely to be adopted in 2016, after the elections scheduled for April 2016. The law envisages establishment of a new national authority, the Department of Risk and Emergency Management, to perform public administration activities in the area of natural and other hazard risk reduction and emergency management (and other activities laid down by the law). With the help of these laws and the DRM action plan, Serbia aims to be one of the first countries in the world with a DRM legislative framework fully aligned with the Sendai Framework for Disaster Risk Reduction.

Finally, apart from the normative and institutional shortcomings, a lack of funding and inadequate allocation of what is available were recognized as an important gap for improved management of this process.

## ENDNOTES

4 Law on Reconstruction Following Natural and Other Hazards, Official Gazette No. 112/15, effective as of December 31, 2015.

# Public Financial Management of Natural Disasters

## CHAPTER

# 4

The ability of the government to rapidly mobilize a budget for an effective response to a disaster largely depends on the financial instruments it puts in place beforehand. A comprehensive, proactive approach to risk financing can help a government become an active risk manager rather than an emergency borrower. This chapter reviews the existing financial arrangements available to the government of Serbia to meet postdisaster expenditures.

International experience has shown that governments ideally combine different instruments to protect against events of different frequency and severity. *Sovereign disaster risk financing* aims to increase the capacity of national and local governments to provide immediate emergency funding as well as long-term funding for reconstruction and development. It requires setting up systems, mechanisms, and procedures for effectively allocating and disbursing the necessary funds in the aftermath of disasters. Once the government has a good understanding of the risk it faces, a financial risk management strategy can be designed and financing mechanisms can be implemented.

Financing mechanisms can be grouped into two main categories:

- *Retention*, in which the government decides to assume and manage disaster losses through its budgetary resources—for

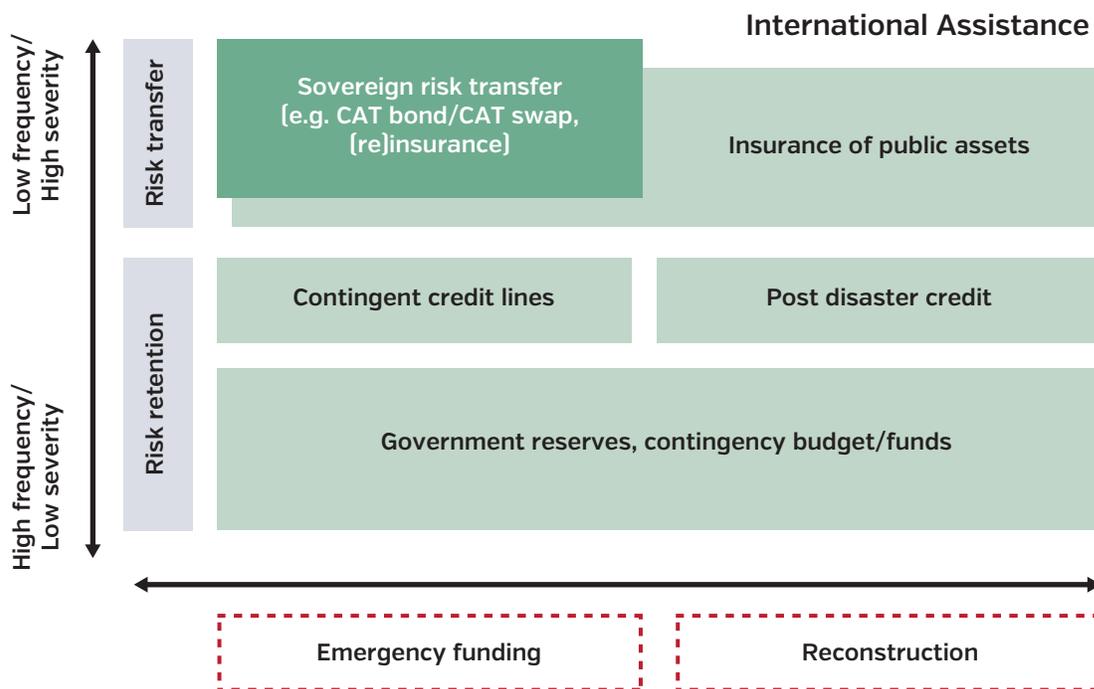
example, through the creation of budgetary reserves or funds or through postdisaster budget reallocations or borrowing.

