# "NATIONAL STRATEGY FOR COMPREHENSIVE SAFETY OF POPULATION AND TERRITORIES OF THE KYRGYZ REPUBLIC FROM DISASTERS AND EMERGENCIES: 2012-2020"

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#### **PREFACE**

The growth of number and scale of disasters in the world requires not as much preparedness to recovery but introduction of new disaster risk management approaches into the national strategies and development programs.

In September 2000, representatives from 191 countries, including the Kyrgyz Republic, adopted the Millennium Declaration. By signing this Declaration, Kyrgyzstan, like other States, has expressed its commitment to the eight key commitments outlined in the Millennium Development Goals (MDG). One of them was poverty reduction and sustainable environmental development. However, achieving these goals is impossible without the safety of the population and territories from various types of emergencies.

This particular problem has been the focus of the Global UN Conference for Disaster Risk Reduction, held in early 2005 in Kobe, Japan. At this event the Hyogo Framework for Action (HFA) 2005-2015: "Building the resilience of nations and communities to disasters" was adopted. The main goal of HFA is to strengthen the resilience of nations and people through the substantial reduction of disaster losses by 2015, i.e. number of victims and social, economic and environmental damage of communities and countries.

By signing the Hyogo Protocol, Kyrgyzstan took over the obligation to carry out national activities aimed at reducing vulnerability to disasters, through introduction and implementation of risk reduction and mitigation initiatives.

HFA proposes five priorities for action, guidelines and practical tools for achieving sustainability of vulnerable communities against the impacts of disasters in the context of sustainable development:

- 1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
- 2. Identify, assess and monitor disaster risks and enhance early warning.
- 3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
- 4. Reduce the underlying risk factors.
- 5. Strengthen disaster preparedness for effective response at all levels.

#### INTRODUCTION

In view of its unique geographical location, the Kyrgyz Republic is a State, which is prone to numerous types of natural disasters. Severe geological, climatic threats and global climate change-related issues have permanent negative effects on the population and national economy.

In addition, technological progress has shown its downside associated with the depletion of land resources as a result of extensive use, a number of social, economic and political crises, as well as the new technological disaster hazards. The interdependence of natural and man-made areas has significantly increased, bringing in new types of disasters that were not previously specific to our republic. Statistics show that the level of social and environmental disaster risks in Kyrgyzstan is rather high.

According to the Ministry of Emergency Situations of the Kyrgyz Republic (MES KR) every year about 200 emergencies of various kinds are registered in the republic, causing direct damage of about \$ 30-35 million, while the government allocates only about \$ 6 million a year from the national budget for prevention and recovery activities, and the number of emergencies occurring in the country is rigorously increasing.

All the above makes us look for new solutions of the problems to protect population and territories from disasters and emergencies, to address anticipated future threats, risks and hazards, and to develop methods of disaster forecasting and warning.

In 2007 the Presidential Decree dated 16 May 2007 No.249 adopted the Country Development Strategy (CDS). One of the areas of the CDS: "Enhancing environment" had several priorities, one of them was: "Provide comprehensive safety for population and territories from disasters and emergencies".

The Presidential Decree "On introducing changes into the Presidential Decree "On the Country Development Strategy: 2007-2010" of 16 May 2007" dated 8 October 2008 No.359, made changes in the preceding strategy and promoted adoption of the Country Development Strategy: 2009-2011.

In view of this fact the Country Development Strategy included measures on reduction of only the *natural disaster risks*, and this raised the need to develop more comprehensive strategy covering wider range of related issues. This comprehensive strategy would include measures to address not only the natural disasters, but also the manmade and bio-social disasters, including social conflicts. The latter types of emergencies also do cause substantial damage to the economy, livelihood and health of citizens of the Kyrgyz Republic. In particular, the examples of social emergencies were the 2010 events (April revolution, June events in the South), made the government bodies to reconsider such crises."

It was evident that emergencies should be approached comprehensively, solving problems together involving new participants and stakeholders into the disaster management process.

The overall goal of the Strategy is to ensure long-term disaster risk reduction until 2020, identifying areas and priorities, which require first of all funding of activities from the state budget and donor funds.

Adoption of the "National Strategy for Comprehensive Safety of Population and Territories of the Kyrgyz Republic from Disasters and Emergencies: 2012-2020" is the formal evidence that this issue is becoming an integral part of the state policy of our country in protection of population and territories from disasters. At this stage the goal of the state policy should be to ensure

guaranteed level of protection of population and territories from disasters within the acceptable risk frames.

The strategy mentions not only the activity of authorized state body, which is the Kyrgyz Ministry of Emergency Situations, but also the activity of all involved partners, particularly government ministries, state committees, administrative agencies, territorial and district administrations, local self-governance bodies and the civil society.

The Strategy is structured of Preface, Introduction and 3 other sections. Preface and Introduction describes the relevancy and the background of the strategy. Section 1 describes more of hazards of various possible disasters in the Kyrgyz Republic and their potential impact. Section 2 defines key priorities of ensuring comprehensive safety of population and territories of the Kyrgyz Republic. Section 3 provides for the process developed to implement the Strategy (implementation stages until 2020), funding of the Strategy and implementation plan.

