FRAMEWORK
FOR STRENGTHENING REGIONAL COOPERATION AMONG CENTRAL ASIAN COUNTRIES
IN THE FIELD OF DISASTER RISK REDUCTION AND THE PREVENTION OF AND RESPONSE TO EMERGENCIES

Approved by
the Regional Forum-Meeting of Heads of Emergency Authorities of Central Asian Countries
Protocol dated 27 April 2018

CENTER FOR EMERGENCY SITUATIONS AND DISASTER RISK REDUCTION - 2020

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INTRODUCTION

Global challenges of the modern world affect all aspects of human life and concern all countries and peoples, which are increasingly exposed to large-scale natural disasters, accidents, and catastrophes resulting in significant human and material losses.

Available evidence indicates that the level of exposure of populations and assets in all countries is increasing faster than vulnerability is decreasing, leading to the emergence of new risk drivers and higher levels of disaster-related losses with substantial socio-economic impacts, particularly at the local and community levels and among vulnerable population groups.

Contemporary threats have so significantly increased the risks of large-scale and transboundary disasters that ensuring security through disaster risk reduction has long become a priority.

Many countries and peoples of the world seek to unite their efforts in the field of disaster risk reduction and the prevention of and response to emergencies through the further strengthening of bilateral, multilateral, regional, and international cooperation, as well as global partnerships.

The Central Asian region comprises high mountain systems, extensive deserts, and treeless grass-covered steppes. The region includes major river systems such as the Amu Darya and the Syr Darya, as well as large water bodies, including the Caspian Sea and the Aral Sea, and lakes Balkhash and Sarez. Temperature variations are significant, ranging from −40°C to +46°C.

The territory of the region is exposed to a wide range of natural and technological emergencies. Key factors increasing the risk of catastrophic events include the widespread accumulation of climate anomalies, the intensification of industry, transport, and energy sectors, the presence of potentially hazardous natural and technological processes and phenomena, and the possibility of terrorist acts that may trigger large-scale and transboundary disasters.

This region, home to nearly 80 million people, is exposed to virtually all types of natural and technological hazards, including earthquakes, floods, landslides, mudflows, debris flows, avalanches, droughts, extreme temperatures, epidemics, dam failures, and releases of hazardous substances.

Among the principal factors increasing the risk of catastrophic events are the widespread accumulation of climate anomalies and the intensification of industry, transport, and energy sectors, as well as the presence of potentially hazardous natural and technological processes and phenomena capable of triggering large-scale and transboundary disasters.

Earthquakes constitute the most dangerous threat, leading to loss of life and the destruction of buildings and infrastructure, while also causing secondary impacts such as landslides, debris flows, avalanches, dam failures, and releases of hazardous substances. Earthquakes, floods, and other large-scale disasters frequently extend beyond national borders.

Throughout their history, the countries of Central Asia have repeatedly experienced devastating disasters accompanied by significant human and economic losses, as the region is characterized by the presence of nearly all types of natural, technological, and other hazards, including earthquakes, floods, landslides, mudflows, debris flows, avalanches, strong winds, droughts, and extreme temperatures.

The Central Asian region provides numerous compelling examples of disasters of destructive magnitude that resulted in significant loss of life during major earthquakes in Kazakhstan (Almaty, 1887, 1889, and 1911), Kyrgyzstan (Suusamyr, 1992), Tajikistan (Khait, 1949; Gissar, 1989), Turkmenistan (Ashgabat, 1948), and Uzbekistan (Tashkent, 1966). It is expected that climate change will pose a threat of a substantial increase in the number of disasters associated with hydrometeorological hazards.

At present, virtually all countries of the region face challenges related to the growing scale of adverse impacts of natural disasters, accidents, and catastrophes, as well as increased human vulnerability to natural and technological hazards, which are further exacerbated by the emergence of new challenges.

Natural disasters, accidents, and catastrophes have a negative impact on investment outcomes in the economies of the countries of the region, thereby hindering the more effective implementation of sustainable development and poverty eradication strategies, programmes, and plans.

