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DISASTER RISK FINANCE

COUNTRY NOTE:

UZBEKISTAN

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ABBREVIATIONS AND ACRONYMS

AEP	Annual Exceedance Probability
CAREC	Central Asia Regional Economic Cooperation
EM-DAT	International Disaster Database
FLEXA	Fire, Lightning, Explosion, and Aircraft Impact
GDP	Gross Domestic Product
GLOF	Glacial Lake Outburst Flood
GoU	Government of Uzbekistan
GSCHS	Government System of Prevention of and Activities in Emergency Situations
GWP	Gross Written Premium
MoES	Ministry of Emergency Situations
MoF	Ministry of Finance
OSCE	Organization for Security and Co-operation in Europe
PEFA	Public Expenditure and Financial Accountability
UNDP	United Nations Development Program
UNISDR	United Nations International Strategy for Disaster Reduction
USAID	United States Agency for International Development

CURRENCY EQUIVALENTS

Exchange Rate Effective as of January 1, 2018

(throughout the note relevant years exchange rates from January 1 each year are used)

In 2018, US\$1 = Uzbek soms 8,120.07

EXECUTIVE SUMMARY

This disaster risk finance country note was prepared within the Uzbekistan Strengthening Disaster Resilience technical assistance. It aims at: (a) raising awareness about fiscal impacts of disasters in Uzbekistan; (b) providing an overview of the way the Government of Uzbekistan (GoU) currently finances disaster losses; and, (c) identifying potential measures to strengthen financial protection against disasters. The note is based on publicly available information and data.

Recently, the GoU has launched ambitious public policy and economic reforms. Addressing disaster risks and improving effectiveness of post-disaster financing within the ongoing reforms would be both timely and important for the population of Uzbekistan.

The country is prone to many natural disasters, such as earthquakes, floods, mudflows, drought, landslide and others. These disasters have the potential for causing significant economic losses. For instance, the Tashkent earthquake of 1966 caused damages of about US\$300 million. If adjusted for inflation in dollar terms, in 2008 terms, this loss would be equivalent to US\$2 billion damages¹. An equivalent of this earthquake today, would likely cause significantly larger impact due to the considerable increase in the value of assets at risk in the city. Further, it was estimated that the expected annual economic loss from natural disasters in Uzbekistan is as large as US\$92 million (in absolute terms, it is the highest in Central Asia).

Further, it is likely that the GoU will face rising costs of responding to disasters due to climate change, growth of the population and economic activities in the areas exposed to natural disasters. Inability to timely recover after natural disasters could increase economic impact and impact on the people living in the country. At the same time, disasters and their economic and fiscal impacts strain public resources and can endanger development efforts of the GoU.

The GoU has a number of regulations that govern post-disaster financing. They include provision that the first line of defense against natural disasters lies with the local level, while resources of a national reserve fund of the Cabinet of Ministers are drawn only when the local resources are exhausted. However, no comprehensive strategy of post-disaster financing exists that considers the following: (a) different needs after disasters depending on the severity of natural disasters for emergency response, rehabilitation/recovery, and reconstruction; (b) how resources reach intended beneficiaries; (c) and, post-disaster expenditure rules. It is also unclear how resources will be attracted when the reserve fund of the Cabinet of Ministers is exhausted. In this case, the GoU would likely resort to budget reallocation and borrowing. The absence of a clear strategy for proactive financial management of natural disasters can lead to an ineffective use of existing resources and might diverted funds from capital investments, derailing development.

While substantial resources are available to the GoU in several reserve funds (about US\$79 million altogether in 2018), most are not earmarked for disasters, while some part (US\$15 million in 2018) is reserved for impact of natural disasters on roads. Further, a number of gaps have been identified including on disaster risks and impact information, along with information on post-disaster-related expenditure. Several agencies are responsible for collecting information on disaster impact, yet, it is unclear if such information is aggregated and analyzed further to be used for the financial planning by the GoU. This makes it difficult to properly understand what resources were and will be required for different severity and frequency of natural disasters.

¹ World Bank, UNISDR, CAREC, Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options, 2009, https://www.unisdr.org/files/11742_MitigatingtheAdverseFinancialEffect.pdf

Similarly, fiscal risks caused by natural disasters seem to be unaccounted for by the GoU in the budget planning, therefore, past impacts of disasters on budget are difficult to accurately assess.

Gaps have been also identified in regard to the existing disaster insurance. Uzbekistan currently provides a possibility of purchasing property disaster insurance that covers such perils as fire, lightning, explosion (usually referred to as FLEXA insurance that includes also aircraft impact) together with catastrophic perils (such as earthquake, flood, landslide, and so on) and impact of nuclear energy. Such bundling usually leads to underpricing that can result in an inability of the insurers to purchase adequate reinsurance, and therefore their potential insolvency. In case of growing portfolio of disaster insurance policies, insolvency of insurers could lead to significant implicit liabilities, where the GoU would be morally required to support the insurance companies if they exhaust their resources after a major catastrophe. However, AXCO² reports that uptake of the property disaster insurance is low. Agriculture insurance is also available, but the level of its uptake is unclear. Overall insurance consumption per capita is nascent but growing, and stood at US\$7.14 per capita in 2017 (with an average for emerging markets of US\$135 in 2015). Therefore, at this point and based on available information disaster insurance is unlikely to provide substantial support to financial management of natural disasters in Uzbekistan. At the same time, the GoU recognizes the important role of disaster insurance – insuring the population living in risky areas is provided by several decrees and a law; and, disaster insurance is among the priorities of insurance market development.

Therefore, the GoU could consider the following major steps to strengthen post-disaster financing in Uzbekistan:

- (a) Improving collection of information related to disasters and accounting for fiscal risks,** including on probabilistic risks for major disasters, disaster impact, post-disaster expenditure; and, accounting for fiscal risks in the budget planning.
- (b) Developing a financial protection strategy against natural disasters,** which considers that different resources are needed in different time (during response, rehabilitation/recovery and reconstruction) and according to different severity of natural disasters; considering contingent credit and risk transfer mechanisms as part of the overall strategy of post-disaster financing.
- (c) Improving disaster insurance; better understanding disaster insurance market in the country is an important first step.**
- (d) Improving effectiveness and targeting of the resources available.**

² AXCO Insurance Information Services Ltd.

COUNTRY PROFILE

INTRODUCTION

Uzbekistan is a lower middle income country. In Central Asia, it is the most populous country with almost 32.5 million inhabitants as of 2017. The same year, poverty at national poverty line was estimated at 12.4 percent of the population decreasing slightly from 12.5 percent in 2016. The unemployment rate instead has increased to 5.8 percent in 2017 from 5.2 percent in 2016.³ Little over half of the Uzbek population lives in urban areas.

In 2017, the Government of Uzbekistan (GoU) launched an ambitious program of market-oriented reforms that were unprecedented in the country's modern history. Liberalization of the exchange rate led the official rate to depreciate by 52 percent as it converged with the curb rate.⁴ Budget deficit for the first half of 2018 augmented to estimated 0.5 percent of GDP. Annual consumer price inflation has grown to an estimated 19 percent.⁵ In 2017, gross domestic product (GDP) of Uzbekistan was US\$49 billion (decreasing from US\$67 billion in 2016). In terms of the GDP composition, industry was contributing 30.1 percent (includes oil and natural gas, metals, machinery and equipment, textiles and chemical products) and agriculture still has an important place contributing 17 percent to GDP (dominated by cotton production⁶). GDP per capita in Uzbekistan was estimated at US\$1,504 as of 2017. To compare with other countries in Central Asia, GDP per capita was US\$8,837 in Kazakhstan, US\$7,355 in Turkmenistan, US\$1,219 in the Kyrgyz Republic and US\$801 in Tajikistan.

Despite the above, according to the World Bank, economy of Uzbekistan continues to demonstrate stable growth. Annual GDP growth is expected to remain steady at about 5 percent in 2018–2019 and 5.5 percent in 2020 as the business climate improves and private investment growth accelerates. The recently developed Uzbekistan's Development Strategy for 2017–2021 aims to transform the country. Among the priorities, it targets: strengthening the role of the parliament (uzb. *Oliy Majlis*), reforming governance and public management systems, ensuring independence of judiciary authorities, protecting rights and freedoms of citizens, strengthening macroeconomic stability, improving competitiveness of the economy, modernization of agriculture, reducing the presence of state in the economy, ensuring integrated and balanced socio-economic development of local territories, job creation, social security, improving living conditions of the population, and so on.⁷

DISASTER RISKS IN UZBEKISTAN

Disasters in Uzbekistan can cause significant impact to the country's stability and development and people's livelihoods. Uzbekistan is prone to many natural disasters, including earthquakes, floods, mudflows, landslides, and droughts, among others.

Earthquakes in Uzbekistan are among the major threats. Seismic risks are concentrated in the northeast Tashkent region and the Bukhara region in the southwest of the country. About 14.6 percent of the Uzbek

³ World Bank Country Data: Uzbekistan

⁴ The same

⁵ The same

⁶ World Bank, UNISDR, CAREC, Central Asia and Caucasus Disaster Risk Management Initiative (CAC DRMI): Risk Assessment for Central Asia and Caucasus Desk Study Review, 2009, https://www.unisdr.org/files/11641_CentralAsiaCaucasusDRManagementInit.pdf

⁷ Tashkent Times on Uzbekistan's Development Strategy for 2017–2021, <http://tashkenttimes.uz/national/541-uzbekistan-s-development-strategy-for-2017-2021-has-been-adopted-following->

territory is in area of the very high seismic risk with almost 50 percent of the population living in this area⁸. Further, about 65.5 percent of GDP is earned in this area.⁹ The capital of Uzbekistan – Tashkent – ranks first among nine largest cities of Central Asia and Caucasus in terms of earthquake hazard and the exposed population.¹⁰ At the same time, Tashkent is a home to about 7.4 percent of the total 32.5 million population of Uzbekistan. About 43 percent of the inhabitants of Tashkent live in buildings that were not adequately designed and constructed to meet the current standards for seismic resistance.¹¹

Figure 1. Epicenters of earthquakes with magnitude > 4.3 in Uzbekistan

Source: Tuichieva M.A., Djuraiev N.M., Djuraiev A., Manual for Individual Real Estate Developers, Tashkent 2015.