# Section I. Disaster risks in the Kyrgyz Republic

#### 1.1 General statistics of disasters

The Kyrgyz Republic is located in the area of intense collision of two giant tectonic plates of global scale: the Euro-Asian in the north and the Indo-Australian from the south. These plates are responsible for the development of orogenic processes and, as a result, a whole range of different natural disasters and emergencies. Being a mountainous country with elevation ranging from 401 to 7439 meters above the sea level, it forms altitudinal climate zonation and natural vertical zonation with high energy relief, seismic and tectonic movements, causing development of landslides, rockfalls, debris flows, floods, snow avalanches, earthquakes, groundwater level rising, outburst hazard glacial lakes, permafrost and other hazards. This mountain system seems to be particularly vulnerable for exposure to natural, manmade, environmental and socio-biological disasters. Statistics on the number of emergencies that have occurred in the Kyrgyz Republic from 1990 to 2011 show that disasters are distributed as follows (in descending order): Osh, Jalal-Abad, Chui, Batken (to some extent, as this region was founded in 1999), Issyk-Kul, Naryn and Talas oblasts. The greatest number of emergencies was noted in 2008, the lowest - in 1992. Annual average statistical number of emergencies over the mentioned period is 159. The percentage of registered emergencies looks as follows: debris flows and floods - 29%, landslides, rock falls - 13%, snow avalanches - 10%, man-made (including fires) - 13%, meteorological (wind, rain, snow, hail, etc.) - 10%, earthquakes - 9%, others - 6%, infectious diseases of humans and animals - 5%, water logging - 5%. In 2011, as compared with the average numbers for the 1990-2011 period the number of emergencies increased as follows: mudflows and floods for 1,8 times, earthquakes - 2.7 times, water logging as a result of rising of ground water level - 3 times, an increasing number of manmade accidents and fires - 1/4 times. Given the data and the dynamics of the emergency at an average natural conditions of the year (rainfall, groundwater levels, temperature, seismic activity, etc.) the number of possible emergencies in the Kyrgyz Republic ranges between 220-240 cases per vear.

The review of the last years shows steadfast growth in number of natural and manmade disasters.

The quantitative analysis of natural and manmade disasters from 2007 to 2010 is provided in the table below:

Years	2007	2008	2009	2010
Number of disasters	209	312	227	439
Number of people affected	93	281	71	158
Material damage, (thousand KGS)	815 813,0	1 194 693,0	156 589,29	596 910,00

Thus, during the above mentioned period the total number of registered natural and manmade emergencies was 1,187. These killed 603 people and caused material damage equaling to 2,764,005,290 KGS.

#### 1.2 Natural disaster risks

The Kyrgyz Republic is the largest mountainous republic in terms of highland territorial relationship among the CIS countries. One of the most specific features of the country is the extensive areas with potential hazard of rock falls, landslides, snow avalanche, debris flows and glaciers. Out of 70 types of globally known natural phenomena, which can cause substantial damage to people and economy, almost all of them present in Kyrgyzstan (except for volcanoes, tsunamis, typhoons). Increasing frequency and damage from natural disasters range from year to year.

**Earthquakes**. In long-term perspective the most hazardous disasters for the people of Kyrgyzstan are earthquakes. The area of potential earthquakes with intensity of 9 are 40,000 sq.km, with intensity 8 - 158,000 sq.km.

Kyrgyz Institute of Seismology of NAS KR<sup>1</sup> emphasizes general increase of seismic activity in Tien-Shan during 2007-2015; the first phase of activation lasted until 2008, second phase being the most intense and long lasting is expected during 2010-2014 with maximum in 2012. In terms of destructive power and severity of impacts earthquakes are the most hazardous natural disasters in Kyrgyzstan. Fortunately, recurrence of disastrous earthquakes is not so high and is incommensurable with the frequency of other hazardous natural processes.

**Debris flows and floods**. In view of the extent and frequency and in terms of the severity of caused damage they are number one amongst other hazardous phenomena in Kyrgyzstan. Total number of debris flow basins is about 3900; there are about 2000 outburst hazard glacial lakes, 200 of them have high outburst potential, 300 settlements are located within the area of disastrous floods.

**Snow avalanches**. A bigger half of the republic's territory is prone to snow avalanche hazard. Duration of avalanche season is 5-7 months. Snow avalanches occur annually on the highways and lead to emergencies and victims.

**Landslides**. There are more than 5000 active landslides in Kyrgyzstan. 510 settlements are prone to land sliding processes to various extents. The potential landslide hazard pose threat to almost 10,000 households, where in the future either landslide protection measures have to be taken or people should be relocated to safer territories.

**Rising of ground water level**. According to the Kyrgyz hydro-geological survey team the water logging processes are spread over 3200 sq.km throughout the country, and pose threat to 316 settlements.

Other natural processes leading to disasters and emergencies include risk of bank erosion, abrasion, damage, drifting and displacement of ground surface by water energy and reservoir waves, subsidence of loess and clay soils, catastrophic and uneven deformation of compressibility in loess and clay soils due to their wetting and water influx leading to destruction of engineering structures, debris failures, rock falls, continuous rains, snowfall, drought, etc.

#### **Problems:**

- 1. Increasing number of natural disasters due to the global climate change;
- 2. Lack of funding for disaster prevention measures;
- 3. Lack of funds with local self-government bodies, rayon and oblast state administrations to provide financial resources for disaster prevention activities;

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<sup>&</sup>lt;sup>1</sup> NAS KR - Kyrgyz National Academy of Science

- 4. Non-execution by territorial state administrations and local self-government bodies of the their commitments provided in the Law of the Kyrgyz Republic "On Civil Protection";
- 5. Need to undertake decentralization of government bodies, delegation of authorities to local self-government bodies.

