

SECTOR ASSESSMENT (SUMMARY): DISASTER RISK MANAGEMENT

Sector Road Map

A. Sector Performance, Problems, and Opportunities

1. Tajikistan's economy grew substantially between 1997 and 2015, adding an average annual 7.2% to its real gross domestic product (GDP). The incidence of poverty declined from 96% to 29% during this period, despite the country's narrow economic base and vulnerability to external shocks. Since more than 60% of the population depends solely on agriculture as a source of livelihoods and 70% of the inhabitants live in zones of high seismic risk, natural hazards such as extreme weather events present a threat to the government's poverty reduction efforts. From 1992 to 2016, disasters in Tajikistan caused economic losses of more than \$1.8 billion and affected almost 7 million people. The country's overall risk profile is rated medium (ranked 61st out of 191 countries) in the Inform 2016 Risk Index. Out of the 180 countries in Notre Dame Global Adaptation Initiative, it is the 79th least vulnerable country and the 51st least ready country.¹

2. Tajikistan faces significant exposure to earthquakes and floods. Floods affect an average annual population of about 100,000 and cause an average annual loss to GDP of about \$100 million. Between 2010 and 2015, the country recorded 145 earthquakes, which affected an average annual population of about 400,000 and caused an annual average loss to GDP of about \$300 million. The probable maximum loss to the economy from earthquakes is estimated to range between \$542 million (100-year return) to \$2 billion (1,500-year return).² Critical assets such as transport infrastructure and hydropower plants are particularly threatened. A recent study estimated that average annual losses³ could reach 1.4% of GDP in the case of floods and 5% in the case of earthquakes.⁴

3. About 36% of Tajikistan's territory is under threat from landslides, and more than 50,000 potential landslide sites have been identified. Of these, 1,200 put human settlements, roads, irrigation, and other facilities at high risk and pose a threat to 728,000 people, or 11% of the total population. In addition to landslides, Tajikistan also experiences a significant number of mudflows and avalanches. A further decrease of forest covers, currently only 2.95% of the total territory, may result in accelerated landslides, mudflows, and desertification, all of which will limit the sustainability of agriculture and threaten human settlements as well as economic and social infrastructure.⁵

4. On climate change vulnerability, Tajikistan is ranked 22nd globally and highest among Central Asian states.⁶ This is exacerbated by a lack of adaptive capacity. Climate scenarios indicate that Tajikistan will experience a temperature increase of up to 2°C by 2050, resulting in increased demand for crop water. It will also lead to accelerated glacial retreat, with glaciers

¹ Notre Dame Global Adaptation Initiative Country Index (ND-GAIN Country Index).

<http://index.gain.org/country/tajikistan>

² United Nations Office for Disaster Risk Reduction. 2015. *Global Assessment Report Tajikistan Risk Profile*. Geneva, Switzerland. https://www.preventionweb.net/english/hyogo/gar/2015/en/profiles/GAR_Profile_TJK.pdf

³ Average annual loss is the expected loss per annum associated with the occurrence of future perils assuming a very long observation time frame. It considers the damage caused on the exposed elements by small, moderate, and extreme events and results in a useful and robust metric for risk ranking and comparisons.

⁴ World Bank. 2017. *Disaster risk profiles – Tajikistan (English)*. Washington, DC.

<http://documents.worldbank.org/curated/en/372481493891899347/Disaster-risk-profiles-Tajikistan>

⁵ United Nations. 2017. *Environmental Performance Reviews: Tajikistan Third Review*. Geneva, Switzerland.

⁶ German Watch. 2017. *Global Climate Risk Index 2017*. Bonn.

expected to decline by 50% between 2010 and 2050.⁷ According to assessments, the main water regimes may change drastically while water reserves may decrease by 10%–15% because of climate change.⁸ Peak seasonal runoff is expected to shift from early spring to late winter. These changes will have significant consequences for food security and rural livelihoods because they alter the volume and seasonality of river flows. Floods, droughts, and mudflows are expected to increase in both frequency and severity as a result of climate change.

5. In addition to its geological and topographical features, Tajikistan faces the consequences of environmental degradation, an aging infrastructure, weak risk governance, and the economic and social characteristics of a predominately rural population. These drivers of disaster risk also increase the probability of high-frequency, low-severity events and erode development gains. The nature of these events and Tajikistan's limited capacity to capture the associated damage and loss are likely to result in an underestimation of disaster impacts.

6. The collection and availability of disaster risk information, including hydro-meteorological data, is limited. Only 16 river gages, 54 meteorological, and 16 hydrological stations are automated. Tajikistan is unable to routinely monitor glaciers or snowfall. The data that is captured is not systematically analyzed to be factored into planning and investment decisions. Regional hazard monitoring is in place, as are transboundary protocols for information sharing.

7. Although the Committee of Emergency Situations and Civil Defense (CESCD) is mandated to coordinate pre-disaster risk reduction and post-disaster response, its capacity is constrained. Given the frequency of disasters, the CESCD directs its limited financial and human resources largely at strengthening its response capacity, such as search and rescue, and incident management. The approval of the 2017 CESCD regulations and the imminent adoption of the Disaster Risk Management Strategy 2018–2030 (expected by year-end) renew the committee's mandate and institutional structure, and give the government a chance to integrate preventive risk reduction in the CESCD and across key sectors.

8. Government agencies have come to recognize the need to explicitly consider disaster risk in their sector strategies and plans. The Ministry of Education's National Strategy for Development of Education 2020 includes disaster risk reduction measures. The Ministry of Energy and Water Resources will account for water-related risks in its forthcoming National Water Strategy 2030, as will the Ministry of Transport with its Strategy 2025. But the absence of reliable data and a lack of staff capacity still make it hard to take risk-informed decisions. While the Ministry of Agriculture captures losses caused by natural hazards, it does not have the capacity to analyze data to support evidence-based policy formulation and budgeting. Similarly, the Ministry of Transport does not maintain an asset management system, nor does the Agency for Land Reclamation and Irrigation utilize data to support flood preparedness.