From 1955 to 2000, earthquakes with magnitude > 5.0 happened 81 times in Uzbekistan.¹² Several major earthquakes hit the country in 20th century. Among them:

- In 1902, an earthquake of magnitude 6.4 destroyed over 40,000 houses and killed more than 4,500 people;
- In 1966, a Tashkent earthquake of magnitude 5.0 killed 10 people, injured 10,000 and destroyed 28,000 of the city's buildings (including 200 hospitals and clinics, and 180 schools), leaving more than 100,000 people homeless;¹³

⁸ World Bank, UNISDR, CAREC, Central Asia and Caucasus Disaster Risk Management Initiative (CAC DRMI): Risk Assessment for Central Asia and Caucasus Desk Study Review, 2009

⁹ Rashidov T.P. Providing seismic safety in Uzbekistan, 2010 - 592 p.

¹⁰ UNISDR, World Bank, CAREC, Central Asia and Caucasus Disaster, Risk Management Initiative (CAC DRMI)

¹¹ Mavlyanova N., Inagamov R., Rakhmatullaev H., Tolipova N., Seismic Code of Uzbekistan, 2004, http://www.iitk.ac.in/nicee/wcee/article/13_1611.pdf

¹² Mavlyanova N., Inagamov R., Rakhmatullaev H., Tolipova N., Seismic Code of Uzbekistan, 2004

¹³ Juliev M., Hubl J., Pulatov A., Natural hazards in mountain regions of Uzbekistan: A review of mass movement processes in Tashkent province, International Journal of Scientific and Engineering Research, March 2017, <https://goo.gl/U5nLBU>

- In 1976 and 1984, two large earthquakes hit the desert town of Gazli, causing sizeable economic damage;¹⁴ and
- In 2011, an earthquake resulted in 13 killed and sizeable economic damage across the region.

Floods are frequent in Uzbekistan. Commonly they are caused by snowmelt, severe storms, or by mountain lakes breaking their banks.¹⁵ Mudflows represent another threat. On an annual basis there are around 22 flash floods and mudflows per year, formed mostly on the slopes of the Chirchik and Ahangaran river valleys, and in Surkhandarya. The high-risk areas occupy around 12 percent of the country and contain around 16 percent of its population.¹⁶

According to the Uzbek hydromet, the country is threatened with 271 potential glacial lake outburst floods (GLOFs), most of which are located outside its borders. The largest transboundary GLOF hazard—Lake Sarez—was created by a seismic-triggered landslide in 1911 in Tajikistan. The resulting Usoy dam holds has around 16 km³ of water.¹⁷ If the dam were to collapse, it would affect estimated 5 million people living in Tajikistan, Afghanistan, Uzbekistan and Turkmenistan.¹⁸

Figure 2. Earthquake hazard in Uzbekistan

Source: Swiss Re CatNet(R) as cited in AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

Figure 3. Gazli earthquake, 1976.
Damage to a residential building.

Source: <http://seismos-u.ifz.ru/personal/1976-1990.htm>.

Figure 4. Tashkent earthquake, 1966.

Source: RiaNovosti, www.rian.ru.

¹⁴ World Bank, Central Asia Earthquake Risk Reduction Forum: Forum Proceedings, 2015, <http://pubdocs.worldbank.org/en/451453873709673/Central-Asia-Earthquake-Risk-Reduction-Forum-Proceedings-2015-eng.pdf>

¹⁵ European Commission, Disaster risk reduction in Uzbekistan, 2016 https://eeas.europa.eu/delegations/uzbekistan_en/12425/Disaster%20risk%20reduction%20in%20Uzbekistan

¹⁶ UNDP, Natural Disaster Risks in Central Asia: a Synthesis, 2011

¹⁷ The same

¹⁸ World Bank, Lake Sarez Mitigation Project, 2000, <http://documents.worldbank.org/curated/en/900431468778506744/pdf/multi-page.pdf>

In 1998, a GLOF from the Alaudyn glacier lake in the Alay range killed over 100 residents from Uzbekistan's Shahimardan village.¹⁹ During February and March 2005, heavy flooding along the Syr Darya river caused significant damage in Uzbekistan. Farmland and settlements were destroyed in the districts of Konimex and Nurota.²⁰ More recently, in 2018, news agencies reported that mudflows have affected 200 houses in Kashkadariynskaya oblast, washing away 12 bridges.²¹

Uzbekistan also faces the risk of **landslides** that cause 10 to 12 percent of the total damage from natural disasters. 90,000 km² of the country is covered with mountains—a home to about 3 million people. 17 percent of this area is prone to landslides. About

65–70 percent of all landslides is triggered by snow melting, precipitation, underground waters; 20–25 percent is triggered by earthquakes; and, 15–20 percent is caused by technogenic factors (new landslide sites can be formed when new transport communication is constructed).²² In May 1991, a landslide in the Angren region killed 50 people. A landslide in January 1992 affected 400 persons.²³

Further, Uzbekistan can be affected by **droughts** that most heavily damage agriculture of the country. Due to its location and climate conditions Uzbekistan has a wide range of areas prone to atmospheric and soil-drought. During years of severe droughts and decreased precipitation, the water supply experiences a decrease in 20–30 percent.²⁴

Other threats to Uzbekistan include strong wind, hurricanes, wild and forest fires and hail.²⁵ Hail can be a serious problem in rural areas, particularly in spring, and can affect growing crops and fruit trees, particularly at blossom time.²⁶

Climate change is an important issue for Uzbekistan. United States Agency for International Development (USAID) estimates 2.0 to 5.7°C increase in annual mean temperatures by 2085 due to climate change.²⁷ As per the United Nations International Strategy for Disaster Reduction (UNISDR), in terms of water resources, climate change in Uzbekistan will result in decrease of the snow contribution to snow-fed rivers by 15–30 percent. In terms of agriculture, under high temperatures, cotton crop production is expected to decline

Figure 5. Mudflow number per century and mudflow risk areas in the Uzbekistan portions of the Fergana Valley and Chirchik-Ahangaran basin

Source: Hydrometeorological Service under the Cabinet of Ministers of the Republic of Uzbekistan, 2009 Second National Communication as cited in UNDP, *Natural Disaster Risks in Central Asia: a Synthesis*, 2011.

¹⁹ The same

²⁰ UNISDR, World Bank, CAREC, Central Asia and Caucasus Disaster, Risk Management Initiative (CAC DRM)

²¹ Information agency Regnum, Mudflows in Uzbekistan affected 200 houses, 2018, <https://regnum.ru/news/2415468.html>

²² Juliev M., Hubl J., Pulatov A., Natural hazards in mountain regions of Uzbekistan: A review of mass movement processes in Tashkent province, *International Journal of Scientific and Engineering Research*, March 2017

²³ UNISDR, World Bank, CAREC, Central Asia and Caucasus Disaster, Risk Management Initiative (CAC DRM)

²⁴ UNDP Project document, Strengthening Disaster Risk Management Capacities in Uzbekistan

²⁵ OSCE, Ecological safety and civil initiatives, Tashkent, 2011, <https://www.osce.org/uzbekistan/106064?download=true>

²⁶ AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

²⁷ USAID, Climate Risk Profile: Central Asia, March 2018

between 9 percent and 15 percent. Similarly, due to higher temperatures, rice production is expected to decrease 10 percent–20 percent.²⁸

Figure 6. Occurrence of meteorological drought in Bukhara and Termez, Uzbekistan, 1970–2006

Source: Hydrometeorological Service under the Cabinet of Ministers of the Republic of Uzbekistan, 2009, *Second National Communication as cited in UNDP, Natural Disaster Risks in Central Asia: a Synthesis*, 2011.

Climate change can also aggravate the situation with extreme weather events. Droughts, in particular, are already becoming more frequent (happening with 3–4 years interval) with areas of water stress expanding. Climate change can also induce glacier retreat, causing a temporary increase in water supply, followed by a sharp decline thereafter.²⁹ It also causes an increase in the area affected by strong winds.³⁰

Climate change is among the issues identified by the World Bank’s Country Partnership Framework with Uzbekistan as the issue that could severely affect the country’s economy through agriculture and increased number of extreme weather events.

ECONOMIC IMPACT OF NATURAL DISASTERS

Information on economic impact of natural disasters in Uzbekistan available to this report is limited in terms of damage caused by natural disasters. The International Disaster Database (EM-DAT) reports that since 1992 there were 7 major disasters in Uzbekistan.

Table 1. Major disasters in Uzbekistan according to EM-DAT

Year	Disaster type	Total deaths	Total affected	Total damage (US\$)
1992	Earthquake	9	50000	
1992	Mass movement (dry)	1	400	
1998	Epidemic	40	148	
1999	Landslide	24		
2000	Drought		600000	50000000
2005	Flood		1500	
2011	Earthquake	13		

Source: www.emdat.be.

²⁸ World Bank, UNISDR, CAREC, Central Asia and Caucasus Disaster Risk Management Initiative (CAC DRMI): Risk Assessment for Central Asia and Caucasus Desk Study Review, 2009

²⁹ UNDP Project document, Strengthening Disaster Risk Management Capacities in Uzbekistan

³⁰ OSCE, Ecological safety and civil initiatives, Tashkent, 2011

In 2009, World Bank, UNISDR and Central Asia Regional Economic Cooperation (CAREC) have estimated that annual average loss from natural disasters in Uzbekistan is about US\$92 million. They further estimated that economic loss from an event with 20 percent Annual Exceedance Probability (5-year event)³¹ could amount to about US\$177 million. An event with 0.5 percent Annual Exceedance Probability (200-year event) could cause over US\$2 billion losses.³²

History evidences some significant disasters in Uzbekistan. Among the most devastating disasters of the recent past in Uzbekistan is the Tashkent earthquake of 1966. Although no official information is available in this regard, it is estimated that this earthquake caused an economic loss of about US\$300 million.³³ If adjusted for inflation in dollar terms, in 2008 terms this loss would be equivalent to US\$2 billion losses.³⁴ An equivalent of this earthquake today, would likely cause significantly larger losses due to the considerable increase in the value of assets at risk in the city.