#### 1.3 Manmade disaster risks

At present, in seven administrative oblasts of Kyrgyzstan there are about one thousand mapped abnormal locations with high concentration and emergence of radioactive deposits in the closed mines, waste dumps, mine tailings, and other insufficiently studied areas.

MES KR is responsible for 61 hazardous entities, 36 of them are mine tailings (31 contain radionuclides) and 25 waste dumps. Hazardous wastes of mining industry have been buried more than half-a-century ago. In five out of seven oblasts of the country there are preserved mine tailings and waste dumps, which pose high risk of possible radioactive and environmental disasters, e.g. near the unique lake of Issyk-Kul at Kaji-Sai village. This kind of places pose threat not only the local population, but also to four Central Asian countries: Kyrgyzstan, Uzbekistan, Tajikistan and Kazakhstan.

Mining nuclear fuel is connected to the problem of burial of radioactive wastes from mining industry, which dramatically increases environmental risk, sickness rate and expropriation of lands. Along with that, addressing radioactive wastes exceptionally from point of long-term maintenance and rehabilitation of preserved mine tailings and waste dumps in view of high seismicity, landslide and debris flow activity in these areas, add to that their age and undue maintenance conditions, this has surely led to geofiltrational depressurization, and also to other ways of leakage of redionuclides, which have occurred in cases of the tailing dam breaking in Kyrgyzstan.

#### Potential disaster risks from water reservoirs and Hydro-Power Plants (HPP)

There are 6 water reservoirs within Naryn cascade of hydro-power plants, and about 450 various agricultural water reservoirs functioning in Kyrgyzstan. Operation of Kambar-Ata-2 HPP and the water reservoir is at the commencing stage.

The stability of water reservoirs and HPP dams in view of their age have a tendency to lose solidity in case of an earthquake and the earth crust displacements.

In view of high level of seismicity in the region there is always a risk of dam breaking, which consists of ground materials, concrete soil, gravitational homogenous explosive rock-fill, alluvial and engineering constructions.

In case of emergency or irrigational and power energy discharge the water can lead to damage and washing of river banks and pose threat of flood to settlements and territories.

# Manmade disaster risks at hazardous industrial entities in the Kyrgyz Republic

In the beginning of 2011 there were 1945 acting industrial enterprises and organizations, and about 20,000 hazardous maintenance facilities (hoisting cranes, gas pipelines, petrol stations, natural liquid gas stations, warehouses of potent poisonous agents, ammoniac facilities, mineral quarry pits, mines, etc.) in the country:

**In Bishkek city** there are 460 organizations and enterprises maintaining 1945 hazardous facilities. The largest maintenance facilities include: Heat Station of Bishkek city, JSC TNC

"Dastan", "Avtomash-Radiator" Ltd., OJSC "Azat Corporation", "Stroimechanizatsiya" Ltd., JSC "Bishkek machinery plant", "Bishkekteplokommunenergo", OJSC "Tash-Temir", "Bishkek Gas".

**In Chui oblast** there are 396 organizations and enterprises maintaining 6,747 facilities. Largest enterprises include "KyrKazGas", OJSC "Kant Cement Plant" in Kant town, "Kant pipe and roof production" Ltd., "Abdysh-Ata" Ltd. in Kant town, "Chui Gas" in Sokuluk town, "Potential" Ltd. in Nov-Pokrovka village, "INTERGLASS" Glass Plant in Tokmok town, etc.

In Naryn oblast there are 112 organizations and enterprises maintaining 946 facilities.

In Issyk-Kul oblast there are 213 organizations and enterprises maintaining 1145 facilities.

**In Talas oblast** there are 75 organizations and enterprises maintaining 222 facilities

**In Osh city** there are 171 organizations and enterprises maintaining 2,355 hazardous facilities. Largest enterprises maintaining boiler facilities and hoisting cranes are Heat Station of Osh city, "Autoremzavod" Ltd., "Hyprokislorod" Ltd., "Sher Az" Ltd., OJSC "Concrete Plant", JSC "Osh-Aktash", JSC "Bolot" and others.

**In Osh oblast** there are 127 organizations and enterprises maintaining 1097 hazardous facilities. Largest enterprises are JSC "Remsnab", OJSC Aravan cotton plant "Ak-Bulak", JSC "Selkhoztechnika", JSC "Ak-Altyn".

**In Jalal-Abad oblast** there are 287 organizations and enterprises maintaining 3842 hazardous facilities. Largest enterprises include JSC "Dostuk Plant", Tereksay mine OJSC "Kyrgyzaltyn", SJSC "Tashkomur".

**In Batken oblast** there are 104 organizations and enterprises maintaining 961 hazardous facilities.

There are high economic losses caused by accidents and industrial injury rate at dangerous production entities. They in turn worsen social environment within the society due to the loss of working places. According to the UN for the last several years the damage caused to the global economy by manmade disasters and accidents has increased for more than three times and exceeds 200 billion USD every year. The Gosgortechnadzor (Mining Supervision Department under the MES KR) takes measures to prevent budget costs for accident and emergency recovery, and response to injury rate at production entities in the republic. So, the annual economic effect by Gosgortechnadzor is estimated to be about one billion KGS.