- *Transfer*, in which the government transfers potential future disaster losses to financial or insurance markets by paying a premium. Traditional insurance, alternative risk transfer products, and contingent financing mechanisms are all available.

Combining different instruments to protect against events of different frequency and severity is known as *risk layering* (figure 4.1). A bottom-up approach is recommended: the government first secures funds for recurring disaster events and then increases its postdisaster financial capacity to finance less frequent but more severe events. Such risk layering ensures that cheaper sources of money are used first, with the most expensive instruments used only in exceptional circumstances. For example, insurance can provide cover against extreme events, but it is not appropriate to protect against low-intensity events that recur regularly. In such a case, the government could consider setting up a dedicated contingency fund to retain this lowest layer of risk.

Serbia currently does not have an explicit strategy or policy in place to systematically manage the financial impact of natural disasters. The government has established contingent budgetary reserves and several

Figure 4.1: Three-Tiered Risk Layering Strategy for Governments



Source: World Bank and GFDRR 2014.

other mechanisms. However, the current disaster funds seem insufficient to cover even smaller recurrent losses, and the government remains even more exposed to more extreme events, relying heavily on ex post mechanisms such as budget reallocations or international donor assistance for response and recovery. Before establishment of the Government Office for Reconstruction and Flood Relief after the May 2014 floods, there was a lack of coordinated information on the overall resources received for postdisaster assistance. Consequently, the only reliable data exist for the floods of May 2014. The Ministry of Finance (MoF) and the government's Committee for Natural Disasters do not maintain accessible historical information on the amount of financing directed at disaster-related uses. Table 4.1 summarizes the resources available to government for disaster response.

## Ex Ante Disaster Risk Financing and Insurance Tools

Data on budget expenditures on disaster responses are difficult to report because the budget appropriations for these purposes are disclosed in several aggregate expenditure items, making it hard to compute precisely the amount of these expenditures.<sup>5</sup> In addition, the data on the structure of these expenditures (by beneficiary, project, and so forth) are not published in the government's standard budgetary document.

### Budget Reserves

*Budget contingencies* together with reserves are the cheapest source of ex ante risk financing and will generally be used to cover

Table 4.1: Amount of Funds Available for Disaster Response, Serbia

Disaster risk	Financing source available	Amount of funds available
<b>High-risk layer</b> (e.g., major floods, major earthquakes)	Donor assistance	Unpredictable and unreliable (e.g., in 2014 the total commitment was €235 million, often in kind)
	Emergency borrowing	Unpredictable (e.g., €227.5 million drawn from World Bank for 2014 floods emergency recovery)
	Insurance of public assets	Unclear but very low
<b>Medium-risk layer</b> (e.g., regional floods, minor earthquakes)	Contingent financing	Not currently available (\$100 million CAT DDO is in early preparation)
<b>Low-risk layer</b> (e.g., localized floods, droughts, landslides)	Budget funds: Permanent Budgetary Reserve	€17,000 (originally budgeted, increased one-off by 2014 supplementary budget to almost €20 million)
	Budget funds: Compensation for Damage Caused by the Natural Disasters (account 484)	€700,000 (originally budgeted, increased one-off by 2014 supplementary budget to approximately €1.5 million)
	Budget reallocation	Unclear (10 percent of each appropriation available immediately; higher if supplementary budget is passed)

Note: These figures are based on discussions with government officials and publicly available information. CAT DDO = Catastrophe Deferred Drawdown Option

minor recurrent losses. A *contingency reserve*, budgeted every year under the MoF (recorded as the Permanent Budgetary Reserve), is used to finance emergency situations. As a result of missing legal provisioning that guarantees a minimum level of contingency reserve, the Permanent Budgetary Reserve in the Serbian budget has more of a symbolic function than a substantive function. Historically, it has been only RSD 2 million (equivalent to €15,000–20,000), which is insufficient to cover even the emergency cost of the majority of disasters. The common practice in Serbia is to pass a supplemental budget to reallocate funds if needed postdisaster. In October 2014, five

months after the major floods devastated 24 Serbian municipalities, the Serbian Parliament adopted a supplementary budget for 2014, and the Permanent Budgetary Reserve was increased in a one-off manner from RSD 2 million (approximately €17,000) to RSD 2.3 billion (close to €20 million), with the aim of financially supporting local governments and public enterprises in the reconstruction phase. The reliance on supplementary budgets leads to delays in the availability of funds (five months in 2014), comes with a high opportunity cost because of the reallocation of already planned expenditures, and is uncertain.