Later, in 1976, a magnitude 7.0 earthquake of Gazli caused an economic loss of US\$85 million. In 1984, another earthquake in the Gazli–Bokhara region affected 201,100 people and caused an economic loss of US\$5 million.³⁵ The Organization for Security and Co-operation in Europe (OSCE) reports that much of this damage was caused by lack of consideration of seismic measures in construction (based, in turn, on the fact that this area was considered seismically safe prior to these earthquakes).³⁶

AXCO further reports that a shallow earthquake on 19 July 2011 struck the border area of Kyrgyzstan, Uzbekistan and Tajikistan (in the Ferghana valley) and resulted in 13 killed in Uzbekistan and an estimated US\$30 million in damage (substantially uninsured) across the region.³⁷

In 1998, a flood caused by a breakthrough on the Shakhimardan river, originating in the Kyrgyz Republic, killed 100 people of Uzbekistan and caused damage estimated at US\$700 million.³⁸

Further, a drought that has affected about 600,000 people in 2000, according to the UNDP, has also caused an estimated economic damage to agriculture of about US\$50 million.³⁹

³¹ Annual Exceedance Probability (AEP) refers to the probability of an event occurring in any year (for example, flood or earthquake). The probability is expressed as a percentage. For example, a large flood which may be calculated to have a 1 percent chance to occur in any one year, is described as 1 percent AEP.

³² World Bank, UNISDR, CAREC, *Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options*, 2009

³³ Juliev M., Hubl J., Pulatov A., *Natural hazards in mountain regions of Uzbekistan: A review of mass movement processes in Tashkent province*, *International Journal of Scientific and Engineering Research*, March 2017

³⁴ World Bank, UNISDR, CAREC, *Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options*, 2009

³⁵ The same

³⁶ OSCE, *Ecological safety and civil initiatives*, Tashkent, 2011

³⁷ AXCO, *Insurance market report: Uzbekistan: non-life (P&C)*, 2018

³⁸ World Bank, UNISDR, CAREC, *Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options*, 2009

³⁹ UNDP, *Natural Disaster Risks in Central Asia: a Synthesis*, 2011

OVERVIEW OF REGULATORY ARRANGEMENTS FOR THE PUBLIC FINANCIAL MANAGEMENT OF NATURAL DISASTERS IN UZBEKISTAN

INSTITUTIONAL FRAMEWORKS

A number of institutions are involved in disaster risk financing in Uzbekistan (based on the Law on Protection of Population and Territories from Emergency Situations of Natural and Technological Character;⁴⁰ information from the Ministry of Emergency Situations (MoES) and Ministry of Finance (MoF) websites^{41,42}):

Cabinet of Ministers of Uzbekistan: guarantees creation of material and financial reserves to be used after a disaster and defines an order for their use; ensures financial and technical resources are available for the institutions involved in disaster response; approves the classification of emergency situations and defines the roles of executive powers in liquidation of disasters; and, oversees activities of the agencies involved in disaster risk management.

MoES was established in 1996 and is responsible, among other tasks, for disaster response and formation of material reserves. MoES finances measures of liquidation of disasters from reserve fund of the Cabinet of Ministers; controls use of allocated material and financial resources; coordinates activities on establishment of financial, food, medical and material and technical reserves.

MoF is responsible for financing, based on the Cabinet of Ministers' decision, creation of material reserves; financing of response and recovery after emergency situations; it is also responsible for other relevant areas, such as insurance supervision; development of financial markets; providing proposals on main directions for the budget policy for a new fiscal year (including medium-term perspective) based on socio-economic priorities and macroeconomic indicators; developing and improving budget planning; setting standards for financing of budget organizations and order of the budgeting; supervising use of the allocated resources; developing proposals for public financial management and macroeconomic policy; together with the relevant ministries and agencies, developing long-, short- and medium-term forecasts for fiscal and budgetary policy; collecting information on budget use; together with Central Bank, monitoring debt and debt service and managing debt as in its competences; emitting government securities and developing conditions for emitting and placement of the securities; coordinating donor support and humanitarian aid with the Ministry of Economy.

Other line ministries and agencies are responsible for establishing relevant material and financial reserves, organizing, financing and implementing relevant response and recovery measures in their relevant field or on their relevant assets (industries, social assets and relevant territories) according to emergency plans. More specifically, after a disaster:

- **Ministry of Health** is responsible for medical response to disasters (supplying medicines in the affected areas, first aid to the affected population, epidemic control and prevention);
- **Ministry of Agriculture and Water Resources**⁴³ is responsible for relevant response in regard to farmers (sanitary-and-veterinary and epizootic control in the affected areas, dam monitoring and flood preparedness with MoES);

⁴⁰ The Law of the GoU on Protection of Population and Territories from Emergency Situations of Natural and Technological Character, 1999 ? <http://www.ifrc.org/Global/Publications/IDRL/DM%20acts/Law%20of%20Uzbekistan%20on%20protection%20of%20population%20in%20emergencies.pdf>

⁴¹ MoES of Uzbekistan, about the Ministry, <https://fvv.uz/ru/menu/vazirlik-haqida>

⁴² MoES of Uzbekistan, functions of the Ministry, https://www.mf.uz/media/file/obw_info/zadachi.pdf

⁴³ Recently, it was renamed to Ministry of Agriculture, the changes in the law have not been introduced yet.

- **Ministry of Economy**, together with MoES and MoF, is responsible for reviewing programs for protecting the population against disasters (presented by other ministries, agencies, local governments, and so on) and preparing proposal on these programs to the Cabinet of Ministers;
- **State Committee on Geology and Mineral Resources** is responsible for formation of a database of hazardous geological processes and damage they caused;
- **State Committee on Architecture and Construction**⁴⁴ is responsible for an estimation of disaster damages to assets and individual property and estimation of material resources for response and first recovery works.

Local governments are the first line of defense against natural disasters. They are responsible among others for creation of material and financial reserves, financing liquidation of emergency situations.

Organizations, institutes and industries are responsible for establishing their own material and financial reserves for emergencies.

Other **state-owned organizations** (such as Uzbekenergo⁴⁵, Uzbekneftegaz⁴⁶, Uzmakhsusimpeks⁴⁷, and so on) are also involved in disaster response in their relevant sector. For instance, Uzmakhsusimpeks procures—by orders from the Cabinet of Ministers and the MoES—the relevant machinery for disaster response and prevention.

Insurance companies⁴⁸ have to provide insurances to the population, specifically, those living in risky areas (at flood, mudflows, landslide risks) and for facilities, physical capital and agricultural production.

Red Cross Society is expected to providing first aid and supporting disaster response; forming reserves of primary resources for disaster response.

LEGAL FRAMEWORKS

There are several legal acts governing disaster risk management and financing in Uzbekistan:

- *Law on protection of population and territories from emergency situations of natural and technological character*
- Budget code
- Annual laws on national budget
- *Law On insurance Activity; and by-laws, including On licensing of insurance activities of insurance companies and insurance brokers*⁴⁹
- Other by-laws, such as a regulation *on further improvement of the government system of prevention of and activities in emergency situations (GSCHS) in the Republic of Uzbekistan*⁵⁰ and a regulation *On creation of a unified system of monitoring, information exchange and forecasting of emergency situations of natural, man-made and ecological nature*.

⁴⁴ Recently, it became Ministry of Construction, the changes in the law have not been introduced yet.

⁴⁵ State Joint Stock Company Uzbekenergo that performs the centralized electric power supply of national economy and population, and also sale of thermal energy to industrial and domestic consumers in distinct cities of the Republic.

⁴⁶ Uzbekneftegaz is a state joint stock company of Uzbekistan's oil and gas industry.

⁴⁷ Uzmakhsusimpeks is a government company responsible for procurement of machinery, equipment and materials, also for disaster liquidation as requested by the relevant ministries

⁴⁸ Including private and state insurance companies

⁴⁹ Attachment to regulation #413 On licensing of insurance activities of insurance companies and insurance brokers, 2002

⁵⁰ Regulation #242 of the Cabinet of Ministers on further improvement of the GSCHS in the Republic of Uzbekistan, http://lex.uz/pages/getpage.aspx?lact_id=1857284

CLASSIFICATION OF EMERGENCY SITUATIONS

There is the following classification of emergency situations in Uzbekistan⁵¹:

- (a) **Object or asset level emergency situation** is an emergency that affected no more than 10 people, or affected livelihood of no more than 100 persons, or caused a material damage of no more than a thousand of minimum wages on the day of emergency situation (about US\$25,000 in 2018), while an area of the emergency did not extend over the territory of industry or a public asset.
- (b) **Local emergency situation** is an emergency that affected more than 10, but no more than 500 people, or affected livelihood of more than 100, but no more than 500 persons, or caused a material damage of more than a thousand, but no more than 0.5 million of minimum wages (or about US\$12.5 million) on the day of emergency situation, while an area of the emergency did not extend over a settlement, city, rayon or oblast.
- (c) **Republican (national) emergency situation** is an emergency that affected more than 500 people, or affected livelihood of more than 500 persons, or caused a material damage of more than 0.5 million of minimum wages on the day of emergency situation, while an area of the emergency extended over an oblast.
- (d) **Transboundary emergency situation** is an emergency that extends over the country borders, or that has happened abroad and affected Uzbekistan.

According to the #242 Resolution of the Cabinet of Ministers of the Republic of Uzbekistan from 24 August 2011, depending on the size and consequences of the emergency, **the declaration of emergency situation** is under the responsibility of the Head of Civil Protection of the Republic of Uzbekistan - Prime Minister, and the respective Heads of Civil Protection – Chair of Joqorgi Kenges of the Republic of Karakalpakstan, and regional, district, or city khokims. Therefore, for emergency management purposes, the declaration of the state of emergency by the responsible government officials as per #242 Resolution is a legal basis for the recognition of the emergency, where the disaster took place and mobilization of the State System of Prevention and Response to Emergency Situations.

DISASTER IMPACT ASSESSMENT AND COLLECTION OF DISASTER IMPACT INFORMATION

Damage and loss assessment for a national level emergency situation in Uzbekistan is conducted by a special governmental committee comprised of stakeholder ministries and agencies. This committee assesses the socio-economic and ecological consequences and damages. Results of this assessment are shared with other relevant stakeholders and is structured as recommendations for making decisions and taking urgent measures.⁵³

Similarly, in case of a local or localized disaster, the impact is assessed by relevant stakeholders at the local level. For instance, in 1992, damage assessment was ordered by a special decree to a head of the local administration of Andijan oblast, together with: (a) ministries and agencies, whose facilities or assets were

⁵¹ Regulation #455 on Classification of emergency situations of man-made, natural and ecological nature, 1998, <http://www.lex.uz/ru/docs/820596?query=чрезвычайные>

⁵² According to the decree of the President of Uzbekistan, the minimum wage in 2018 was 202 730 soms per month (USD 25), https://nrm.uz/contentf?doc=564102_ukaz_prezidenta_respubliki_uzbekistan_ot_13_10_2018_g_n_up-5553_o_povyshenii_razmerov_zarabotnoy_platy_pensiy_stipendiy_i_posobiy&products=1_vse_zakonodatelstvo_uzbekistana

⁵³ MoES, Uzbekistan, National progress report on the implementation of the Hyogo Framework for Action, 2009, https://www.preventionweb.net/files/9814_Uzbekistan.pdf

⁵⁴ Further reformed to the State Insurance Supervision Department (Gosstrakhnadzor).