**Fires**. Average number of fires per annum is 3,125, causing average damage of 192,531,000 KGS.

There are three main groups of fires causes. *First*, the reasons associated with carelessness (48% of fires), child pranks with fire (28%) and non-compliance with fire safety regulations and rules during operating and mantling electric equipment (31%). *Second* group of fire causes includes natural factors: spontaneous ignition, thunderstorms, focusing of sunbeams and some other reasons. *Third* group of fire reasons refers to arsons due to various motives.

In rural settlements the radius of servicing by fire brigades, dislocated in rayon centers, exceeds the normative for 8-10 times. For example, distance of fire unit to Tuya-Moyun village in Aravan rayon, Osh oblast, is 120 km, Jerkochku village in Naryn rayon – 139 km, Saryjaz village in Ak-Suu rayon, Issyk-Kul oblast – 120 km., Kaynar village in Kara-Buura rayon, Talas oblast – 65 km, Suusamyr village in Jayil rayon, Chui oblast – 157 km, and so on. Remoteness of settlements and inadequate communication increase the time of reach by fire brigades to a place of fire call, and the lack or disrepair of fire water supply in settlements and economic

facilities have negative impact on efficient response by the state fire service.

#### **Problems:**

- 1. Worn out equipment and machinery;
- Outflow of qualified staff abroad;
- 3. Low level of specialist training, need for their training abroad, which required additional funding.
- 4. Corruption in road safety bodies, poor training of drivers unable to pass exams.
- 5. Imperfection of legislation for state supervision of industrial sector.

#### 1.4 Bio-social disaster risks

# **Epidemiologic and epizootic condition**

Epidemiologic and epizootic situation in the Kyrgyz Republic is conditioned with the most specific infectious diseases: Siberian anthrax, typhoid fever, brucellosis, rabies, foot-and-mouth disease. Favorable climatic conditions, lack of quality potable water, and drinking water from open reservoirs promote general intestinal diseases with people, such as typhoid fever, viral hepatitis, etc. Compared to 2008 there is an observed decrease of brucellosis with people. In 2009 number of registered cases of brucellosis was 3,629 (in 2008 – 3,815 cases), of them in Jalal-Abad oblast - 1146 people, Batken oblast - 284 people, Issyk-Kul oblast - 550 people, Naryn oblast - 436 people, Osh oblast - 452 people, Talas oblast - 252 peoplea, and in Chui oblast - 369 people.

During the epidemiologic studies it was clear that the sick develop brucellosis and Siberian anthrax during participating in compelled slaughtering and butchering of cattle. There are 1,234 soil hotbeds of Siberian anthrax in Kyrgyzstan; 11 cases of Siberian anthrax were registered in 2009; 10 of these people have taken this in Jalal-Abad oblast. Another serious problem requiring complex addressing of the issue is to fight rabies taken by cattle. Growth of wild carnivorous animals and rodents is the main source of rabies virus and infection of animals. Lack of a complex program against rabies and lack of interconnection between the stakeholders of this issue do not allow the agencies to make optimistic forecast on prevention of this disease among the animals for the next few years. Permanently unfavorable regions in the country in terms of rabies are Jalal-Abad and Batken oblast.

#### **Problems:**

- 1. Low level of preparedness of medical and veterinary services, their equipping, monitoring and control;
- 2. Lack of prophylaxis system of epidemic, epiphytotic, and epizootic diseases;
- 3. Disruptions in environmental system: pollution of air, soil and water.
- 4. Using of nitrates, herbicides and pesticides for fertilization of soil, eradication of insects.

#### 1.5 Risk of terrorism and social conflicts

International terroristic organizations are strengthening their armed confrontation to antiterrorist coalition in Afghanistan and Iraq on the background of ongoing "colour revolutions" in Arabic countries. They can send subversive and terroristic units to Central Asian countries to destabilize situation in the region. Their main goal is to establish state units in Central Asian region under theocratic (pseudo-Islamic) slogans. One of the parallel objectives of their activity is to disrupt shipping and supply of cargo by antiterrorist coalition in Afghanistan. The above situations are favored by growth of international narcotic drug traffic through the Central Asian countries, weak interstate boundaries and other factors. Under these conditions the above countries have activation of underground cells of international terroristic and religious extremist

organizations, pursuing their aim to destabilize situation in these countries to establish their control over certain territories.

Special hopes of extremist powers to reach their aims are laid upon Kyrgyzstan, where interethnic mass disorders took place in 2010, ethnic conflict potential still exists, and sociopolitical processes are actively ongoing. During preventive works on identifying and suppression of terroristic activity the competent authorities of the Kyrgyz Republic have received rapid information regarding the intention of one terroristic organization acting in one of the Central Asian country to commit terroristic acts to destabilize socio-political situation. The same information has been received from other security, defence and law enforcement agencies of Kyrgyzstan, government bodies and from partners of competent authorities from CIS countries, member-states of CSTO<sup>2</sup> and SCO<sup>3</sup>, and other sources as well.

Potentially dangerous entities, which could be the target objects for terroristic acts are:

- Mine tailings and waste dumps;
- Industrial entities using chemicals and dangerous substances in the production process;
- Outburst hazard glacial lakes;
- Railway and air transport;
- Places of mass public gathering.

#### **Problems:**

- 1. Imperfect legislation for ensuring national security;
- 2. Need for mobilization of the entire civil society against terrorism;
- 3. Poor equipping of national security agencies;
- 4. Increasing number of extremist organizations within the country and beyond.

