

«APPROVED»
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of Emergency Management Agencies of the Central Asian Countries
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REGULATIONS
on the Regional Early Warning and Mutual Information System
on the Threat and Occurrence of Emergencies

1. General Regulations

1.1 The present Regulations define the procedure for the establishment, organization and functioning of the Regional Early Warning and Mutual Information System on the threat and occurrence of emergencies in the transboundary territory of the Central Asian countries.

1.2 The main prerequisites for establishing the Regional Early Warning and Mutual Information System on the threat and occurrence of emergencies include:

- the exposure of the region's territory to virtually all types of emergencies of natural, technological, environmental, and biological-social nature;
- the increasing vulnerability of the countries of the region to the adverse impacts of climate change, which act as catalysts for the development of hazardous geological and hydrological processes, significantly increasing the risk of disasters, including those of large-scale and transboundary character;
- the presence in the countries of the region of a sustained trend of increasing frequency and intensity of extreme natural and climatic processes and phenomena, which often lead to emergencies, the adverse socio-economic consequences of which hinder progress towards sustainable development;
- the existence of risks of large-scale and transboundary emergencies, the consequences of which cannot always be addressed solely by the forces and resources of one country;
- the need to establish at the regional level an effective mechanism for the implementation of bilateral and multilateral inter-State and intergovernmental treaties (agreements) in force in the field of emergency prevention and response, as well as United Nations strategic programme documents in the areas of disaster risk reduction, combating climate change and achieving the Sustainable Development Goals;
- the need to establish and ensure the sustainable functioning of the Regional Early Warning and Mutual Information System on the threat and occurrence of emergencies, in order to reduce socio-economic damage and losses from emergencies, particularly those of large-scale and transboundary character.

1.3 The Regional Early Warning and Mutual Information System on the threat and occurrence of emergencies shall be established and shall function on the basis of measures aimed at the integration/technical interconnection and use of the national warning and public information

systems operating in each of the Central Asian countries regarding the threat or occurrence of emergencies affecting populations and territories.

1.4 In accordance with technical and time parameters, as well as managerial decision-making related to the receipt of information on the threat or occurrence of emergencies and the speed of activation of the national early warning and public information systems operating in each of the Central Asian countries, the Regional Early Warning and Mutual Information System is divided into two regional systems:

- 1)** the Regional Earthquake Early Warning System;
- 2)** the Regional Mutual Information System on the threat or occurrence of emergencies.

2. Regional Earthquake Early Warning System

2.1 The Regional Earthquake Early Warning System is established for the purpose of enabling the Crisis Management Centres of the Central Asian countries to receive, in an operational manner, signals regarding the occurrence of an earthquake, the approximate location of the epicentre, the radius of propagation, and the strength of ground shaking/intensity of the earthquake, followed by the activation of automated early warning (public information) systems for populations and territories, as well as the adoption of emergency measures aimed at mitigating socio-economic damage and losses from emergencies, particularly those of a large-scale and transboundary character.

2.2 The Regional Earthquake Early Warning System is based and functions taking into account the following key factors:

- the speed of seismic wave propagation is not very high, and reaching populated areas may require from several tens of seconds to several minutes, depending on the distance of cities and settlements from the earthquake epicentre;
- when seismic waves (ground shaking) occur, seismometers and seismic sensors installed across the seismically hazardous territory of the region automatically register the event, and seismographs analyse and estimate the approximate location of the epicentre, the radius of propagation, as well as the strength, magnitude and intensity of the earthquake according to the MSK-64 intensity scale;
- the information received from seismometers, seismic sensors and seismographs regarding the approximate epicentre location, propagation radius, and the strength, magnitude and intensity of an earthquake exceeding the threshold level of 8 points or more on the MSK-64 scale shall be immediately registered and processed in specialized data processing centres and transmitted without delay to the national Crisis Management Centres of the Central Asian countries;
- upon receiving signals regarding the occurrence of an earthquake, the approximate epicentre location, propagation radius, and strength, magnitude and intensity exceeding the threshold level of 8 points or more on the MSK-64 scale, the Crisis Management Centres of the Central Asian countries process the information and, where necessary, decide upon and activate automated early warning (public information) systems for populations and

territories, in order to undertake emergency measures aimed at mitigating socio-economic damage and losses from emergencies.