⁵⁵ <http://www.lex.uz/ru/docs/451787?query=чрезвычайные>

⁵⁶ Regulation #1027 on creation of a unified system of monitoring, information exchange and forecasting of emergency situations of natural, man-made and ecological nature, 2017, <http://www.lex.uz/ru/docs/3481007?query=чрезвычайные>

affected by a disaster; and, (b) State Committee on architecture and construction of Uzbekistan; (c) several banks: Uzgosbank, Uzagroprombanks, Uzpromstroyban, Uzsberbank; and, (d) the state insurance directorate under the MoF Uzgosstrach.⁵⁴ Timing for conducting this assessment was provided as 10 days.⁵⁵

Different agencies are responsible for collecting different **disaster impact information**.⁵⁶ It is unclear if there is a single agency that collects all the information on disaster impact.

Impact of earthquakes:

- State Committee on architecture and construction of Uzbekistan
- MoES
- Stock company Uzbekneftegas
- Stock company Uzbekenergo
- Stock company Uzkimiesanoat
- Ministry of Agriculture and Water Resources⁵⁷
- Ministry of Health
- Heads of organizations

Landslides:

- Stock company Uzbekiston Temir Yullari
- State Committee for Roads
- Stock company Uzkimiesanoat
- Stock company Uzbekenergo
- Stock company Uzbekneftegas
- Ministry of Agriculture and Water Resources
- Heads of organizations

Strong wind:

- State Committee on architecture and construction of Uzbekistan
- Ministry of Agriculture and Water Resources
- State Committee for Roads
- Stock company Uzbekiston Temir Yullari
- Stock company Uzbekenergo
- Heads of organizations

Hail:

- Ministry of Agriculture and Water Resources
- Ministry of Health
- Heads of organizations

⁵⁷ Recently, the Ministry was renamed to Ministry of Agriculture; its responsibilities were updated accordingly.

Rains causing mudflows and floods:

- Ministry of Agriculture and Water Resources
- State Committee on architecture and construction of Uzbekistan
- Heads of organizations

Extreme heat:

- Ministry of Agriculture and Water Resources
- Ministry of Health
- Heads of organizations

Drought:

- Ministry of Agriculture and Water Resources
- Heads of organizations

Floods:

- MoES
- Ministry of Agriculture and Water Resources
- State Committee on ecology and environment protection
- Heads of organizations

Mudflows:

- Ministry of Agriculture and Water Resources
- Heads of organizations

From the information available to the country note, it was unclear if the damage assessment and information on disaster impact is collected using a special methodology and impact is considered over a period of time or is based only on expert's knowledge and first assessment. Further, it is unclear if expenditure information is collected specifically for disasters. Such information will differ from disaster impact, because the reconstruction projects will stretch over years, while the initial estimation of damage is often likely to increase when post-disaster works begin.

PUBLIC FINANCIAL MANAGEMENT OF NATURAL DISASTERS IN UZBEKISTAN

DISASTERS AS CONTINGENT LIABILITIES

In disaster-prone countries, disaster are important sources of contingent liabilities. Contingent liabilities⁵⁸ are fiscal obligations that may be triggered due to occurrence of an uncertain event.⁵⁹ Contingent liabilities can be explicit and implicit. Explicit contingent liabilities are liabilities that according to country's regulations are to be covered by the government, for instance, loss of public assets and emergency response or governmental insurance schemes. Implicit liabilities are responsibilities created by social or political pressure, which leads the government to accept additional liabilities after a major disaster such as bailing out financial institutions or assisting recovery of the economy.⁶⁰ For instance, in case of Uzbekistan, half of the population lives in areas of high seismic risk, including in the capital city – Tashkent. According to the budget code of Uzbekistan, the GoU has an explicit contingent liability to provide financial support to the families affected by natural disasters (Article 71). Further, the state still owns a significant portion of both land and industry – supporting recovery of these lands and industries after a disaster might turn into a significant contingent liability for the GoU.

However, because contingent liabilities due to disasters are often implicit, it is difficult to accurately estimate potential future funding needs. Sound estimations of the potential fiscal cost following different disasters is the first step in weighing the relative costs and benefits of different financial instruments to finance disaster relief, recovery, and reconstruction. It will also help understanding when resources are needed as not all of them will be needed in the same time and plan accordingly (see Figure 6).

Figure 7. Post-disaster financing needs change over time

Source: Ghesquiere and Mahul (2010).

For better managing the government contingency liabilities, it is also important to understand the current process of post-disaster financing. This includes understanding of available financial instruments used by the government to raise resources after disasters and the strategy of post-disaster financial management.

⁵⁸ In contrast with to direct liabilities or obligations which fall due with certainty, such as wages

⁵⁹ Olivier Mahul, David Cummins, Catastrophe Risk Financing in Developing Countries: Principles for Public Intervention, the World Bank, 2009, http://www.preventionweb.net/files/15924_54291.pdf

⁶⁰ The World Bank, GFDRR, Quantify Contingent Liabilities Associated with Natural Disasters, <http://documents.worldbank.org/curated/en/672271467997574054/pdf/97977-BRI-Box391499B-PUBLIC-Short-Note-1-Risk-Assessment-04Nov2013.pdf>

FINANCIAL PROTECTION STRATEGY AGAINST NATURAL DISASTERS

International experience has shown that governments should ideally combine different instruments to protect against events of different frequency and severity. Financing mechanisms can be grouped into two main categories:

Retention. The government assumes and manages disaster losses through its budgetary resources – for example, budgetary reserves, post-disaster budget reallocations, or borrowing.

Transfer. The government transfers potential future disaster losses to financial or insurance markets by paying a premium – for example, through traditional insurance/ reinsurance.

Combining different instruments to protect against events of different frequency and severity is known as risk layering (Figure 4). A bottom-up approach is recommended: the government first secures funds for recurring disaster events and then increases its post-disaster financial capacity to finance less frequent but more severe events. Risk layering ensures that cheaper sources of money are used first, with the most expensive instruments.

Figure 8. Three-tiered risk layering strategy for governments

Source: Adapted from World Bank and GFDRR 2014. Note: Cat = Catastrophe.

PUBLIC FINANCIAL MANAGEMENT OF NATURAL DISASTERS IN UZBEKISTAN

With the regulation #242 of the Cabinet of Ministers, the GoU has established the order of post-disaster financing.⁶¹ It provides for improvement of the GSCHS, which is led by the MoES, but includes all other relevant stakeholders, such as local government, ministries and agencies and organizations. This regulation provides that resources of local governments, agencies and organizations, that is, resources of the territorial GSCHS sub-systems, are to be used first. In case these resources are exhausted, the reserve fund of the

⁶¹ Regulation #242 of the Cabinet of Ministers on further improvement of the GSCHS in the Republic of Uzbekistan

Cabinet of Ministers can be used. Further, the regulation provides for the use of material reserves of the Red Cross Society and for attracting donor or bilateral aid. At the same time, the regulation establishes that local GSCHS parties (local administration, MoES and other relevant stakeholders) should ensure adequate coverage of disaster insurance for private property. How this should be done is not specified.

While the above regulation makes it quite clear that the local resources should be used first, no strategy of post-disaster financing have been identified that would account altogether for: (a) different needs after disasters according to timing of these needs and severity of natural disasters; (b) how resources reach their beneficiaries; and, (c) post-disaster financing rules. It is also unclear on how resources will be attracted when the reserve fund of the Cabinet of Ministers is exhausted.

The table below presents a summary of available financing instruments and resources in these instruments, discussed in detail in the following part of the country note.

Table 2. Financing instruments and their resources in Uzbekistan

All-risks layer	Donor aid	US\$20 million since 1992 for all humanitarian assistance
High-risk layer	Borrowing	Can potential be used. Currently, external debt is growing, but is projected to stabilize
	Budget reallocation	Can be used for both state budget (up to 10 percent can be reallocated with approval of the Cabinet of Ministers) and in-ministry budgets (up to 15% can be reallocated with approval of the MoF). Time that reallocation takes is unclear
Medium-risk layer	Agricultural insurance	Depending on the premium paid, 50–80% of the expected crop/cattle price, however, penetration is unclear
	Disaster insurance for private property	Available (can be either full coverage or proportional). Penetration is low.
	Contingency credit	Unavailable
	Reserve fund of the Cabinet of Ministers	US\$32 million in 2018
Low-risk layer	Reserves of the road fund	US\$15 million in 2018
	Reserves of the GSCHS	Size is unclear
	Local governments reserve funds	Altogether, US\$32 million in 2018 (from US\$983,181 in Syrdariynskaya oblast to US\$2.9 million in Tashkent city)

EX ANTE FINANCIAL INSTRUMENTS

Thinking ex ante⁶² about post-disaster financing is important to ensure fast response and efficient reconstruction of the affected areas. If no funds are available, considerable indirect losses appear on top of the direct losses worsening the adverse effect of the disaster. In this regard, Uzbekistan has explored a number of ex ante practices and arrangements.

⁶² Ex ante financial instruments are instruments that are planned and organized in advance, such as reserve funds or insurance. On the contrary, ex post instruments do not require specific ex ante actions, like borrowing or budget reallocation (although these instruments might involve some planning, such as legal frameworks, for instance).

RESERVES FOR CONTINGENCIES

The GoU has a number of reserves that can be used after disasters. This includes national and local reserve funds, GSCHS reserves, material reserves, reserves under special funds used for other purposes, that is, Road fund. The first line of protection are local governments budgets and reserve funds, budgets of relevant ministries and organizations. Reserve fund of the Cabinet of Ministers is used only when these aforementioned resources are exhausted.

RESERVE FUND OF THE CABINET OF MINISTERS

According to the law on protection of population and territories from emergency situations of natural and technological character, financial and material reserves have to be created in advance for emergency financing. In case of the reserve fund of the Cabinet of Ministers, Cabinet of Ministers is responsible for defining the order of creation, use and replenishment of this reserve (budget code, Article 25, 73 and the law on protection of population and territories from emergency situations of natural and technological character, Article 7). Proposals with requests on use of the reserve fund are developed in accordance with a relevant financial body and submitted by relevant ministries and agencies⁶³ to the Cabinet of Ministers. In case some resources were already provided in the national budget for financing of the requested activities, the reserve fund is used only after these resources are exhausted. If resources allocated from the reserve fund have some time-period, then unused resources are returned by the end of this period within 10 working days to the reserve fund. Receiving ministries and agencies should provide quarterly reports to the MoF on use of the allocated resources (Budget code, Article 73).