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<sup>&</sup>lt;sup>2</sup> Collective Security Treaty Organization

<sup>&</sup>lt;sup>3</sup> Shanghai Cooperation Organization

# Section II. Main priorities for ensuring comprehensive safety of population and territories of the Kyrgyz Republic

#### 2.1 Overall assessment

This Strategy identifies the main priorities for action to be addressed by MES KR, state authorities and local self-government bodies ensuring comprehensive safety of population and territories of Kyrgyzstan. The specific goal of the Strategy is to identify the risks and threats posed to the national security and sustainable development of the state for mid- and long-term perspectives until 2020. One of the perspective ways, which projects the way out of system crisis, is the way of sustainable development, which is concluded in coordinated addressing of disaster risk reduction issues and socio-economic development of the State.

#### 2.1.1 Achievements and Problems

The outcomes of MES activity and the Civil Protection system of the Kyrgyz Republic for 2007-2010 period indicates phased and successive implementation of the **main tasks** on prevention of natural disasters:

- Established unified system of Civil Protection of the Kyrgyz Republic functioning according to the Kyrgyz Law "On Civil Protection" dated 20 July 2009 No.239; In order to improve normative legal framework of the Civil Protection the Kyrgyz Government has passed following decrees:
  - "About approving Regulation on Civil Protection of KR"
  - "About the Civil Protection services"
  - "About the Civil Protection units"

2. In 2008-2010. Conducted 1,960,293,000 KGS worth recovery and capital construction works at 293 entities, 111 of them are agricultural facilities (for 277,468,000 KGS).

- 3. Conducted special prevention and recovery works at 643 entities of the republic.
- 4. February 2010. Completed works on rehabilitation of meteorological stations and posts, and at 14 monitoring stations installed communication equipment, received additional equipment and devices for 12 water gauging stations and 8 meteorological stations.
- 5. In 2009-2010. In order to strengthen technical capacity of fire units procured 73 fire trucks, 166 pcs of car-based, permanent and mobile communication devices.
- 6. February 2011. Established the Civil Protection Specialist Training Center of MES KR on the basis of Republican Civil Protection Courses in order to build capacity of Civil Protection management and specialists.
- 7. In 2009-2011. In order to activate work on rescuers training the following MES-based new subdivisions have been introduced: Central Rescue Group (Osh city), Training Center for Divers and Underwater-technical Works (Bishkek);
- 8. End of 2009. Established the MES-based Agency on Nuclear and Radiation Safety to provide more effective implementation of the state policy on nuclear and radiation safety, supervision of compliance with regulated production norms and rules, control of using, storing, moving of radioactive materials and managing radioactive wastes.
- 9. Developed general Concept on rehabilitation of mine tailings and waste dumps in Mailuu-Suu in accordance with the national and international norms and standards with the support of UNDP and other international organizations. Associated events took place

- in 2009: the regional conference "Uranium mine tailings in Central Asia: local problems, regional impacts, global solution" was held in Bishkek and international forum on radioactive wastes took place in Geneva.
- 10. In 2009. Jalal-Abad and Talas oblasts joined the network of Emergency Response Centers (ERC). By the end of 2011 it is planned to launch ERCs in Issyk-Kul, Naryn and Batken oblasts. Osh and Bishkek ERCs have 2 mobile control units for northern and southern regions, which are able to transmit information from emergency spots via online video broadcast. They have GIS-based electronic map with all hazardous processes and phenomena taking place in the Kyrgyz Republic.
- 11. In 2010. Under the UNDP Project "Mainstreaming Disaster Risk Management into Decentralization Process in Kyrgyzstan" and MES Action Program USD 200,000-worth satellite equipment for modernization of the unified ERC network has been procured to strengthen local self-government bodies and to improve quality of disaster risk management services for poor and vulnerable rural communities.
- 12. May 2011. Established the Kyrgyz National Platform for Disaster Risk Reduction (NP DRR), which was officially announced on 13 May 2011 during the Third Session of the Global Platform for Disaster Risk Reduction by the Kyrgyz Minister of emergency situations in Geneva. The National Platform Secretariat has been established, the NP DRR Charter and Provisions for the NP Secretariat have been developed.
- 13. June 2011. Conducted scientific and practical conference on Civil Protection issues under the established Kyrgyz National Platform for Disaster Risk Reduction. The conference was initiated by MES KR, under the support of the UNDP project and the European Commission's Sixth Action Plan (DIPECHO VI): Enhancing Disaster Risk Reduction Capacities in Central Asia, and also OSCE Center, Aga-Khan Foundation, World Health Organization, and was attended by experts, specialists, scientists and practitioners from Russia, Kazakhstan and Tajikistan.
- 14. Repair and construction works are underway to establish warehouses in Osh section of State Enterprise "SCER4", which in 2011 has been allocated 6,536,104 KGS from the national budget. Establishment of the unified warehouse was preceded by lessons learnt from the last destructive earthquake in Nura village (5 October 2008). There were problems in storing arrived humanitarian cargo, their packaging arrangements and delivery to various places, which resulted in extended time for delivery and increased expenses; June 2010 events in the South, when the base of SE "SCER" was seized and stored humanitarian aid like food products, clothes, tents and other priority need items were looted, when Osh city badly needed these inventory holdings. The constructed central warehouse of SE "SCER" is located on the detour ring road of Osh-Pamir; distance to Bishkek is 670 km, to Tashkent - 400 km, to Irkeshtam - 400 km. (border with China), to Khorog – 700 km (Afghanistan). It is the only state strategic base of MES KR in the south with 2,8 km long access railways, tanks for storing fuel, storage rooms for inventory holdings of 14,250 cub.m., with cement warehouse for 289 tons, workshop for producing safety and protection items and constructions. The volume of the storage plant of SE "SCER" of MES KR is 30,000 cub.m., area of the base in Nariman village is 6,7 hectares, length of branch railway is 2,8 km. Due to safety reasons the constructed Central warehouse is located near the MES Rescuers Training Center in Osh city with convenient access ways to the warehouse, which will enable to load and unload 10 heavy-load trucks at the same time, thus saving time and resources.