*Compensation for Damage Caused by the Natural Disasters (account 484)*<sup>6</sup> is another type of reserve. Different institutions can have this budget line (Ministry of Agriculture, Ministry of Labor, and Government Office for Reconstruction and Flood Relief), but historically almost all funds were centralized under the Ministry of Finance. In its use, this reserve is quite similar to the Permanent Budgetary Reserve. Before the May 2014 floods, it was at the level of RSD 80 million (almost €700,000), but after the floods (2014 supplementary budget and 2015 budget) it more than doubled, to RSD 200 million (€1.5 million).

The purpose of the contingency budgetary reserve in Serbia, both the Permanent Budgetary Reserve and the Compensation for Damage Caused by the Natural Disasters, is quite restrictive—only to provide a first layer of financial support for postdisaster relief and reconstruction that is relatively small scale. Contingency reserve funds are distributed to the local level based on an assessment of the damage, or to public enterprises based on their financial needs linked to the postdisaster relief or reconstruction. Because there is no legal framework to regulate the financial obligations of the government (that is, contingent liabilities related to natural disasters are implicit), the decision for distribution of funds is made only by the government after the disaster, based on a recommendation of the Government Committee for Natural Disasters or the Government Office for Reconstruction and Flood Relief.

This financial shield is adequate only in years in which only local damage is caused by small-scale hazards (minor floods, droughts, wildfires, or earthquakes). But even in those cases, municipalities are often not fully compensated for the cost of damage. Final assessment of transfers depends on the

available funds and extent of the damage, as there is no legal definition of the central government's obligations arising from contingent liabilities.

Local self-governments most often do not designate any contingency reserve for natural disasters because there are no legal provisions requiring them to do so. Possessing a high degree of flexibility and a relatively simple procedure to change their budget during the year (typical municipalities have three to four supplementary budgets during the year), most of them rely on postdisaster budget reallocations. The historical practice (not established by law) of financial support from central government's contingency funds further discourages local self-governments from having contingency reserves that would be financially adequate for a quick response to a disaster.

### Contingent Credit

For the middle-risk layer, the budget reserves of the government would not be sufficient. So far, Serbia does not have any contingent credit arrangements linked to natural disasters. The World Bank has developed a Development Policy Loan (DPL) with a Catastrophe Deferred Drawdown Option (CAT DDO), and the government of Serbia recently expressed an interest in its implementation, as was stipulated in the recent Country Partnership Framework. The CAT DDO offers the government access to immediate liquidity through an active but undisbursed line of credit of up to the smaller of 0.25% of GDP or \$500 million.

### Insurance

Disaster risk insurance is available, but it is underutilized in Serbia; the insurance market in general has very low penetration, leaving

the government with potentially large fiscal exposures. Implicitly, households have high expectations that the government will pay for damages. These expectations are a very strong disincentive for strengthening the presence of insurance, regardless of the fact that insurance could reduce the fiscal impact of disasters by transferring a portion of the financial burden to insurers.

Property *catastrophe risk insurance* aims to protect homeowners and small and medium enterprises against loss arising from property damage. It is with this objective in mind that in 2012 the governments of Serbia, Albania, and the former Yugoslav Republic of Macedonia established Europa Re, a Swiss-based catastrophe reinsurance company focusing on natural disaster risks in these three countries. Supported through a World Bank project (Southeast Europe and the Caucasus [SEEC] Catastrophe Risk Insurance Facility [CRIF]), Europa Re was created to help address the very low levels of catastrophe and weather risk insurance penetration in southeastern Europe. Europa Re offers reinsurance support to local insurance companies and enables them to provide homeowners, farmers, enterprises, and government organizations with affordable insurance coverage against natural risks. It began operations in Serbia only in late 2014 when cooperation with the first Serbian insurance company was signed and the first policy against earthquake and flood sold. Regardless of the recent start, so far insurance companies, businesses, and households have not shown a great deal of interest in this type of insurance, and it cannot be expected that market penetration will significantly increase in the near future. An annual insurance premium of €30–60 remains unaffordable for many of the poorest households that have the highest exposure to natural disaster risks. Also, many farmers and small businesses that face persistent liquidity issues do not insure

their property, choosing instead to rely on the implicit commitment of the government to step in and (at least partially) cover the damage.