This reserve fund is annual non-accruing fund, meaning that it maintains the same statutory size in budget percentage terms and cannot be accumulated or carried forward from one year to another.⁶⁴ Unused resources of the reserve fund are returned to the national budget at year-end (budget code, Article 73).

The reserve fund of the Cabinet of Minister is not earmarked for disasters. According to the budget code, Article 73, this reserve can be used for timely and flawless financing of unexpected expenditure related to economic, social, cultural and other areas.

The resources to the reserve fund of the Cabinet of Ministers are allocated from revenues of the national budget. Size of the reserve fund is not pre-defined, but is defined in the annual laws on national budget based on the macroeconomic indicators and parameters of the national budget. In 2018, the reserve fund of the Cabinet of Ministers was allocated US\$32 million. In comparison, according to the annual law on national budget of 2013, the reserve fund of the Cabinet of Ministers was allocated about US\$34 million.⁶⁵

LOCAL RESERVE FUNDS OF THE REPUBLIC OF KARAKALPAKSTAN, OBLASTS, TASHKENT CITY AND RAYON AND OTHER CITIES BUDGETS

Use of the local reserve funds is decided by the relevant local government (budget code, Article 28, 73). The local reserves are also not earmarked for disasters and can be used for timely and flawless financing unexpected expenditure related to economic, social, cultural and other areas. Size of the local reserve funds is decided when the local budgets indicators are approved. Similar to the reserve fund of the Cabinet of Ministers, in case some resources were already provided for financing of the proposed activities, the local

⁶³ For instance, the MoES can suggest on use of the reserve fund according to a decree #5066, <http://www.lex.uz/ru/docs/3223790?query=чрезвычайные>

⁶⁴ World Bank, UNISDR, CAREC, Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options, 2009

⁶⁵ Regulation of the President of Uzbekistan On forecasting of main macroeconomic indicators and parameters of the national budget of the Republic of Uzbekistan for 2013, <http://lex.uz/acts/2108669#2110402>

reserve funds are used only after these resources are exhausted. If resources allocated from the reserve fund have some time-period, then unused resources are returned by the end of this period within 10 working days to the relevant reserve fund (budget code, Article 73). Quarterly reports are required on use of the resources to the relevant territorial financial bodies.

Local funds are also non-accruing funds and their unused resources are returned to the relevant budget at year-end. Resources are allocated to the local reserve funds from revenues of the relevant budgets (of the Republic of Karakalpakstan, oblasts, cities, regions). According to the annual law on national budget of 2018, local reserve funds were set at about 1 percent of the relevant budgets (total of US\$32 million). At the same time, these reserves were increased 5–6 times and reserve funds were introduced at rayon level,⁶⁶ which means more financial capacity and responsibility was assigned for post-disaster financing to local governments.

SUMMARY OF THE RESOURCES IN NATIONAL AND LOCAL RESERVES

According to the annual law on national budget of 2013, the reserve funds of the Cabinet of Ministers and local reserve funds altogether were allocated the total of about US\$43 million:⁶⁷

In 2013	Size of the reserve fund (soms, millions)	Size of the reserve fund (in US\$)
Reserve fund of the Cabinet of Ministers	68,060.8	34,279,613
Total for local reserve funds	16,989.0	8,556,707
including:		
Karakalpakstan Republic	1,126.5	567,375
Andijanskaya oblast	1,412.9	711,624
Bucharskaya oblast	963.6	485,328
Djizakskaya oblast	729.8	367,572
Kashkadaryinskaya oblast	1,493.0	751,967
Navoiyskaya oblast	630.7	317,659
Namanganskaya oblast	1,303.5	656,523
Samarkandskaya oblast	1,798.6	905,886
Surkhandariyskaya oblast	1,283.8	646,601
Syrdariyskaya oblast	504.8	254,248
Tashkent oblast	1,426.8	718,624
Ferganskaya oblast	1,822.6	917,974
Khorezmskaya oblast	924.0	465,383
Tashkent city	1,568.4	789,943
Total for all the reserve funds	85,049.8	42,836,320

Note: From an attachment to the Regulation On forecasting of main macroeconomic indicators and parameters of the national budget of the Republic of Uzbekistan for 2013

According to annual law on national budget of **2018**, the total of US\$64 million (520.2 billion soms) was available in the reserve fund of the Cabinet of Ministers and local reserve funds. This was estimated as being equal to 0.84 percent of the budget expenditure.⁶⁸

⁶⁶ MoF, budget message for the year 2018, 2017, https://www.mf.uz/media/file/state-budget/pub/byudjetnoe_poslanie.pdf

⁶⁷ Regulation of the President of Uzbekistan On forecasting of main macroeconomic indicators and parameters of the national budget of the Republic of Uzbekistan for 2013

⁶⁸ MoF, budget message for the year 2018, 2017

In 2018	Size of the reserve fund (soms, millions)	Size of the reserve fund (in US\$)
Reserve fund of the Cabinet of Ministers	263,421.7	32,440,816
Total for local reserve funds	256,786.3	31,623,656
including:		
Karakalpakstan Republic	17,227.5	2,121,595
Andijanskaya oblast	21,406.7	2,636,270
Bucharskaya oblast	15,924.6	1,961,141
Djizakskaya oblast	11,423.8	1,406,860
Kashkadaryinskaya oblast	22,014.9	2,711,171
Navoiyskaya oblast	9,892.6	1,218,290
Namanganskaya oblast	19,343.9	2,382,233
Samarkandskaya oblast	28,018.5	3,450,524
Surkhandariyskaya oblast	18,612.9	2,292,209
Syrdariyskaya oblast	7,983.5	983,181
Tashkent oblast	20,463.0	2,520,052
Ferganskaya oblast	25,953.1	3,196,167
Khorezmskaya oblast	14,967.3	1,843,248
Tashkent city	23,554.0	2,900,714
Total for all the reserve funds	520,208.0	64,064,472

Note: From an attachment to the Regulation On forecasting of main macroeconomic indicators and parameters of the national budget of the Republic of Uzbekistan for 2018, http://fmc.uz/legisl.php?id2=pp_3454_31

Budget increase in soms did not affected budget increase in U.S. dollar, which is likely because of rapid currency devaluation of 2017–2018.

The most recent available Public Expenditure and Financial Accountability (PEFA) Assessment (2012; the next PEFA assessment for 2018 is under preparation) indicates expenditure from the state budget on contingencies as:

Year	Budget (soms, millions)	Actual (soms, millions)	Original budget (soms, millions)
2008	31 500	28 682	7 404 766
2009	34 175	39 723	10 875 317
2010	54 175,0	52 141,1	13 683 405,0

Note: Information from World Bank, PEFA, 2012

PEFA assessment reports that share of spending from the contingency was 0.39, 0.37, 0.38 percent, respectively of the original budget in 2008, 2009, and 2010, so practically all the resources were used throughout the year. It also reports that, throughout the assessment period, the MoF had the control of the contingency reserves and used it based on the demands during the implementation of the budget.⁶⁹

⁶⁹ World Bank, PEFA Assessment, 2012, https://www.mf.uz/media/file/state-budget/obzori/PEFA_UZBEKISTAN_2012.pdf

RESERVES OF THE NATIONAL ROAD FUND UNDER THE CABINET OF MINISTERS

National road fund under the Cabinet of Ministers of Uzbekistan also includes reserves that are earmarked for liquidation of natural disasters and reconstruction of roads (budget code, Article 75). For instance, according to the annual law on national budget, in 2018, this fund included reserves of 120 billion soms as a reserve (or about US\$15 million) or 3 percent of the total expenditure. Total expenditure of the fund was 3,947.0 billion soms (or almost US\$490 million) in 2018.⁷⁰

RESERVES OF THE GSCHS UNDER THE MOES

According to the regulation #242 of the Cabinet of Ministers on further improvement of the GSCHS in the Republic of Uzbekistan,⁷¹ all levels of GSCHS, which is under coordination of the MoES, have to create financial and material reserves for disaster response and first recovery (evidentially, these are different resources to both local and national reserve funds). Size of these reserves, agency responsible for using of these resources and how often they are used, however, is unclear.

MATERIAL RESERVES

Material reserves are also available to Uzbekistan to support post-disaster response and recovery. MoES creates material reserves⁷² and decides on their use. The creation of material reserves is approved by the Cabinet of Ministers.⁷³ Material reserves generally include strategic materials and goods for dealing with emergency situations and supporting the government and economy after a disaster (such as flour, grain, fuel or construction materials).

CONTINGENT CREDIT ARRANGEMENTS

Use of contingent credits was not identified for Uzbekistan.

OVERVIEW OF DISASTER INSURANCE

Insurance market in Uzbekistan

The insurance industry in Uzbekistan is supervised by the State Insurance Supervision Department (Gosstrakhnadzor), under the MoF.

Insurance companies and professional services. According to the MoF, in 2016, there was 27 licensed insurance companies in Uzbekistan (4 of them are life insurance companies). These companies had 1284 branches (growing from 1048 in 2014; 465 in 2007), who had over 7,200 agents.⁷⁴ Insurance market has seen a number of improvements in terms of professional insurance services. The MoF reported significant increase of companies providing professional insurance-related services, such as adjusters and surveyors (24 company), actuaries (4 companies), brokers (3 companies) that employ overall about 5,500 staff in 2017.⁷⁵

Size of the market and premium per capita. The Uzbekistan insurance market remains relatively small, with a low premium expenditure per capita and an insurance culture which is still developing. In 2017, gross written premium (GWP) reported by the MoF increased to 927.4 billion soms (US\$421 million) from

⁷⁰ MoF on the Budget Law for 2018, <https://www.mf.uz/open-data/otkrytye-dannye-2/infografika.html>

⁷¹ Regulation #242 of the Cabinet of Ministers On further improvement of the GSCHS in the Republic of Uzbekistan

⁷² MoES, History, <https://fvv.uz/ru/menu/tarix>

⁷³ MoES, Collaboration with other stakeholders, <https://fvv.uz/ru/menu/davlat-tizimlari-bilan-hamkorlik>

⁷⁴ MoF, Report on regulation and supervision of insurance market in Uzbekistan for 2016, 2017, <http://insurance.uzreport.uz/files/docs/report2017.pdf>

⁷⁵ MoF, Report on regulation and supervision of insurance market in Uzbekistan for 2016, 2017

551 billion soms (or US\$250 million) in 2015 and 439.1 billion soms (about US\$200 million) in 2014. In Central Asia, Uzbekistan has the second largest insurance market after Kazakhstan. Insurance consumption per capita in 2017 was US\$7.14⁷⁶ increasing from US\$2 in 2007, but remaining small if compared to emerging markets average of US\$135 in 2015.⁷⁷ (In comparison, premium per capita in Russia was US\$152 in 2017,⁷⁸ in Kazakhstan - US\$73.76⁷⁹).