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<sup>&</sup>lt;sup>4</sup> SCER - Southern Center for Emergency Response

- 15. In November 2011. Based on the signed Agreement between the Kazakh, Kyrgyz and Tajik Governments "On establishment of Central-Asian emergency response and disaster risk reduction center" the new "Central-Asian Disaster Response Center" for the Kyrgyz Republic, Republic of Tajikistan and Republic of Kazakhstan is starting for operation. The Kyrgyz Republic is initiating implementation of the project "Establishment of centralized warehouse for storing inventory holdings on the basis of the Southern Center for Emergency Response of MES KR", which in the future perspective will serve as a joint warehouse for signatories to the Agreement with total budget of 22 mln. KGS.
- 16. In 2010. Under the "Mainstreaming Disaster Risk Management into Decentralization Process in Kyrgyzstan" project the public works have been conducted, which resulted in 38,457 people receiving 3,610,300 KGS-worth goods.
- 17. In November 2011. 4,006,416 KGS worth mitigation works will be completed, where the number of goods recipients will be 54,866 inhabitants of pilot ayil okmotus (local self-governments).
- 18. In 2011. In terms of the national level activities the project has developed recommendations to identify roles of local self-governments in disaster risk management activities, to provide separation of functions and responsibilities of the executive and local authorities (developed sample regulations about the Civil Protection commissions), improved statistics of natural disasters through optimization of statistical reports and elaboration of administrative report forms for planning purposes of socio-economic development of local self-governments and drafting local budgets with consideration of disaster risk reduction activities.

Taking into account the current socio-economic development state of the country in the light of deficit of budget funding, ensuring comprehensive protection of population and territories from disasters in full scale deems impossible as the protection measures from landslides, water logging, debris flows, floods, and manmade disasters are very expensive and require substatial investments. In addition to the limited financial resources the other reasons for high disaster risks and social vulnerability are a number of objective and subjective factors:

- Insufficient supervision over potentially hazardous facilities and complying with general safety regulations in livelihood activities;
- Not always effectively undertaken prevention activities;
- Lack of resources for monitoring of hazardous natural phenomena and insufficient efficiency in localization of disasters at their initial stage;
- imperfection of organizational and normative legal acts regulating areas of responsibility, separation of functions, structures, staffing of authorities, resources at all levels of state authorities and administrations;
- Insufficient level of preparedness and commitment of relevant management staff, officials and specialists responsible for addressing disaster management issues, and also insufficient level of preparedness of population to act in case of emergencies during peace and wartime.
- lack of financial opportunities of the government, lack of defense-industrial sector, limited material and technical capacity of civil protection.

# 2.2 Strategic priorities

The current situation requires elaboration and implementation or urgent and long-term activities aimed at profound protection of population and critical facilities from various types of emergencies (natural, manmade, bio-social, terroristic acts). These emergency protection activities should also be reflected in a mechanism of political, administrative, legislative,

economic and technical decisions, and feedback in management system - monitoring of strategic threats and challenges, and passing this relevant information to the state authorities.

In order to achieve the main goal of the Strategy the following practical activities should be undertaken:

- segregation of functions on assisting in emergence prevention activities with financial support at all levels of government;
- integration of disaster risk reduction measures into the building norms and regulations, and into the land use standards in cities and settlements located in natural disaster prone areas;
- implementation of the Kyrgyz Law "On Civil Protection" in terms of the state supervision on disaster risk reduction activities;
- improvement of monitoring and forecasting of natural hazards in Kyrgyzstan in view of the transboundary disasters potential;
- establishment of the unified mobile and professional trained group of MES specialists with aviation component;
- integration of disaster risk reduction into educational programs of schools and higher education institutions;
- establishment of functional early warning system to alert people of an emergency.

# 2.2.1. Enhancing legal framework for disaster risk management

Goal: Establish normative legal base for effective disaster risk management.

Objective: Improve legislative and institutional frameworks for disaster risk management.

Activities: Establish the state safety control system.

First of all, bring order in segregation of responsibilities - government, oblast, city/town, rayon and local self-government.

