

**“APPROVED”**

*By the Regional Forum-Meeting of the Heads  
of Emergency Authorities of CA countries  
Protocol of 6 October 2022*

**Developed within the frame of:**

- *the Protocol of the Regional Forum-Meeting of the Heads of Emergency Authorities of Central Asian countries dated 11/04/2021*
- *Action Plan (Road Map) on implementation of the Cooperation Development Strategy of Central Asian countries in the field of disaster risk reduction for 2022-2023)*

**PROVISION**  
**on the Regional Early Warning and Mutual Information System for disaster threats and  
occurrence**

*(is subject to alteration and amendment)*

**1. General provisions**

- 1.1** This Regulation determines the procedure for organizing and functioning of the Regional Early Warning and Mutual Information System for disaster threats and occurrence.
- 1.2** The main prerequisites for the creation of the Regional Early Warning and Mutual Information System for disaster threats and occurrence are:
- exposure of the territory of the region to almost all types of natural, man-made, ecological, biological and social disasters;
  - increased vulnerability of the countries of the region to the negative consequences of climate change, which are catalysts for the development of dangerous geological and hydrological processes, which significantly increase the risk of disasters, including large-scale and transboundary ones;
  - the presence in the countries of the region of a trend of increasing frequency and intensity of extreme natural and climatic processes, which often lead to emergencies, negative socio-economic consequences impede progress towards sustainable development of the countries of the region;
  - the presence of risks of large-scale and transboundary disasters, which cannot always be eliminated by the forces and means of one country;
  - the need to create at the regional level an effective mechanism for the implementation of bilateral and multilateral interstate and intergovernmental treaties (agreements) that have entered into force in the field of prevention and elimination of emergencies and international strategic program documents of the United Nations in the field of disaster risk reduction, combating climate change and achieving the goals of sustainable development;
  - the need to create and ensure the sustainable functioning of the Regional Early Warning and Mutual Information System for disaster threats and occurrence, in order to reduce socio-economic damage and losses from emergencies, especially large-scale and transboundary ones.
- 1.3** the Regional Early Warning and Mutual Information System for disaster threats and occurrence is created and operates on the basis of the implementation of measures for integration and the use of national early warning systems operating in each of the countries of Central Asia and informing the population and territories about the threat or occurrence of emergencies.
- 1.4** The Regional Early Warning and Mutual Information System for disaster threats and occurrence in terms of technical and temporal parameters and management decisions for obtaining information on disaster threat or occurrence and the speed of launching the national early warning systems operating in each of the countries of Central Asia is subdivided into two regional systems:
- 1)** The Regional Early Warning System for earthquakes;
  - 2)** The Regional Early Warning and Mutual Information System for disaster threats and occurrence.

**2. The Regional Early Warning System for earthquakes**

**2.1.** The Regional Early Warning System for earthquakes is being created in order to automatically receive signals from the Crisis Management Centers of the Central Asian countries about the occurrence, approximate location of the epicenter, the radius of propagation and the strength of earthquakes / earthquake intensity and the subsequent launch of automated early warning systems to inform the population and territories, as well as the adoption of emergency measures aimed at mitigating the socio-economic damage and losses from disasters, especially large-scale and transboundary ones.

**2.2.** The Regional Early Warning System for earthquakes is based and operates using the following main factors:

- the speed of propagation of seismic waves is not very high, and in order to reach settlements, they may need from several tens of seconds to several minutes, depending on the distance of cities and settlements from the earthquake epicenter;
- in the event of a seismic wave (tremors), seismometers / seismic sensors installed throughout the region automatically register, seismographs analyze and predict the approximate location of the epicenter, the propagation radius, as well as the strength / magnitude / intensity of the earthquake on the MSK-64 scale ;
- information received from seismometers / seismic sensors / seismographs about the approximate location of the epicenter, the propagation radius, as well as the strength / magnitude / intensity of an earthquake above the threshold level of 8 or more points on the MSK-64 scale, should be instantly recorded and processed by national crisis management centers of the countries of Central Asia;
- Crisis management centers of Central Asian countries, when receiving signals about the occurrence, approximate location of the epicenter, propagation radius, as well as the strength / magnitude / intensity of an earthquake above the threshold level of 8 or more points on the MSK-64 scale, process the information and, if necessary, accept decide and launch automated early warning (informing) systems for the population and territories in order to take emergency measures aimed at mitigating socio-economic damage and losses from emergency situations;

**2.3.** The algorithm of actions to create and ensure the functioning of the Regional Earthquake Early Warning System consists of three main stages:

First stage: implementation of measures for the integration / technical interface of all systems available in the region for receiving signals / information from seismometers / seismic sensors / seismographs by the Crisis Management Centers of Central Asian countries about the occurrence, approximate location of the epicenter, propagation radius, as well as the strength / magnitude / intensity of the earthquake;

Second stage: processing by the Crisis Management Centers of the Central Asian countries of signals / information from seismometers / seismic sensors / seismographs about the occurrence, approximate location of the epicenter, propagation radius, as well as the strength / magnitude / intensity of an earthquake above the threshold level of 8 or more points on the MSK-64 scale and immediate (within a few seconds) making a decision to launch national automated systems for early warning of the population and territories about the occurrence of an earthquake.