Insurance penetration as reported by AXCO was at 0.32 percent of GDP,⁸⁰ which is low compared with the global average of 6.9 percent of GDP and emerging markets average of 3.0 percent of GDP⁸¹ as reported by the Asian Development Bank.

Gross insurance liabilities in 2017 were 298.1 trillion soms (about US\$93 billion), growing 4.2 times since 2010. Total volume of insurance claims paid in 2017 increased 4 times in comparison to 2013 – from 66.9 billion soms (US\$20.8 million) to 269.9 billion soms (US\$83.9 million). According to the MoF, this was a result of increased payouts for agricultural risks. The market remains highly profitable nevertheless—with total volume of insurance claims paid accounts for only 29 percent of GWP.

Insurance companies and their market share. In 2017, the MoF reported that based on the gross premium income, the leading insurance companies on the Uzbek market were two state-owned companies or companies that have a government shareholding—Uzagrosugurta (14.5 percent), Uzbekinvest (14.1 percent), a private company gross insurance (8.8 percent), another state-owned company Kafolat (8.7 percent) and a daughter company of Uzbekinvest and Kafolat - O'zbekinvest Hayot (6.8 percent). Based on the claims paid volume, the leading insurance companies were Uzagrosugurta (34.5 percent), O'zbekinvest Hayot (13.9 percent) and New Life Insurance (9.2 percent). The MoF reports that role of the state insurance companies has decreased – in 2017, state insurance companies were making 37.2 percent of GWP in Uzbekistan (down from 40.5 percent in 2013).

Market concentration. AXCO reports high concentration of insurance market in Uzbekistan, where half of the insurers registered being small and having less than 2 percent market share each.⁸² In 2017, combined market share of the top 10 insurance companies was 76.5 percent of GWP in Uzbekistan. The situation with market concentration has improved, according to the MoF, since 2007, when five major insurance companies were making 73 percent of GWP and in 2014 - 54.3 percent.

Capital requirements, reserves and reinsurance. According to the Resolution #1544 On Additional Measures for the Further Strengthening of Insurers' Financial Stability (2011), the minimum capital requirements are the following: non-life insurers - US\$1.52 million; insurers writing compulsory classes - US\$3.04 million; those offering reinsurance - US\$6.08 million. Standard solvency margin for non-life insurers and reinsurers is defined as being whichever is the greater of the following three amounts: (a) the required minimum charter capital; (b) a premium calculation based on the written premium for all classes for the year less any returned

⁷⁶ AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

⁷⁷ XPRIMM, Insurance penetration and density almost unchanged globally year over year; emerging markets gained an increasing share in the global insurance premiums production, 2016, <http://www.xprimm.com/Swiss-Re-Insurance-penetration-and-density-almost-unchanged-globally-year-over-year%3B-emerging-markets-gained-an-increasing-share-in-the-global-insurance-premiums-production-articol-1,8-8172.htm>

⁷⁸ SWISS RE, World insurance in 2017: solid, but mature life markets weigh on growth, 2018, https://www.segurostv.es/doc/informes/sigma3_2018_en.pdf

⁷⁹ AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

⁸⁰ AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

⁸¹ Asian Development Bank, Republic of Uzbekistan: Insurance Sector Development, 2012, <https://www.adb.org/sites/default/files/project-document/75049/46112-001-uzb-tar.pdf>

⁸² AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

premiums; (c) a claims calculation based on the claims paid over the preceding 36 months. According to the insurance law, insurers and reinsurers must establish reserves to meet their obligations.

According to the MoF and as a result of the increased requirements for minimum capital reserve, aggregated capital of the insurance companies in Uzbekistan in 2017 was 321.6 billion (US\$100 million), growing 1.6 times from 2010. Gross insurance reserves amounted to 766 billion soms (US\$238 million). Investments of the insurance companies in Uzbekistan are primarily in low-risk low return bank deposits (45 percent) and government securities (41.4 percent).

According to AXCO, the majority of insurance companies are profitable.⁸³ However, despite that there are no restrictions on the placement of reinsurance abroad, reinsurance capacity is significantly limited by the non-convertibility of the som and exchange control restrictions. The company further reports that the most business is retained in the local market either with the direct insurer or with locally placed reinsurance and few insurers have reinsurance treaties of any sort. At the same time, excess of loss and catastrophe reinsurance cover is not widely used. In addition, AXCO reports that the insurance companies in Uzbekistan do not monitor earthquake accumulation of Probably Maximum Losses due to earthquakes.

Therefore, sustainability of the insurance companies in case of a major catastrophic event, such as a large earthquake, remains questionable. Large risk retention is especially an issue considering that Uzbekistan is a disaster-prone country and, as of 2017, 55.6 percent of the insurance premiums were written in Tashkent and 7.5 percent in Tashkent oblast,⁸⁴ which are prone to high seismic risk. Further, AXCO reports that there is no central fund to compensate policyholders in the event of insurer insolvency, except for compulsory motor third party liability.

PROPERTY DISASTER INSURANCE

The decree of the Cabinet of Ministers of Uzbekistan⁸⁵ acknowledges disaster insurance among the types of insurance provided in the country. The law provides for a classification of insurance products in Uzbekistan, which includes the insurance against fire and natural disasters. This insurance covers fire, lightning, explosion, nuclear energy impact, and natural disasters, such as earthquakes, floods, landslides and others. The product offered bundles together most of the FLEXA⁸⁶ insurance cover with catastrophic perils. In 2007, World Bank reported about potential risks connected to such bundling. These risks could include underpricing of the product, therefore, inability of the local insurers to purchase adequate reinsurance coverage, leaving them exposed to the risk of insolvency in case of a major catastrophic event.⁸⁷

Several companies in Uzbekistan are offering voluntary disaster insurance.⁸⁸ A stock company Kafolat (with the MoF holding 66.50 percent of company's shares) offers the aforementioned insurance against fire and natural disasters for private property. While at the moment it includes 19 perils, evidentially some adjustments could be made to the number of perils covered in accordance with the insured. AXCO reports that sum insured under different perils, such as fire and earthquake are identical. Rates for buildings and contents

⁸³ AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

⁸⁴ MoF, Report on regulation and supervision of insurance market in Uzbekistan for 2016, 2017

⁸⁵ According to an attachment #1 to the decree #413 of the Cabinet of Ministers of Uzbekistan On licensing of insurance business of insurers and insurance brokers, 2002, <http://insurance.uzreport.uz/cgi-bin/main.cgi?raz=9&lan=r>

⁸⁶ Fire, Lightning, Explosion, and Aircraft impact

⁸⁷ World Bank, UNISDR, CAREC, Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options, 2009

⁸⁸ Regulation of the Cabinet of Ministers #201 On measures for prevention and liquidation of catastrophic consequences related to floods, mudflows and landslides events, of 1994 mentions the mandatory disaster insurance. Functioning of such a mechanism, however, was not confirmed from other sources, <http://www.lex.uz/docs/16542351994>.

were reported to be in the range from 0.15 percent to 0.20 percent. Deductibles vary by zone between 2 to 5 percent of sum insured, however, there has been a market trend, under severe competition, to eliminate deductibles altogether.⁸⁹

Other insurance companies that provide disaster insurance for property include two other governmental companies – stock company Uzagrosugurta (with the MoF holding 93.6 percent of company's shares),⁹⁰ state-owned Uzbekinvest,⁹¹ and private companies – Ingo-Uzbekistan,⁹² Euroasia Insurance,⁹³ Alfa-invest.⁹⁴ The provided insurance in many of the above companies includes a deductible, some offer coverage of losses based on the replacement cost and others propose to choose from full or proportional coverage.

In 2018, AXCO reported that the proportion of insured losses in disaster related losses is low and penetration currently is estimated by market sources to be less than 5 percent. This is due to the lack of an insurance culture in general and the lack of finance to pay premiums.⁹⁵

Some small volumes of premiums are generated by compulsory property insurance requirements that could be generated by:

- insurance of items taken as loan pledges (property placed as collateral)
- insurance of leased equipment
- insurance of property offered as security (to pawnbrokers)
- insurance of mortgaged property⁹⁶

Industrial and commercial enterprises usually buy insurance only if they were required to do so by multinational partners, foreign investors or bank lenders. For business, property insurance penetration varies considerably. While many major industrial clients with foreign investment are insured, perhaps only 20 percent to 30 percent of medium-sized businesses are covered and less than 5 percent of small businesses are thought to have insurance.⁹⁷

AGRICULTURAL INSURANCE

Agriculture is an important sector of the Uzbek economy, contributing about 17 percent to GDP, yet, among the economic sectors, it is the most affected by natural disasters. Approximately 70,000 farms operate in Uzbekistan.⁹⁸

AXCO reports that the only insurers writing agricultural risks are Uzagrosugurta and Kafolat, both state-owned insurers, but Uzagrosugurta practically has a monopoly on this sector. The agricultural insurance proposed is divided to agricultural property, cattle and crops.