#### This requires to:

- build new platform for interaction, funding and administration between the links of government administration;
- introduce compulsory insurance of civil liability for causing damage to hazardous facilities:
- develop technical regulations for seismic-proof construction, fire safety and protection of population and territories from disasters and make them function;
- complete work on elaborating safety passports for territories and achieve that the development and livelihood activity in the regions is planned and implemented by relevant authorities in view of identified disaster risks;
- develop normative legal documents regulating disaster risk management issues, and identifying normative indicators for natural and manmade risks in view of actual socioeconomic conditions;
- continue work on further development of normative methodological framework for declaration of safety at industrial, power energy and transport facilities posing potential hazard, and also development of the state standards for emergency monitoring, forecasting and damage assessment after an emergency;
- develop methodology to identify economic damage from emergencies and effectiveness of investment into disaster prevention, reduction and mitigation activities;
- develop and introduce legal acts to establish state supervision of fire safety, civil protection and protection of population and territories from emergencies;

- develop legal framework for establishment of independent risk assessment system for fire safety and civil protection (establish an institute of independent specialist organizations and experts);
- in order to optimize emergency prevention planning system develop unified organizational and methodological instructions to elaborate Action plans for protection of population and territories from various emergencies (Civil Protection plans).

### 2.2.2 Disaster risk assessment in the Kyrgyz Republic

Goal: Conduct disaster risk assessment in the Kyrgyz Republic.

<u>Objective:</u> Identify threats, vulnerability and disaster risks for all populated areas within the Kyrgyz Republic.

#### Activities:

- organization and conducting of scientific researches, development, experimental and design works to identify hazardous natural and manmade factors;
- systematization of potentially hazardous facilities, productions, technologies and materials, analysis of technical condition, development of possible disaster scenarios;
- development of new methods of probability assessment of large accidents at complicated technical systems, conducting assessment of probability of natural disasters in Kyrgyzstan;
- enhancing scientific and methodological base for assessment of environmental, social and economic impacts and risks of emergencies for population;
- development of the system of integral risk indicators from emergencies to conduct comprehensive analysis and summing up various types of risk and (or) leading to various consequences, introducing of methods of comprehensive disaster risk analysis;
- establishment and enhancement of disaster data base and geographical information system (GIS);
- organization and conducting laboratory analyses of chemical and radiological state of environmental condition, including food products, edible and forage raw material and water, which can potentially be a source of disaster hazard;
- organization of information share, coordination of activity and functionality control of all monitoring agencies and organizations;
- providing reliable information to the public about hazards and threats specific to their area
  of livelihood, and providing them with short-term forecasts about further developments of
  hazardous natural and manmade processes.

#### 2.2.3 Establishment of government system to regulate emergency safety issues

<u>Goal:</u> Disaster risk reduction measures are integrated into development process of the Kyrgyz Republic

<u>Objective:</u> Establish mechanisms to identify and integrate disaster risk mitigation and management issues into development policy, programs and projects of the Kyrgyz Republic.

#### Activities:

 establishment of the state system of comprehensive monitoring and forecasting of hazardous natural processes based on GIS-based technologies and distant sounding in the Kyrgyz Republic with the unified coordinating center (Department of Monitoring and Forecasting of Emergencies of MES KR);

- organization and establishment of comprehensive operating network for monitoring of hydrological and seismic movements of Earth crust in the Kyrgyz Republic and at frontier areas with other countries of Central Asian region;
- rehabilitation of meteorological, snow avalanche, water gauging stations and posts;
- completion of setting up the ERC network at MES KR.
- Enhancement of scientific capacity within the Civil Protection system for more in-depth and systematic study of existing strategic risks, for participation in development of state programs and activities for reduction of these risks, and addressing scientific and methodological issues;
- Setting up state expertise and control system within the Civil Protection to promote protection of population and territories from emergencies;
- Introducing disaster risk management into the national policy of land use and urban planning, etc.

### 2.2.4 Development of emergency response system

Goal: Reduction of human and material losses due to disasters.

<u>Objective</u>: Building disaster preparedness and response capacity at the national, regional, district and local self-government levels (including improving early warning systems), and also building disaster risk reduction capacity.

#### Activities:

- development and undertaking of engineering and technical measures to reduce possible losses and damage from emergencies (disaster mitigation) at certain facilities and locations. These include: expertise of emergency prevention planning, engineering and technical civil protection activities, construction and use of different-purpose protection structures (hydrotechnical protection structures, engineering protection structures on highways and in settlements located in mountainous areas, utility and industrial treatment facilities, protection structures of civil protection, protective afforestation), establishment and use of warning systems for local population, staff and authorities, establishment of financial and material reserve stock at all levels, keeping shelters, conducting sanitary and antiepizootic activities beforehand, and ensure early relocation or evacuation of people at risk;
- improving licensing system and certification of activity in fire safety area, which provides for establishment of maximum favourable environment for increasing the number of organizations and individual entrepreneurs, who provide quality services and works to ensure fire safety and establishment of healthy competitive environment through promoting licensing of fire safety related activities targeted at protection of lives and health of civilians and their property from fires. The licensing work will result in increased fire safety in the country through improving the quality of works and services in fire safety area.
- Increasing level of administrative responsibility for all categories of officials for not taking required measures on time, which would minimize disaster risk, preserve public health, reduce damage to natural environment and material losses in case of disasters, as the formation of effective system of sanctions for unlawful deeds in protection of population and territories from emergencies area is significantly falling behind from development of normative regulations. In this regards the Code of the KR "On administrative infringements of the law" should be amended.
- establishment of unified territorial bodies of Civil Protection (MES KR) to improve management, organization and coordination of activity of all territorial rescue forces;
- building Civil Protection capacity based on quality-targeted new approaches to optimize its composition and the structure, and also establish the State Fire and Rescue Service of Civil

Protection during three years time starting from 2012 on the basis of the existing State Fire Service (SFS) and Rescue services of MES KR;