Serbian law does not require mandatory *insurance of government assets*. In practice, insurance is decentralized, and every institution chooses if and what type of insurance coverage to obtain. Most commonly, government insures workers, property, vehicles, and cash. Even when institutions buy property insurance, it often does not cover natural disaster risks (for example, it would cover fire but not earthquake and floods). Local self-governments are responsible for the maintenance costs of schools and health institutions, including property insurance. However, most of them do not purchase any insurance, citing lack of financial resources.

The National Bank of Serbia has reported that, in response to the May 2014 floods, until December 31, 2014, only €16.9 million was paid out by insurance companies, and the total post-flood insurance claims amounted to only €38.8 million (less than 2.5 percent of total damages and losses and less than 2.9 percent of recovery needs).<sup>7</sup>

### Catastrophe (CAT) Bonds

CAT bonds are a relatively new financial market product. They are risk-linked securities that transfer a specified set of disaster risks from an issuer to investors. There is no track record of CAT bond issuance in the region. Government and (re)insurance companies showed no interest in this instrument because the Serbian financial market is still underdeveloped, especially the corporate bond market, and the penetration of natural disaster insurance is quite low. Even though this product is increasingly used by Europe's largest reinsurance companies, it remains a

relatively expensive and advanced risk transfer mechanism for developing countries.

## Ex Post Instruments

In the near absence of reserve funds, Serbia's Ministry of Finance is predominantly using ex post instruments such as budget reallocation, international aid, and debt financing, all of which require time to become available.

### Donations

As a candidate country for membership in the European Union (EU) and a developing country, Serbia will likely continue to look to donor support in the event of a major catastrophe, especially from the EU and its Solidarity Fund. However, donor assistance usually does not support a government response to less catastrophic but frequently recurring events. Moreover, donor financing is highly unpredictable and does not allow the government to plan for a fast disaster response. In addition, disaster assistance may decline in the future as the country advances along its EU accession path and becomes more economically prosperous.

Following the May 2014 floods, coordination between government institutions and donors was successfully implemented by the Government Office for Reconstruction and Flood Relief. A total of €234.6 million in donations was raised for disaster relief and reconstruction. The largest donor was the European Union (through its Solidarity Fund and Instrument for Pre-Accession Assistance).

### Emergency Borrowing

In October 2014, Serbia and the World Bank signed a loan agreement for €227.5 million (\$300 million) for the Floods Emergency Recovery Project. The key areas of the project were addressing the recovery of the power and

agriculture sectors, repairing damaged flood control infrastructure, and helping the country better respond to natural disasters in the future. Specifically, the loan helped to close the financing gap for energy purchases (following the damage to the coal mines) and ensured a stable power supply during the heating season. It also helped to finance the critical power sector infrastructure and to finance investments in energy efficiency. In the agriculture sector, the project allowed budget support for direct subsidies to the farmers in flood-affected areas. This provided farmers with the income security they needed to invest in their farms. The project was also intended to help improve resilience to disasters by financing repairs to critical flood prevention infrastructure.

### Budget Reallocation

This postdisaster instrument is used by most countries in cases in which a natural disaster causes significant damage that must be covered by the government. Serbia's legal framework provides some flexibility in terms of quick budget reallocation. All institutions can transfer up to 10 percent of any budget appropriation to any other budget line.<sup>8</sup> This change requires only the approval of the Ministry of Finance, and it can be implemented in a few days. However, larger-scale reallocation of funds requires a supplementary budget and regular parliamentary approval. This takes more time and is likely to be too late to provide the immediate resources needed during and just after a disaster.

After the May 2014 floods, more than five months passed before approval of a supplementary budget that envisioned additional funds for postdisaster recovery and reconstruction. The government managed to cover a portion of the funding gap using international and domestic grants and borrowing. In the future, it would be

beneficial if the MoF, together with the other ministries, would play a more active role in prompt budget reallocation, especially in the postdisaster relief phase. Timely availability of funds in the aftermath of a natural disaster can prevent more extensive damage.

### Additional Taxation

Serbia did not change its tax policy after the floods in 2014, despite the fact that many types of additional *solidarity* taxes were introduced in other countries (such as Republika Srpska within Bosnia and Hercegovina in 2014) to generate funds for postdisaster expenses.