Uzagrosugurta provides, for instance, the following products. For loss of cattle, it covers 50–80 percent of cattle price (depending on the premium paid). For loss of yield, this company offers a coverage of up to

⁸⁹ AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

⁹⁰ Uzagrosugurta, Disaster insurance for property, <http://www.agros.uz/ru/insurance/strahovanie-imushestva-krome-nazemnyh-transportnyh/>

⁹¹ Uzbekinvest, For physical persons, <http://www.uzbekinvest.uz/ru/individuals>

⁹² Ingo-Uzbekistan, Disaster insurance for property, <http://ingo.uz/strahovanie-imushestva>

⁹³ Euroasia insurance, Disaster insurance for property, <https://eai.uz/strahovanie-imushestva>

⁹⁴ Alfa-invest, Disaster insurance for property, <http://alfainvest.uz/ru/strahovanie-imushestva-2/>

⁹⁵ AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

⁹⁶ The same

⁹⁷ AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

⁹⁸ The same

70 percent of price of the last three yields.⁹⁹ The agricultural insurance is provided for a yield season, according to the world practices. A separate product is offered for cotton, covering up to 60–80 percent of the expected cotton price.¹⁰⁰ The insurance contract for cotton should be concluded until July 1 of every year, similarly with the above. All the agricultural insurance products cover multiple perils including different disasters (droughts, hail, flood, frost, and so on) and such perils as pests. Deductibles for this type of insurance are unclear, but could range from 1 to 10 percent according to the AXCO report. Previously existing compulsory agricultural insurance requirement was abolished.¹⁰¹ Uptake of the voluntary agricultural insurance is unclear, but in 2016 Uzagrosugurta reported GWPs of 45.61 billion soms (US\$14.24 million) and paid claims of 15.44 billion soms (US\$4.82 million), but comprising all insurance types. Risks are not reinsured and are retained by the company. AXCO reports that insured amounts are low under the agricultural insurance in Uzbekistan.¹⁰²

DISASTER INSURANCE: SUMMARY

Summarizing the above, the level of disaster insurance penetration in Uzbekistan is too low, while capacity of the insurance market is questionable. Many efforts were done by the GoU in the recent years and the insurance market has seen some improvements, including improvement in the availability of professional insurance services, increased capital and solvency margin requirements.¹⁰³ This, however, might not be sufficient for disaster insurance to mitigate the adverse financial consequences of future natural disasters on the economy, central government and household budgets, similarly to the situation observed back in 2007.¹⁰⁴ At the same time, in 2015, priorities for insurance development in Uzbekistan included the introduction of a comprehensive system for protection of governments, business and population against natural disasters. Further, according to AXCO, compulsory property insurance which could respond in the event of a natural catastrophe is currently discussed by the GoU.

EX POST FINANCIAL INSTRUMENTS

Disasters often exceed a government's capacity to cope with them and while ex ante instruments will assist in covering some of the losses occurred, there is generally a need for ex post funding arrangements. In fact, an optimal strategy for financial protection relies on a combination of ex ante and ex post financial instruments. The latter take longer to implement, but they can often mobilize larger amounts of finance.

BUDGET REALLOCATION

According to the budget code, Article 144, it is possible to introduce changes to the expenditure part of the national budget:

- When less than 10 percent of the expenditure part is proposed to be changed, then approval from the Cabinet of Ministers is required based on the proposal submitted by the MoF;
- When over 10 percent of the expenditure part is proposed to be changed, then approval from Oliy Majlis is required based on the proposal submitted by the Cabinet of Ministers.

The 2012 PEFA assessment comments on the above that such a strong control enabled limited deviations from the budget in terms of the composition of the realization.

⁹⁹ Uzagrosugurta, Voluntary agricultural insurance, <http://www.agros.uz/ru/insurance/dobrovolnoe-strahovanie-finansovyh-ubytkov/>

¹⁰⁰ Uzagrosugurta, Voluntary agricultural insurance, <http://www.agros.uz/ru/insurance/dobrovolnoe-strahovanie-ot-finansovyh-ubytkov-sels/>

¹⁰¹ The same

¹⁰² AXCO, Insurance market report: Uzbekistan: non-life (P&C), 2018

¹⁰³ The MoF in the Report on regulation and supervision of insurance market in Uzbekistan for 2014, 2015

¹⁰⁴ World Bank, UNISDR, CAREC, Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options, 2009

Further, the PEFA assessment reported that reallocations in budgets of organizations are possible of up to 15 percent with the approval of the MoF.¹⁰⁵

BORROWING

A threshold for public debt is set annually by Oliy Majlis with approval of the annual law on national budget (budget code, Article 152). The MoF reports that the threshold of the public debt was set at 40 percent of GDP in 2018.¹⁰⁶ External debt of Uzbekistan was estimated at 18.5 percent of GDP in 2017. The MoF reports that raise of the external debt of Uzbekistan is expected to 23.7 percent of GDP in 2018, however, the debt is expected to stabilize over the next years.¹⁰⁷ In 2018, debt service was 952.7 billion soms (or US\$117 million).

Figure 9. External debt position of the GoU, as reported by the MoF

Source: MoF, Budget for citizens, 2018

Among multilateral financial institutes, the largest creditors of Uzbekistan were Asian Development Bank (62.91 percent), World Bank (22.45 percent) and Islamic Bank of Development (13.80 percent). Borrowing from multilateral financial institutes accounted for total 52.95 percent of external debt in 2017.¹⁰⁸

Borrowing can potentially be used for major disasters in Uzbekistan. The budget code, Article 156, provides, for instance, that borrowing through the government securities can go on socio-economic development, large investment projects and other activities, set by the President of Uzbekistan. Further, debt position is projected to stabilize in the following years, which opens possibilities to attracting borrowing for post-disaster financing.

TAXATION

There have been no examples identified during this study, where the GoU would increase taxation to cover financial needs after natural disasters.

¹⁰⁵ World Bank, PEFA Assessment, 2012

¹⁰⁶ MoF, budget message for the year 2018, 2017

¹⁰⁷ MoF, budget for citizens, 2018, https://www.mf.uz/media/file/state-budget/pub/budget_for_citizens.pdf

¹⁰⁸ The same

DONOR AID

Since 2000, according to UN OCHA financial aid tracking service, Uzbekistan has been receiving some donor aid – with the donor aid amounting to almost US\$20 million (the aid, however, is not disaggregated according to its purpose, so it includes any humanitarian issues).¹⁰⁹ In comparison, Tajikistan since 1999 has received total of US\$577 million donor aid with US\$91 million direct at post-disaster financing. The Kyrgyz Republic has received from 2002 to 2016 about US\$27 million for financing post-disaster needs.

CASE STUDIES ON POST-DISASTER FINANCING

Few cases studies on post-disaster financing are available, but are dated back to 1992 and 2000.

1st case study.¹¹⁰ Disasters¹¹¹ have affected Andijanskaya oblast in May 1992. The GoU ruled to provide 5 million rubles (about US\$40,000) from the reserve fund for compensating the affected population (500 rubles per family or US\$4); from the state budget – 80 million rubles (about US\$640,000) for reconstruction works on public assets. Uzsberbank was ruled to provide long term concessional credits (with no more than 3 percent annual interest) in total amount of 200 million rubles (US\$1.6 million) to the affected kholkoz and sovhoz (collective farms) for construction and reconstruction of houses.

Within the above resources and material resources provided, a number of ministries and agencies (Ministry of Agriculture, Ministry of Water Resources, Ministry of Architecture, Ministry of Energy, Ministry of Roads, and so on¹¹³) were to complete works on assets affected by natural disasters, including houses and public assets. 111 public assets were affected and required reconstruction works, including 33 schools and 31 pre-schools. Different ministries were assigned for the reconstruction works, including Ministry of Water Resources to reconstruct 6 schools and Ministry of Architecture to reconstruct 3 schools. Among these assets, 77 were on the balance of local governments and were to be reconstructed through local budgets, 34 – through Andijanskaya oblast budget.

Other ministries and agencies were provided with different tasks. For instance, Uzkontractorg was to provide additional construction resources. Ministry of Energy to ensure availability of electricity with its own budget in a month. Uzgosstrakh together with the Ministry of Housing and Communal Property in 10 days to provide an assessment of damage to households, population and provide insurance payouts. Uzbeklegprom with other agencies was to provide reconstruction and recovery works on the affected plants and industries.

2nd case study.¹¹⁴ In August 1992, mudflows affected Kashkadaryinskaya, Novoyetskaya, Namanganskaya, Samarkandskaya, Surkhandaryinskaya and Khorezmskaya oblasts. Resources were drawn from the reserve fund (8.5 million rubles or US\$68,000 for compensations to the affected families, 500 rubles or US\$4 each; 52 million rubles or US\$415,000 from the republican budget for reconstruction works on public assets).

3rd case study.¹¹⁵ Same year, disasters affected Karakalpakstan. The GoU estimated that 158 million rubles (US\$1.3 million) will be required for all the reconstruction works (from the state budget) + 405.5 million

¹⁰⁸ The same

¹⁰⁹ UN OCHA, Financial tracking service, <https://fts.unocha.org>

¹¹⁰ Regulation #243 On measures for supporting liquidation of natural disaster consequences in Andijanskaya oblast, 23.05.1992, <http://www.lex.uz/ru/docs/451787?query=чрезвычайные>

¹¹¹ This is unclear from the regulation what disasters has happened.

¹¹² With exchange rate provided by the Central Bank of Russia for July 1, 1992 as USD 1 = 125,26 rubles

¹¹³ Because the regulation is dated back to 1992 and a number of changes took place in the GoU, the names of the involved ministries do not correspond to the current ones.

¹¹⁴ Regulation #261 On measures for supporting liquidation of natural disaster consequences in rayons of Republic of Uzbekistan, 04.09.1992, <http://www.lex.uz/ru/docs/454362?query=чрезвычайные>

rubles (US\$3.2 million) (from credits from banks) + 612 million rubles (US\$4.9 million) (from the fund on industrial development and other resources). The regulation provided for the State Forecast and Statistics Agency, MoF, Central Bank and banks to provide the required resources. Several other ministries proposed to conduct reconstruction works from their own budgets, such as the Ministry of Roads.

4th case study.¹¹⁶ In 2000, an earthquake has affected Kamashinskiy rayon of Kashkadaryinskaya oblast. The regulation provided that the MoF should allocate 2 billion soms (about US\$14.3 million) from the Cabinet of Ministers' fund for reconstruction and construction works in the affected area. Other works on reconstruction of the affected assets of communal, administration, public and industrial ownership should be performed with resources of the relevant ministries, agencies and resources of relevant industries and organizations. Removal of public assets should be performed with the budget of local governments and sponsors.

The regulation also indicated that for this disaster, Uzagrosugurta has provided payouts for the households in amount of 6.709.800 soms (US\$48,000). Concessional credits (5–7 percent interest) were also provided in amount of 17 million soms (US\$121,000) for the households affected by this earthquake.

As per the above case studies, many reconstruction and recovery costs were covered by reserve funds, but also through local and ministries or agencies' budgets and budget reallocation, provision of credits through country banks, some insurance support, although minimal. It seems no resources were requested from donors to cover post-disaster financing needs; however, speed and effectiveness of the post-disaster financial management remains under question and require further study. At the same time, these case studies are old, which makes them relatively unreliable.