The main factors increasing disaster risk include the growing frequency of both recurrent and large-scale emergencies, accidents, and catastrophes; the widespread accumulation of climate anomalies; intensive demographic processes; the development of industry, transport, and energy sectors; the physical ageing of earlier-built infrastructure; the presence of radioactive tailings storage facilities and mining waste dumps; and the possibility of terrorist acts.

An analysis of the current situation in the field of disaster risk reduction indicates that, despite ongoing activities and achieved results, the exposure and vulnerability of the countries of the region continue to increase.

Given that disaster risks pose threats not only to the population and territories of each individual country - threats that may exceed national response capacities - but also entail transboundary consequences, there is a need to strengthen regional cooperation to undertake joint and coordinated actions to reduce such risks through the implementation of the present Framework for Strengthening Regional Cooperation in the Field of Disaster Risk Reduction (DRR) among Central Asian countries.

SECTION I: RISKS OF TRANSBOUNDARY DISASTERS AND THEIR CONSEQUENCES

In the Central Asian region, there exists a significant risk of transboundary threats, such as earthquakes, floods, droughts, radioactive waste, and environmental pollution.

Ashgabat Earthquake, Turkmenistan

The Ashgabat earthquake (M = 7.3), which occurred on 5 October 1948, caused severe destruction in Ashgabat and surrounding settlements, where almost all brick buildings were destroyed, reinforced concrete buildings were heavily damaged, and freight trains were derailed. Damage and casualties were also recorded in the Darr-e Gaz area of Iran. Surface ruptures were documented in areas to the northwest and southwest of Ashgabat. According to EM-DAT data, the number of fatalities amounted to 110,000. However, in 2008, on the sixtieth anniversary of the earthquake, Turkmenistan released data indicating an even higher death toll - 176,000 people, equivalent to approximately 80% of the population of the capital of Turkmenistan. The Turkmenistan–Iran border area is characterized by high to very high seismic hazards.

Kemin Earthquake, Kyrgyzstan

As a result of the Kemin (Kebin) earthquake (M = 8.2), which occurred on 3 January 1911 in the northern Tien Shan region (Kazakhstan and Kyrgyzstan), a complex system of surface ruptures was formed. During the earthquake, six fault ruptures of the KeminөChilik and Aksu fault zones were activated, exhibiting different characteristics of strike, dip, and movement. Damage was

recorded in the Chong-Kemin (Great Kemin) Valley, as well as in Ananyevo and Oytal (Kyrgyzstan). The city of Almaty in Kazakhstan was almost completely destroyed.

Tectonic dislocations, surface ruptures, and large landslides were observed within a radius of up to 200 kilometres in the Chong-Kemin and Chilik valleys, as well as along the shores of Lake Issyk-Kul. The earthquake was felt at distances exceeding 1,000 kilometres, including parts of Kazakhstan and Russia.

The Kemin earthquake was one of the strongest events in a series of seismic catastrophes that affected the Kungey Range and the Zailiysky Alatau between 1887 and 1938. According to expert estimates, earthquakes of great destructive force occur in this region approximately every 80–100 years. The most recent period of heightened seismic activity occurred between 1885 and 1911, during which several devastating earthquakes took place, including the Belovodskoe (1885), Verny (1887), and Kemin (1889) earthquakes. Since that time, no earthquakes of comparable destructive magnitude have occurred, and the probability of a recurrence of a similar series of events within the next 10-15 years is considered to be high (IRIN, 2004).

The 2008 earthquake in Nura, Kyrgyzstan

On 5 October 2008, a strong earthquake with a magnitude of 6.6 occurred in south-eastern Kyrgyzstan. The epicenter was located 220 kilometres from the regional centre of Osh, near the border with the Republic of Tajikistan and the People's Republic of China, in a seismically active area. On the following day, 6 October 2008, the United States Geological Survey recorded an earthquake with a magnitude of 5.9 in central Afghanistan, approximately 70 km south of Kabul. There is a high probability of earthquakes with magnitudes ranging from 8 to 9 occurring in this region, with around 40 per cent of the population (5.24 million people) residing on one fifth of the country's territory where the likelihood of a magnitude 9 earthquake exists, while an additional 7.5 per cent of the country's territory is exposed to the risk of earthquakes with a magnitude of 8.