2.3 The algorithm of actions for establishing and ensuring the functioning of the Regional Earthquake Early Warning System consists of three main stages:

First stage: implementation of measures for the integration and technical interconnection of all existing systems in the region for receiving signals and information from seismometers, seismic sensors and seismographs, through specialized data processing centres of the Central Asian countries, concerning the occurrence of an earthquake, the approximate epicentre location, the radius of propagation, and the strength, magnitude and intensity of the earthquake, as well as the establishment of a Central Integration Server;

Second stage: processing by specialized data processing centres of the Central Asian countries of signals and information from seismometers, seismic sensors and seismographs regarding earthquakes exceeding the threshold level of 8 points or more on the MSK-64 scale, and the subsequent immediate transmission of data to the national Crisis Management Centres of the Central Asian countries for prompt decision-making (within several seconds) on activating national automated early warning systems for populations and territories in the event of an earthquake;

Third stage: emergency activation of national automated early warning systems for populations and territories in the event of an earthquake, using existing automated information and management systems and other early warning and public information mechanisms, including sirens, mobile applications, SMS messages, radio and television broadcasting networks, “smart/safe city” management systems, automated systems for halting industrial operations, shutting off electricity and gas supply, cold and hot water supply, surface and underground transport, and other automated systems, the operation of which ensures urgent alerting and informing of populations and territories about the occurrence of an earthquake, enabling people, within a short period of time - ranging from several seconds to one minute - to take protective actions, seek shelter or evacuate from hazardous zones, and minimize adverse consequences.

3. Regional Mutual Information System on the Threat or Occurrence of Emergencies

3.1 The Regional Mutual Information System on the threat or occurrence of emergencies is established in order to ensure the immediate and urgent mutual exchange of operational information among the emergency management agencies of the Central Asian countries regarding the threat or occurrence of emergencies of natural, technological or environmental nature, the impact factors of which may pose a risk of spreading to the territory of other countries in the region, as well as to adopt a set of measures aimed at reducing socio-economic damage and losses from emergencies, particularly those of a large-scale and transboundary character.

3.2 The Regional Mutual Information System on the threat or occurrence of emergencies is based and functions taking into account the following key factors:

- the Central Asian countries are exposed to virtually all types of hazardous processes and phenomena of natural, technological and environmental nature, and also contain potentially

hazardous facilities on their territories that may give rise to emergencies, the impact factors of which may spread to the territory of other countries in the region;

- monitoring and forecasting are carried out in the countries of the region with regard to hazardous natural processes and phenomena, the condition of potentially hazardous facilities, and the threat or occurrence of emergencies of natural, technological and environmental nature, including the zones, scale and extent of their possible spread;
- Crisis Management Centres have been established and are functioning in each country of the region on a 24-hour basis, ensuring the collection, analysis and assessment of the actual situation, informing authorities, populations and territories of the threat or occurrence of emergencies, as well as providing operational coordination of response measures and the elimination of their consequences.

The algorithm of actions for establishing and ensuring the functioning of the mutual information system on the threat or occurrence of emergencies consists of two main stages:

First stage: the emergency management agencies of the Central Asian countries, on a quarterly basis, exchange operational information on the forecasting and monitoring of hazardous processes and phenomena of natural, technological and environmental nature, as well as on the condition of potentially hazardous facilities that pose a risk of emergencies, the impact factors of which may spread to the territory of other countries in the region;

Second stage: when a threat is identified or an emergency of natural, technological or environmental nature occurs, the impact factors of which, according to monitoring, forecasting and situation assessment data, pose a risk of spreading to the territory of other countries in the region, the emergency management agencies of the Central Asian countries ensure immediate and urgent mutual notification and transmission of operational information on the situation that has arisen, and organize interaction and cooperation in order to coordinate joint actions.

4. Competent and Working Bodies for the Establishment and Functioning of the Regional Early Warning and Mutual Information System on the Threat or Occurrence of Emergencies

4.1 The competent bodies responsible for the establishment and ensuring the functioning of the Regional Early Warning and Mutual Information System on the threat or occurrence of emergencies shall be the Crisis Management Centres of the emergency management agencies of the Central Asian countries.

4.2 The working body responsible for the establishment and ensuring the functioning of the Regional Early Warning and Mutual Information System on the threat or occurrence of emergencies shall be the Technical Working Group (TWG), composed of delegated expert specialists from the Central Asian countries (three expert specialists from each country).

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

4.4 Assistance in the establishment and ensuring the functioning of the Regional Early Warning and Mutual Information System on the threat or occurrence of emergencies shall be provided by the Centre for Emergency Situations and Disaster Risk Reduction, acting as the Secretariat of the Regional Forum-Meeting of Heads of Emergency Management Agencies of the Central Asian countries, within the framework of the initiation and implementation of regional programmes and projects financed by donor agencies and international organizations.