CONCLUSIONS

Uzbekistan is subject to many natural disasters, such as earthquakes, floods, landslides, mudflows, drought and others. The GoU will likely face raising impact of these disasters with growing exposure of population and assets and climate change that aggravates severity and frequency of hydrometeorological disasters. Major disasters have affected the country in the past and their impact was significant. In 1966, Tashkent earthquake has caused an estimated US\$300 million in losses. In 2008 U.S. dollar, this loss would be equivalent to US\$2 billion losses.¹¹⁷ An equivalent of this earthquake today would likely cause significantly larger absolute damages due to the considerable increase in the value of assets at risk in the city. In 1976, the Gazli earthquake caused an estimated loss of US\$85 million. Adjusted for inflation and population growth, this figure would be much larger in 2018 U.S. dollar terms. In 1998, floods caused estimated damages of US\$700 million. In 2000, drought caused US\$50 million damage to the agricultural sector in relevant year dollars.

World Bank, UNISDR and CAREC estimated expected annual economic loss from natural disasters in Uzbekistan to be US\$92 million. It was further estimated that economic loss from a 5-year return period event¹¹⁸ could amount to about US\$177 million. A 200-year event¹¹⁹ could cause over US\$2 billion losses, equal to about 9.5 percent of GDP in 2008.¹²⁰

Public financial management of natural disasters of the GoU involves a number of stakeholders and their responsibilities in emergency situation are clearly defined by law. While the MoES plays a central role in coordination of post-disaster response, other line ministries and agencies and local governments play a central role at the reconstruction stage. The MoF is responsible among others for allocating resources after disasters, overseeing budget implementation and proposing potential sources of financing of post-disaster needs.

Gaps have been identified in collection of information on disaster risks, impacts and post-disaster expenditure in Uzbekistan. Different agencies are responsible for collecting disaster impact information and it is unclear whether any of them aggregates this information into a single database. Historical information on disaster impact is limited to major catastrophes. More recent disasters have been accounted for only since the dissolution of the Soviet Union. Modelled information is currently limited to global estimations, such as provided above. Further, in regard to expenditure information, the MoF should be receiving information on budget spending from reserve funds and budgets of ministries and public organizations. However, the MoF does not seem to be collecting this information disaggregated on response, recovery and reconstruction and the MoF does not account for potential fiscal risks due to natural disasters. Absence of proper information can complicate financial planning for natural disasters.

Substantial resources are available to the GoU in such ex ante instruments as reserve funds and these funds can potentially provide support for responding to relatively frequent disasters. The reserve fund of the Cabinet of Ministers had US\$32 million in 2018. Local reserves accounted

¹¹⁵ Regulation #405 On measures for liquidation of natural disaster consequences and resolution of social and economic problems in the Republic of Karakalpakstan, 02.09.1992, <http://www.lex.uz/ru/docs/491763?query=чрезвычайные>

¹¹⁶ Regulation #244 On measures for liquidation of impact of earthquake happened in Kamashinskiy rayon of Kashkadariynskaya oblast, 27.06.2000, <http://www.lex.uz/ru/docs/1671078?query=чрезвычайные>

¹¹⁷ World Bank, UNISDR, CAREC, Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options, 2009

¹¹⁸ Disaster event with 20 percent Annual Exceedance Probability. AEP refers to the probability of an event occurring in any year (for example, flood or earthquake). The probability is expressed as a percentage. For example, a large flood which may be calculated to have a 1 percent chance to occur in any one year, is described as 1 percent AEP.

¹¹⁹ An event with 0.5 percent Annual Exceedance Probability.

¹²⁰ World Bank, UNISDR, CAREC, Mitigating the Adverse Financial Effects of Natural Hazards on the Economies of Central Asia: A Study of Catastrophe Risk Financing Options, 2009

altogether for another US\$32 million in the same year. However, these funds are not earmarked for disaster related expenditure and can be used for other contingencies. Further, the local reserves are coming from local governments all over the country and can be used only by their respective stakeholders for their territory. Reserves for emergencies under the road fund could provide further support with about US\$15 million available in 2018 for reconstructing affected road infrastructure. Further, in-kind reserves are available to support recovery and reconstruction. GSCHS also has some reserves for financing post-disaster response, but their size and who is responsible for managing them is unclear.

In regard to risk transfer instruments, disaster insurance is unlikely to provide substantial resources to finance disaster response in Uzbekistan. Insurance consumption per capita and uptake is very low while, according to AXCO. In addition, the product offered by the market has weaknesses leading to potential underpricing. The resulting lack of capacity to purchase adequate reinsurance coverage could lead to insolvency of some insurance companies after a major event. Growth of the number of insured dwellings could lead to significant implicit liabilities for the GoU: it could find itself morally obliged to support the insurance companies if they exhaust their reserves and capital after a major catastrophe. Agricultural insurance is also available, but the level of its uptake is unclear. The GoU recognizes an important role of disaster insurance. The MoF included the provision of comprehensive protection against natural disasters among the priorities for development of the insurance market in Uzbekistan. Discussions are also ongoing on introducing compulsory property disaster insurance.

Among ex post instruments, the GoU could borrow funds after a disaster. However, this could be costly depending on market conditions and its level of debt. Budget reallocation (both in the state budget and own budgets of the ministries / agencies) are another option but imply diverting resources from important development projects which entails an opportunity cost.

Donor assistance to the country amounted to about US\$20 million since 2000. However, relying on donors for disaster response comes with risks, since donor assistance might be insufficient, come with delay, be in-kind only, and/or earmarked.

Overall, two findings emerge in this note: (a) central government has a key role in the post-disaster financing in Uzbekistan; and (b) available resources might not be sufficient to finance the response to major disasters.

CHALLENGES AND OPTIONS FOR CONSIDERATION

Based on the results of this country note, the GoU could consider the following steps to improve post-disaster financing in Uzbekistan:

(a) Improving collection of information related to disasters and accounting for fiscal risks. Information is at the core of successful decision-making in disaster risk financing. Collecting proper information includes:

- **Information about disaster risks,** including estimates from probabilistic models. Information should be collected not only damages (such as number of bridges destroyed and livelihoods affected), but also losses (cost of business interruption or public assets not being reconstructed over time). Probabilistic modelling of damage could further help with financial planning. A good understanding of potential disaster related costs can also inform measures of risk reduction.
- **Information collection on post-disaster expenditure** could be strengthened. Ideally, such information would be disaggregated by response, recovery and reconstruction. In

addition to the size of actual expenditures on disasters, such information will allow the GoU to better assess the effectiveness of its spending and the quality of damage assessments.

- **Accounting for fiscal risk due to natural disasters.** Since disasters are a source of important implicit and explicit contingent liabilities, they should be considered in the MoF's assessment of fiscal risks.

(b) Developing a financial protection strategy against natural disasters. The GoU might want to consider developing a strategic approach to the post-disaster financing, that would include the following:

- **Planning for different needs after disasters depending on the severity of natural disasters for emergency response, rehabilitation/recovery, and reconstruction.** When considering potential impact of a Tashkent earthquake today, we could expect losses in billions of U.S. dollars. More frequent, but less severe disasters cause losses annually which can add up to an important sum over time. Different instrument can be used to provide financing for the response of disasters of different severity and frequency.
- **Considering contingent credit arrangements.** Building sufficient reserves for a catastrophe is not the best strategy, because of the opportunity cost of having large resources aside. Some alternative solutions as contingent credits to support immediate liquidity for large catastrophes might, therefore, be considered. Contingent credits are credits that are prearranged in advance of a natural disaster, providing access to immediate liquidity to the government.
- **Consider risk transfer mechanisms as part of the overall strategy of post-disaster financing.** In addition to risk retention instruments, risk transfer is an important mechanism for managing the fiscal impact of natural disasters and protection the stability of budget implementation after a disaster. Risk transfer mechanisms include property disaster insurance, sovereign insurance, public assets insurance, and agricultural insurance.

(c) Improving disaster insurance; better understanding disaster insurance market in the country is an important first step. It is widely recognized that disaster insurance can reduce a natural disaster's fiscal impact as well as its economic impact on the population; and lead to faster post-disaster recovery. Uzbekistan has disaster insurance, however, the product bundles together very different risks (such as FLEXA, catastrophe perils, nuclear energy impact, and so on). This can result in a number of issues, as mentioned on page 25. The insurance market in the country has been growing fast and has seen a number of improvements in recent years. Development and improvement of disaster insurance could, therefore, be an attractive solution the GoU to reduce overreliance on the central government budget, stimulate insurance market development and / or increase responsibility of the population. Disaster insurance can take different forms: purchasing of the insurance can be made voluntary or compulsory (with the GoU, as per AXCO, already thinking about introducing the latter). Insurance can cover individuals, households, farmers, businesses, governments or the poor (micro insurance). However, given that disaster insurance is characterized by high-risk accumulation, especially in such disaster-prone countries as Uzbekistan, careful solvency requirements and adequate excess of loss reinsurance should be considered. At the same time, there is lack of available information on the current disaster insurance market and more information is required for identifying a more specific way forward to improving disaster insurance in Uzbekistan.

(d) Improving effectiveness and targeting of available resources. Presence of proper disbursement rules after a disaster and financial planning for resources might make the use of currently available resources more effective. For instance, It is important to have clear rules on using the reserve funds. Because reserves are an important resource for providing fast post-disaster liquidity, it is important that they

have clear disbursement rules and adequate strategy to arrive to the beneficiary in time. No clear rules in using the reserve funds can often lead to the reserves yielding low resources, while becoming a political slush fund.¹²¹ Further analyzing the flow of post-disaster financing in practice could allow to identify measures to strengthen effectiveness and targeting of resources. In regard to the latter, it is important to consider low-income people and how to target post-disaster support in a way that they have adequate means to recover after natural disasters and thus do not fall into poverty.

¹²¹ Clarke, D. J., Dercon, S. Dull disasters? how planning ahead will make a difference, New York, Oxford University Press, the World Bank, 2016.

**ANNEX: UZBEK SOM AND UNITED STATES DOLLAR EXCHANGE RATES
AS OF JANUARY 1 EACH YEAR
(PROVIDED BY THE CENTRAL BANK OF UZBEKISTAN)**

Year	Soms = US\$1 Exchange rate
2018	8120,07
2017	3217,56
2016	2809,98
2015	2422,40
2014	2202,20
2013	1985,46
2012	1795,00
2011	1640,00
2010	1511,40
2009	1393,00
2008	1291,23
2007	1240,00
2006	1180,00