The 2000 drought in Central Asia and the Caucasus

As a result of the drought that began in 2000 and continued for several years in Central and South-East Asia and the Caucasus, approximately 60 million people were affected and substantial economic damage was incurred. The occurrence of this event was associated with large-scale changes in climatic conditions in the Indian and Pacific Ocean regions, the impacts of which were exacerbated by chronic political instability in many countries of the region. From a regional perspective, this drought was the most severe in Central Asia in several decades. A significant reduction in precipitation had major socio-economic consequences for Tajikistan, Uzbekistan, and Turkmenistan. The drought depleted resources in agriculture, livestock production, water management, and public health throughout the region.

The 2005 flood in the Amu Darya basin

The Amu Darya is the largest river in the region. The main part of its catchment area is located in Tajikistan. From Tajikistan, the river flows along the border between Uzbekistan and Afghanistan, crosses Turkmenistan, re-enters the territory of Uzbekistan, and discharges into the Aral Sea. In JuneөJuly 2005, flooding occurred along the Amu Darya and its tributaries, significantly affecting areas of Tajikistan, Afghanistan, and southern Kyrgyzstan. Most areas along the Amu Darya were impacted by floods and debris flows, including the inundation of thousands of hectares of

agricultural land in the Hamadoni and Farkhor districts of Khatlon Region in Tajikistan; in the Badakhshan and Balkh provinces of Afghanistan; and in the Osh, Batken, and Jalal-Abad regions of Kyrgyzstan. Extensive damage was caused to eight districts of Afghanistan and to the administrative centre of one province as a result of a hurricane. Significant damage was also inflicted on roads and bridges in Afghanistan.

The 2005 flood in the Syr Darya basin

The Syr Darya originates in the Tien Shan mountains and is the longest river in Central Asia. Most of its catchment area is located in the territory of Kyrgyzstan. The river flows through Uzbekistan and Tajikistan and discharges into the Aral Sea on the territory of Kazakhstan. In FebruaryөMarch 2005, as a result of severe flooding along the Syr Darya, Kazakhstan and Uzbekistan suffered significant losses. Serious damage was caused to agricultural land and settlements in Kyzylorda Region of Kazakhstan, as well as in the Konimex and Nurota districts of Uzbekistan.

Radioactive waste and transboundary environmental pollution

The Central Asian region is also vulnerable to radioactive contamination. The region contains numerous tailings dumps remaining from uranium mining and the processing of radioactive materials. Central Asia has many hazardous and inadequately maintained radioactive waste disposal sites located in densely populated areas. Most of these facilities are situated in border areas, thereby posing risks of transboundary contamination of soil, air, and water. The region also hosts several nuclear test sites, including Semey, Lira, Sai-Utes, Kapustin Yar, and Azgir. Furthermore, the presence of metallurgical, oil, and coal mining industries increases the region's vulnerability to emissions of toxic industrial waste. Poorly managed municipal landfills, pesticide storage facilities, and hazardous chemical waste sites are also present. In the Fergana Valley, where several radioactive waste storage facilities and transboundary population centres are located, there is a risk of radioactive releases from tailings storage facilities in Kyrgyzstan.

Climate Change Trends

- Kazakhstan: 1. an increase in the average annual temperature by 1.4°C by 2030, by 2.7°C by 2050, and by 4.6°C by 2085; 2. an increase in precipitation during the winter and spring periods by 9 per cent and 5 per cent, respectively.

- Kyrgyzstan: 1. a clear warming trend, with the average temperature projected to increase by 2°C by 2060 and by 4-5°C by 2100; 2. a significant decrease in precipitation during the summer months and an increase during the winter period.