Any introduction of new taxes, especially in a period in which large parts of the population are directly or indirectly affected by a disaster, is not popular. Even though it can be a relatively easy way for the government to collect the necessary funds, it is not the most effective one. The current taxation system in Serbia is already quite complex, and the tax administration has serious challenges in implementing and enforcing the existing laws. For that reason, additional taxation, even in the case of disasters, should be imposed only when it is absolutely necessary.

## Case Study: May 2014 Floods

The government of Serbia launched a significant response and reconstruction operation following the devastating May 2014 floods, with extraordinary support from the international community.

Total damages and losses amounted to €1.7 billion, and the postdisaster needs were valued at €1.346 billion. Different sources were used to finance the emergency response,

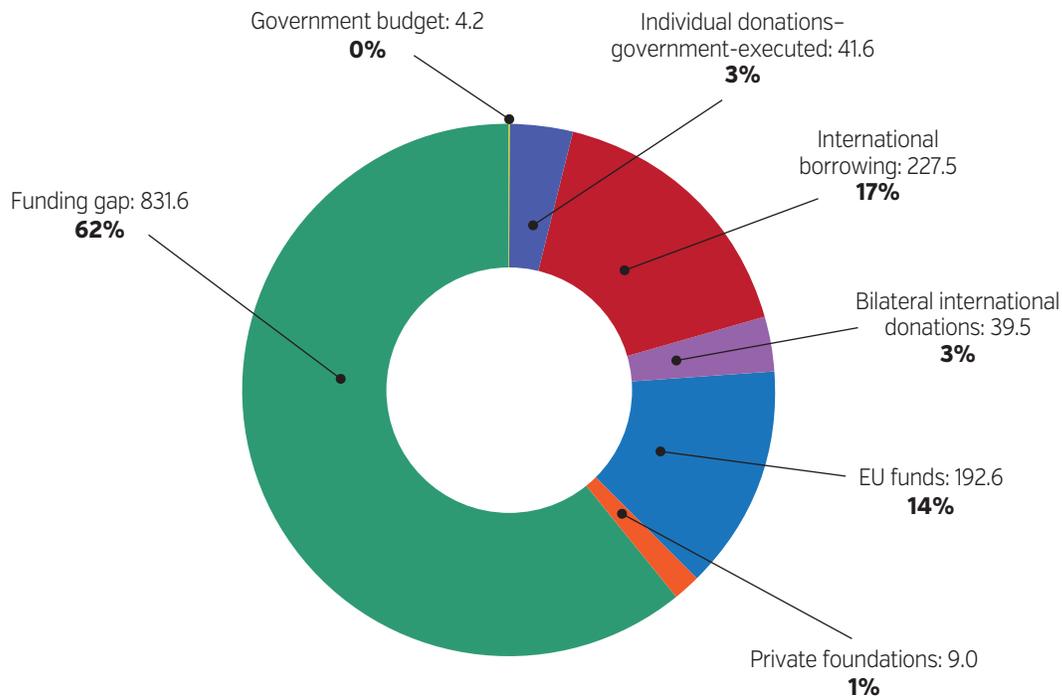
reconstruction, and recovery: a combination of government funds, private sector resources (including personal and enterprise contributions, family remittances from abroad, and limited insurance proceeds), as well as cash grants and donations from the international community and fresh and rescheduled loans from international financial institutions. The total funding raised to implement recovery and reconstruction activities over the period May 2014–October 2015 was €514.4 million.

Until the end of 2014, only €16.9 million was paid out by insurance companies, whereas the total postflood insurance claims amounted to only €38.8 million (less than 2.5 percent of the total damages and losses and less than 2.9 percent of the recovery needs), as reported by the National Bank of Serbia.<sup>9</sup>

During the months after the floods, predominantly through the use of donor aid and loans, Serbia invested considerable resources in the reconstruction of transport infrastructure, public buildings, and power production and distribution facilities, as well as in the reconstruction and strengthening of flood protection infrastructure. The Government Office for Reconstruction and Flood Relief played a central role in coordinating international aid, which was an important source of the funds provided to Serbia (figure 4.2). Government aid was also provided to nearly 21,000 families for the reconstruction of their damaged or destroyed homes, as well as to thousands of small and medium-size businesses and farmers.