9. The State Agency for Hydrometeorology of the Committee on Environmental Protection is receiving financial support from government and development partners to modernize its services and tackle institutional weaknesses. While these investments are at an early stage, cooperation between the agency and the CESCD, and with other ministries and institutions, is already well established and provides a solid foundation.

⁷ Asian Development Bank (ADB). 2014. *Climate Change and Sustainable Water Management in Central Asia*. Manila.

⁸ United Nations. 2016. *United Nations Development Assistance Framework for Tajikistan 2016–2020*. Dushanbe, Tajikistan.

10. The identification, assessment, and management of disaster risk is most effective when sectors own the risks faced, and within a coordinated framework. Currently, line ministries and other responsible state entities place little emphasis on understanding, accounting for, or managing risk within their sectors. This is attributed to a lack of sector-specific data and knowledge, limited information sharing, and a weak governance regime.

B. Government's Sector Strategy

11. The government recognizes the necessity to shift its focus from managing disasters to reducing disaster risk. Since the adoption of the Hyogo Framework for Action in 2005, Tajikistan has initiated significant reforms related to disaster risk management (DRM). Disaster risk is identified in the National Development Strategy 2030 as a main challenge to Tajikistan's development aspirations. The government has set out a people-centered preventive approach that recognizes governance and capacity constraints.⁹

12. The National Disaster Risk Management Strategy 2010–2015, and the draft strategy 2018–2030, explicitly seek to integrate disaster risk reduction (DRR) into all development activities and to improve disaster preparedness and response. Strategy 2010–2015 has five inter-related objectives: (i) improve the legal and institutional basis for efficient DRM; (ii) comprehensively assess hazards, risk, and vulnerability to natural hazards; (iii) integrate DRR into development policy, programs, and projects; (iv) enhance disaster preparedness and response capacities; and (v) build understanding of disaster risk and improve public awareness.

13. Guided by the strategy, Tajikistan has made some progress toward its implementation since 2010. The 2014 Resolution of the Government No. 833 on establishing responsibilities under the uniform state system for emergency prevention and response sought to harmonize sector-specific disaster response initiatives. This was followed by revised regulations for the CESC. Efforts to enhance disaster response were also made, largely with development partner support through the provision of equipment and first responder training. The government also established a national platform for DRR in 2016 to enhance coordination in this area. Less progress was made in integrating DRR into development policies and programs. That said, many ministries and authorities, while noting the absence of DRR measures in their existing strategies, are now factoring in disaster risk more systematically into their projects. But apart from the Ministry of Education, they have made little progress in comprehensively assessing hazards, risks, and vulnerability to natural hazards.

14. As outlined in the draft national DRM strategy 2018–2030, the government commits to reducing existing and preventing new disaster risk by building national capacity for DRM in line with the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals. The strategy sets four priorities: (i) improve understanding of disaster risk; (ii) enhance the organizational and legal frameworks for DRM; (iii) increase investment in DRR to strengthen response capacity; and (iv) strengthen preparedness for disasters by ensuring an effective response and implement the “build back better” principle in rehabilitation and reconstruction activities.

15. While the government has had a national DRM strategy since 2010, it has not been able to fully implement it because of inadequate governance, and financial and capacity constraints. The institutional reforms within the CESC were a necessary first step, but efforts to achieve a better understanding of disaster risk in all its dimensions have been insufficient. This

⁹ Government of Tajikistan. 2016. *National Development Strategy 2030*. Dushanbe: Government of Tajikistan

resulted in a lack of public investment in disaster risk prevention and reduction measures. As mandates within the sector have evolved, the CESC now has a more prominent role in prevention as well. However, this role is not clearly articulated, nor is its relationship with other ministries and agencies in that context. Tajikistan needs to solve these deficiencies and develop a road map to fully implement the 2018–2030 DRM strategy if it wants to attain its goal of comprehensive risk reduction and prevention.

C. ADB's Sector Experience and Assistance Program

16. The Asian Development Bank (ADB) has supported eight stand-alone DRM projects and two emergency loan projects in Tajikistan since 1999, totaling more than \$48 million. Most were geared to improving flood management. Under the Building Climate Resilience in the Pyanj River Basin project approved in July 2013, ADB is providing \$21.55 million to increase the resilience of vulnerable communities to climate-induced disasters through flood protection, climate-proofing of infrastructure, and promotion of microfinance services. The project will reduce adverse effects of climate variability and climate change in 59 villages and 19 *jamoats*¹⁰ in the Pyanj River Basin. ADB, with additional financing from the Green Climate Fund approved in February 2018, will also help build the capacities of the State Agency for Hydrometeorology for producing timely and accurate forecasts of climate-related extreme weather events.

17. In its country assistance program evaluation for Tajikistan, the Independent Evaluation Department recommended that ADB step up the integration of climate change resilience in DRM activities in Tajikistan's development agenda, ensure consistency and synergy across sectors and organizations, and support capacity building in and dissemination of climate change science.¹¹ In response, ADB's subsequent country partnership strategy included resilience building in its overall strategic objective, targeting especially urban development as well as the agriculture, natural resources, and rural development sector.¹²

¹⁰ *Jamoat* is the third-level administrative division in Tajikistan, like communes or municipalities.

¹¹ Independent Evaluation Department. 2014. *Country Assistance Program Evaluation: Tajikistan*. Manila: ADB.

¹² Asian Development Bank. 2016. *Country Partnership Strategy: Tajikistan, 2016–2020*. Manila.