- Tajikistan: 1. an increase in the average annual air temperature by 0.2–0.4°C by 2030; 2. wetter summer periods and drier winter periods.

- Uzbekistan: 1. an increase in the average air temperature by 2-3°C over the next 50 years; 2. a slight overall increase in total precipitation across the country.

- Turkmenistan: 1. an increase in air temperature by 2°C and an increase in precipitation by 2040; 2. an acceleration in the rate of temperature increase and a reduction in precipitation by 8-17 per cent by 2100.

SECTION II:
INTERNATIONAL STRATEGIC AND PROGRAMMATIC DOCUMENTS IN THE FIELD OF DISASTER RISK REDUCTION AND EMERGENCIES

The Sustainable Development Goals to 2030 (SDGs). At the United Nations Summit held on 25-27 September 2015, the Member States of the United Nations adopted the 2030 Agenda for Sustainable Development, which is built upon 17 global Sustainable Development Goals.

The Agenda aims to achieve a just, rights-based, equitable, and inclusive world. It commits all stakeholders to work together to promote sustainable and inclusive economic growth, social development, and environmental protection for the benefit of all, including women, children, youth, and future generations. The implementation of this universal Agenda requires an integrated approach to sustainable development and collective action at all levels to address contemporary challenges, with the overarching commitment to "leave no one behind" and to address inequality and discrimination as core defining priorities.

The Sendai Framework for Disaster Risk Reduction 2015–2030. The Sendai Framework places a strong emphasis on disaster risk management as opposed to disaster response. It defines seven global targets, identifies disaster risk reduction as the expected outcome, and sets the goal of preventing the creation of new risk, reducing existing risk, and strengthening resilience. The Framework also establishes a set of guiding principles, including the primary responsibility of States for disaster risk prevention and reduction, as well as the participation of all segments of society and all state institutions.

The Sendai Framework underscores the need for a deeper understanding of disaster risk in all its dimensions; accountability for disaster risk management; preparedness for recovery based on the principle of "building back better"; recognition of stakeholders and their respective roles; the mobilization of risk-informed investments to prevent the creation of new risk; the resilience of health infrastructure, cultural heritage, and workplaces; strengthened international cooperation and global partnerships; and risk-informed donor policies and programmes, including financial support and access to lending from international financial institutions.

The Sendai Framework for Disaster Risk Reduction 2015-2030 sets out further actions to prevent and reduce disaster risk in order to ensure sustainable development and resilience to disasters. It offers solutions aimed at saving lives, livelihoods, and assets, as well as reducing the fiscal and budgetary burden on governments in the recovery from economic crises resulting from unsustainable development practices.

The Sendai Framework places particular emphasis on the need for coordinated regional and subregional strategies and cooperation mechanisms, as well as the conduct of progress reviews through regional and global platforms.

The United Nations Framework Convention on Climate Change (UNFCCC). The ultimate objective of the Convention is the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt

naturally to climate change, ensure that food production is not threatened, and enable sustainable economic development.

The Paris Agreement on Climate Change. Adopted in Paris in December 2015, the Paris Agreement on climate change, for the first time in history, brought together the efforts of all major global actors to combat climate change. It was approved by 195 countries and replaced the Kyoto Protocol of 1997, which had established greenhouse gas emission quotas only for a limited number of developed countries. The Agreement entered into force in November 2016.

SECTION III: MAIN GOALS AND OBJECTIVES OF STRENGTHENING REGIONAL COOPERATION IN THE FIELD OF DISASTER RISK REDUCTION AND EMERGENCIES

The main objective is to prevent the emergence of risks of large-scale and transboundary disasters and to reduce existing risks through economic, social, cultural, and environmental measures that decrease exposure and vulnerability and enhance resilience.

Key objectives:

- the establishment and/or further development of appropriate institutional frameworks facilitating the implementation of bilateral and multilateral intergovernmental and/or inter-agency agreements, international sustainable development goals, and the creation of sustainable mechanisms for regional cooperation aimed at the prevention of, preparedness for, and response to transboundary emergencies;
- the improvement of regional systems for risk assessment, disaster monitoring, and early warning with regard to large-scale and transboundary hazards;
- the strengthening of the capacities of personnel of emergency authorities and services of the countries of the region in the field of risk management of large-scale and transboundary disasters.