Figure 4.3 shows the total needs for reconstruction and recovery and the financing secured from different sources for the effort. It also shows that, even with the tremendous response from the donor community, an overwhelming need for further funding is still present. As of October 2015, the funding gap for

**Figure 4.2: Recovery and Reconstruction Resource Needs, Funding Sources, and Gap: Serbia, Post-May 2014 (€, millions)**



Source: Government Office for Reconstruction and Flood Relief.

recovery and reconstruction efforts amounted to over €830 million.

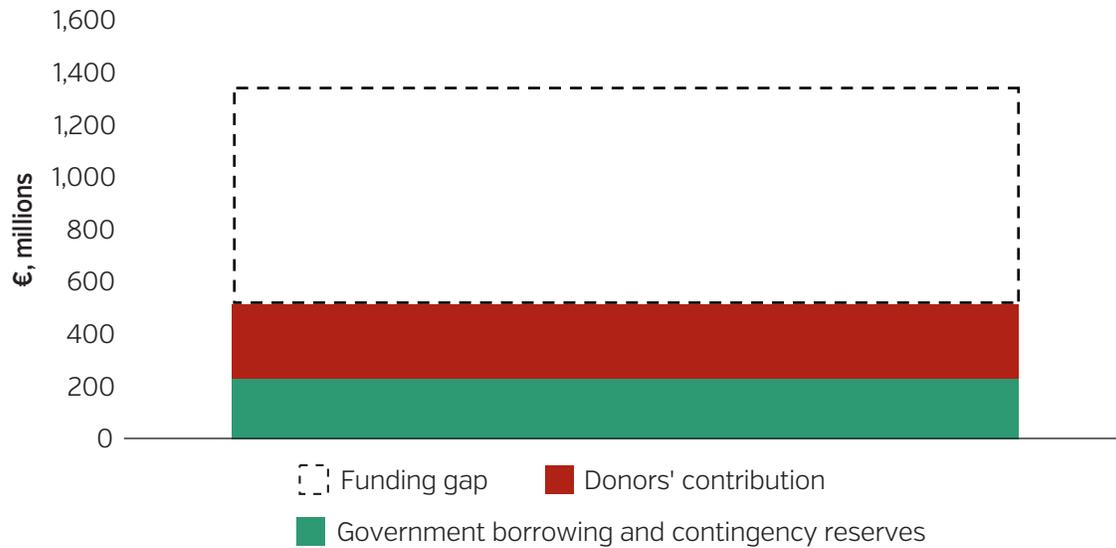
## Summary and Fiscal Resources Gap

In summary, this review of the disaster risk financing and insurance (DRFI) instruments available in Serbia indicates that the number of instruments available is limited, and that the government currently relies largely on ex post instruments such as budget reallocation, emergency borrowing, and donor financing. The current financing available for disaster response is insufficient even to cover recurrent losses, representing a significant resource gap.

The government remains exposed to more extreme events, relying heavily on international donor assistance for relief, recovery, and reconstruction. For post-May 2014 flood activities, only a fraction of financing came from public funds; the majority were from donations and emergency loans, but a significant funding gap remained, as shown in figure 4.2.

Public as well as private assets remain largely uninsured, and there is no strategy or policy framework in place to actively manage the financial impact of natural disasters. It is important that all levels of government understand the current financing requirements and take the appropriate fiscal preparedness measures.

**Figure 4.3: Recovery and Reconstruction Sources of Financing: Serbia, Post-May 2014**  
[€, millions]



Source: Government Office for Reconstruction and Flood Relief.

**ENDNOTES**

- 5 Information in this chapter on disaster funds was obtained from meetings held with a number of government departments and a desk review of existing reports.
- 6 In 2014 all of the social assistance provided to the flood-affected households in Serbia by the Government Office for Reconstruction and Flood Relief was budgeted as Compensation for Damage Caused by the Natural Disasters. It is important to note that the source of those specific funds in 2014 was individual donations provided by domestic and foreign entities and paid into a special disaster relief government account rather than budget contingency funds.
- 7 Public Investment Management Office, Government of Serbia.
- 8 Until 2015, it was only 5 percent.
- 9 Figure cited in letter from the National Bank of Serbia to the Public Investment Management Office [Former Floods office].