Third stage: emergency launch of national automated systems for early warning of the population and territories about the occurrence of an earthquake, using existing automated information management and other early warning and information systems, including sirens, mobile applications, SMS messages, radio and television broadcasting networks, “smart / safe city”, automated systems for shutting down production, shutting off electricity, gas, cold and hot water supply, ground and underground transport and other automated systems. This action will provide emergency notification and informing the population and territories about the occurrence of an earthquake, which will allow people in a short time, in a few seconds to a minute, to take protective actions, take shelter or evacuate from hazardous areas and minimize the negative consequences.

### **3. Regional Early Warning and Mutual Information System for disaster threats and occurrence**

**3.1.** The Regional Early Warning and Mutual Information System for disaster threat or occurrence is being created in order to ensure the emergency departments of the Central Asian countries immediately exchange emergency information about the threat or occurrence of emergencies of a natural, man-made,

environmental and socio-biological nature, the damaging factors of which pose a threat of spread to the territory other countries of the region, as well as the adoption of a set of measures aimed at reducing the socio-economic damage and losses from emergency situations, especially large-scale and transboundary ones.

**3.2.** The Regional Early Warning and Mutual Information System for disaster threat or occurrence is based and operates on the basis of taking into account and using the following main factors:

- the countries of Central Asia are exposed to almost all types of hazardous processes and phenomena of a natural, man-made, environmental, biological and social nature, and also have potentially dangerous objects on their territories that pose a threat of emergency situations, the damaging factors of which can spread to the territory of other countries of the region ;
- in the countries of the region, monitoring and forecasting of hazardous natural processes and phenomena, the state of potentially dangerous objects, the threat and occurrence of emergency situations of a natural, man-made, environmental and socio-biological nature, zones, scales, and sizes of their distribution area are carried out;
- in each country of the region, Crisis Management Centers (CMCs) have been created and are functioning around the clock, collecting, analyzing and assessing the real situation, informing government authorities, the population and territories about the threat and occurrence of emergencies, as well as operational management of response and elimination of their consequences.

The algorithm of actions to create and ensure the functioning of mutual information about the threat or the occurrence of emergency situations consists of two main stages:

First stage: The emergency departments of the countries of Central Asia, on a quarterly basis, exchange operational information on the forecast and monitoring of hazardous processes and phenomena of a natural, man-made, environmental, biological and social nature, as well as on the state of potentially dangerous objects that pose a threat of emergency situations, the damaging factors of which can spread to other countries in the region;

Second stage: when a threat or emergencies of a natural, man-made, environmental and socio-biological nature are identified, the damaging factors of which, according to monitoring, forecasting and assessment of the situation, pose a threat of spread to the territory of other countries of the region, the emergency departments of the countries of Central Asia provide immediate emergency mutual information and transfer of operational information about the current situation and organize interaction and cooperation in order to coordinate joint actions.

#### **4. Competent and working bodies for the establishment and operation Regional system of early warning and mutual information about the threat and occurrence of emergencies**

**4.1** The competent authorities for the creation and operation of the Regional System of Early Warning and Mutual Information about the Threat and Emergencies are the Crisis Management Centers of the emergency departments of the Central Asian countries.

**4.2** The working body for the creation and operation of the Regional System for Early Warning and Mutual Information on the Threat and Emergencies is the Technical Working Group (TWG), consisting of delegated expert experts from the countries of Central Asia (3 specialist experts from each country).

**4.3** The Technical Working Group (TWG), if necessary, additionally, upon agreement, may include expert experts from scientific institutions, international, non-governmental and other organizations specializing in the field of seismology, early warning systems, disaster risk reduction and emergency situations.

**4.4** Assistance in the creation and operation of the Regional System of Early Warning and Mutual Information about the Threat and Emergencies is carried out by the Center for Emergency Situations and Disaster Risk Reduction - the Secretariat of the Regional Forum - the Meeting of the Heads of Emergency Departments of the Central Asian countries, as part of the initiation and implementation of regional programs and projects funded by donor agencies and international organizations.

# REGIONAL CENTRAL ASIAN EARLY WARNING SYSTEM