SECTION IV: PRIORITY AREAS FOR STRENGTHENING REGIONAL COOPERATION IN THE FIELD OF DISASTER RISK REDUCTION AND EMERGENCIES

- Enhancement of the Regional Forum-Meeting of Heads of Emergency Authorities of Central Asian countries.
- Establishment and ensuring the effective functioning of the working bodies of the Regional Forum-Meeting of Heads of Emergency Authorities of Central Asian countriesЖ

- the Secretariat of the Regional Forum-Meeting of Heads of Emergency Authorities of Central Asian countries;
- the Working Group of the Regional Forum-Meeting of Heads of Emergency Authorities of Central Asian countries;
- the Regional Scientific and Technical Council on Emergencies.

- Establishment and ensuring the effective functioning of a Register of national and international specialists and experts in the fields of seismic, environmental, fire, radiation, industrial, hydrogeological, and other areas of safety.
- Establishment of a Unified Register of Forces and Assets of Central Asian countries for the purpose of conducting emergency rescue operations on their territories in the event of large-scale and transboundary emergencies.
- Establishment of a Regional Coordination Mechanism for Response to Large-scale and Transboundary Emergencies.
- Development and implementation of a Plan for interaction between Central Asian countries and international organizations engaged in disaster risk reduction, preparedness, and emergency response at the regional and global levels.
- Implementation of measures to harmonize national regulatory and legal frameworks in order to ensure the effective implementation of international obligations, bilateral and multilateral intergovernmental and inter-agency agreements of Central Asian countries, with a view to aligning them with the requirements of international law and addressing gaps in mechanisms and procedures for their practical application.
- Implementation of measures to harmonize coordination and cooperation mechanisms in the field of disaster risk reduction and the response to transboundary emergencies.
- Implementation of practical measures and/or projects aimed at reducing the risks of transboundary disasters.
- Improvement of regional systems for risk assessment, disaster monitoring, early warning, prevention, preparedness, and response with regard to large-scale and transboundary disaster hazards.
- Implementation of measures to strengthen regional cooperation aimed at the establishment, development, improvement, and harmonization of a regional early warning, alert, and mutual information-sharing system on disaster risks, as well as risk monitoring and assessment in the event of or in response to large-scale and transboundary emergencies, based on the use of the capacities of existing national crisis management centres and early warning systems.
- Enhancement of the capacity of personnel of emergency authorities and services of the countries of the region in the field of risk management of large-scale and transboundary disasters.

- Implementation of measures to strengthen regional cooperation aimed at improving the professional level and qualifications of specialists of state authorities authorized in the field of the prevention of and response to emergencies, emergency services, and local authorities.

SECTION V: COOPERATION FOR THE IMPLEMENTATION OF THE FRAMEWORK FOR STRENGTHENING REGIONAL COOPERATION IN THE FIELD OF DISASTER RISK REDUCTION AND EMERGENCIES

The implementation of the Framework for Strengthening Regional Cooperation in the field of Disaster Risk Reduction (DRR) shall be carried out on the basis of voluntary commitments, in accordance with the goals and objectives of bilateral and multilateral intergovernmental and/or inter-agency agreements, the Regional Forum-Meeting of Heads of Emergency Authorities of Central Asian countries, the Centre for Emergency Situations and Disaster Risk Reduction in the city of Almaty, joint development projects, and other forms of cooperation. It shall be implemented through interaction and partnership among all relevant stakeholders at the international, regional, and national levels, with organizational and technical support from international organizations and donor agencies.

CONCLUSION

Amendments and additions to the present Framework for Strengthening Regional Cooperation in the field of Disaster Risk Reduction among Central Asian countries shall be made by Decisions of the Regional Forum-Meeting of Heads of Emergency Authorities of Central Asian countries.