# Options for Consideration

## CHAPTER

# 5

A workshop to discuss the findings of this analysis and consult on the options for next steps was held in Belgrade, Serbia, March 29–30, 2016. The workshop was attended by 40 participants from the government of Serbia, including the Ministry of Finance, Public Investment Management Office, Ministry of Interior, Fiscal Council, and international partners, including the Swiss State Secretariat for Economic Affairs (SECO), the International Monetary Fund, and the United Nations Development Programme. Participants arrived at a list of policy priorities to strengthen financial resilience to inform a national financial protection strategy.

The workshop concluded that a comprehensive disasters risk financing and insurance (DRFI) strategy should be developed as a key step toward advancing proactive financial risk management from natural disasters. Such a strategy with priorities could be developed by the Ministry of Finance in close coordination with the Public Investment Management Office and other key stakeholders. This strategy could clarify institutional coordination for strengthening financial resilience and identify options for the provision of sustainable access to immediate liquidity and adequate resources for longer-term reconstruction and could identify which instruments could be integrated into the risk financing strategy.

Participants agreed on the following recommendations that the government may wish to consider:

**Recommendation 1: Strengthen financial planning for disasters at all levels.** All local self-governments could consider preparing action plans for disaster risk finance, based on the national DRFI strategy.

### Budget mobilization

**Recommendation 2: Reconsider both the size and the use of contingency funds.** The Ministry of Finance could re-evaluate the size of its contingency budgets and reserves for a natural disaster response, with the ultimate goal of being able to meet annual expected losses from disasters through these mechanisms, and could look into establishing clear rules and procedures for accessing these resources for response, recovery, and reconstruction.

**Recommendation 3: Utilize contingent credit to access rapid liquidity following disaster shocks.** With the adoption of the National Disaster Risk Management Program in December 2014, Serbia became eligible for a contingency credit from the World Bank (CAT DDO). For Serbia, this would mean that up to \$100 million would be available immediately after a disaster to serve as bridge financing until other domestic funds can be reallocated or international aid is received.

**Recommendation 4: Explore innovative risk transfer to provide municipal governments with immediate liquidity.** The government could explore innovative risk transfer

mechanisms for strengthening the financial resilience of local self-governments by providing access to critical funds following disasters.

### Budget execution

**Recommendation 5:** Create clear rules and guidelines for the financing of disaster response through budgetary means. The government could consider developing clear guidelines for postdisaster budget reallocation and transparency of the budgetary expenditures on disasters, and could explore options for taking into account emergency funding in fiscal rules (escape clauses).

**Recommendation 6:** Explore the establishment of a national disaster fund. The government may wish to explore the possibility of establishing a national disaster fund in order to channel funds for the full disaster risk management cycle through one budgetary tool. The fund resources could accrue over time, subject to budgetary system constraints and estimation of the opportunity costs and benefits of such an accrual. Such a fund could also finance prevention measures to reduce damage from future disasters.

### Reducing the government's contingent liability

**Recommendation 7:** Strengthen insurance penetration. The government may wish to

consider promoting a culture of insurance and help develop private catastrophe risk insurance markets. This could include public awareness campaigns and the compulsory insurance for all subsidies from the budget (agricultural, mortgage, small and medium enterprise loans). The government could also consider developing a program for insuring public assets (such as public buildings and bridges) and critical infrastructure (such as power plants). This could also serve as an incentive to invest in better risk assessment and risk reduction activities (such as retrofitting) to reduce losses and lower the cost of insurance.

To promote *individual insurance against natural disasters*, the government might consider giving tax-exemption status to insurance against floods and earthquake, as it does for private pension insurance and private health insurance.<sup>10</sup> In this way, citizens may be motivated to purchase insurance through their employers, and corporations could be used as vehicles for promoting and selling insurance policies. The government would not lose significant fiscal income through the tax exemption in view of the relatively low prices of such insurance premiums, as well as the extremely limited current penetration of such products.

### ENDNOTES

<sup>10</sup> Since February 1, 2014, the tax relief on voluntary pension fund contributions has been increased from RSD 5,214 to RSD 5,329 (approximately €50). Employers' monthly contributions to voluntary pension funds up to RSD 5,329 per employee are exempt from the personal income tax and compulsory social contributions. The same amount of contribution by direct debit from salary is also tax-exempt. Since May 2013, tax relief for voluntary health insurance premiums has been included in the total income tax relief.

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