- taking measures on establishment of fire and rescue units at the state budget expense. At
  that increasing number of units established by local state administrations and local selfgovernments will allow for providing effective response to "local emergencies", reduce load
  on MES KR resources and reduce damage through rescue works;
- within the managed delegation of authorities to local self-governments and in order to preserve required level of protection of population and territories, and to optimize staffing of the State Fire Service by establishing territorial departments and voluntary fire and rescue guards (up until 2015), delegate them fire fighting functions based on agreements with territorial authorities and local self-governments.
- establishment of favourable conditions for effective use of aviation as the means for delivery of staff and resources to undertake rescue works through identifying locations for the units in the vicinities of air facilities used on the rent basis in combination with the use of aviation unit of MES KR;
- establishment and development of unified dispatch services (UDS) to increase efficiency of emergency response, integration of UDS into the network of Emergency Response Centers using new information technologies;
- equipping of state fire and rescue services and Rescue Centers of MES with required technics and assets;
- establishment of emergency medical service;
- establishment of joint warehouses.

#### 2.2.5 Development of information management system for disaster reduction

Goal: Disaster reduction through improved exchange of knowledge and education.

<u>Objective:</u> Establish national infrastructure for awareness rising on existing opportunities and methods for disaster risk reduction through information exchange.

#### Activities:

- Introducing up-to-date teaching techniques into the education process to pass information about disaster risks to students;
- Introducing partial education program in preschool institutions;
- Introducing DRR elements into training programs of public educational institutions;
- Organization of mass information and advocate DRR knowledge involving local communities, Mass Media, business, international and public organizations;
- Systematization of approaches for population training and elaborate unified mechanism to educate people. In this regard the Kyrgyz Government decree "On unified public education system in Civil Protection" needs to be approved;
- Introducing the "culture of safety" concept through DRR into public education standards in "Code of Education" and Education Development Strategy: 2012 - 2020;
- Development of information policy concept.

# Section III. Implementation of the Strategy

#### 3.1 Stages of implementation

#### 3.1.1 Period: 2012 - 2014

In order to implement **Priority for Action 1** the following tasks should be addressed:

- 1. During 2011-2012 continue work on adjusting normative legal documents regulating activity of MES KR and Civil Protection system in accordance with the Law "On Civil Protection";
- 2. Develop and introduce normative and legal frameworks for disaster risk reduction (Law "On seismic safety", Law "On technical regulation of building construction", make changes and amendments into the national legislation on state safety supervision);
- 3. introduce compulsory insurance of civil liability for causing damage to hazardous facilities;
- 4. develop technical regulations for seismic-proof construction, fire safety and protection of population and territories from disasters and make them function;
- 5. complete work on elaborating safety passports for territories and achieve that the development and livelihood activity in the regions is planned and implemented by relevant authorities in view of identified disaster.

# The following tasks will be addressed under **Priority for Action 2**:

- 1. Introduce system of comprehensive monitoring and forecasting of hazardous natural processes based on new high technologies, conduct scientific research works, prepare analytical materials on disaster monitoring and forecasting;
- 2. Conduct disaster risk reduction activities induced by uranium mining and processing industries;
- 3. Modernization of monitoring networks and introduction of new information technologies into hydrometeorology system.

Based on the developed and approved Forecasting Plans and Programs the following protection activities will be conducted under the **Priority for Action 3** next year:

- Accident recovery and capital construction works under the programs of the Department of Emergency Prevention and Recovery and Debris flow and Flood Protection Department of MES KR;
- Planned Special disaster prevention and recovery activities (SDPRA):
- Forced avalanche triggering activities;
- Medical, radiation, chemical and bacteriological protection activities.

#### Addressing of the following tasks under **Priority for Action 4** is of high importance:

- 1. Building material and technical base of fire and rescue services of MES KR;
- 2. Rehabilitation of mine tailings and bank protection dams in Kyrgyzstan;
- 3. Enhancing of disaster risk management in local self-government bodies, rising of awareness and training of population, living in rural areas of Kyrgyzstan;
- 4. Increasing level of preparedness to natural disasters and building capacity of MES KR.

# Implementation of **Priority for Action 5** provides for:

- 1. Development and introducing of up-to-date teaching techniques in kindergartens, schools and higher education institutions;
- 2. Awareness rising and training of population to respond to emergencies.

In view of budget funding deficit, attract investments to the disaster management area for implementation of **Priority for Action 5** will allow for effective addressing of contingency issues.

#### Resources:

In order to achieve these targets and funding of priorities for action this will require **2,217,6 mln. KGS** for 2012. Of them:

Priority for Action 1 - 722,1 mln. KGS. Priority for Action 2 - 94,9 mln. KGS. Priority for Action 3 - 444,0 mln. KGS. Priority for Action 4 - 956.6 mln. KGS.

# Programs and investment projects under the set priorities for actions

In order to achieve the goals set in Section 3, the following projects, programs and publications will have to be implemented:

#### In regards to Goal 1:

- 1. To build cooperation and coordination between the Kyrgyz Government, UN Country Team and other key actors working in disaster response area the second phase of "Enhancing disaster response coordination in the Kyrgyz Republic" Project will be implemented:
- 2. UNDP Project "Mainstreaming Disaster Risk Management into Decentralization Process in Kyrgyzstan" (budget for 2010 862,476 USD).
- 3. Concept on development of staffing service of MES KR;
- 4. Program to introduce the Unified State Dispatch Services (UDS) of MES KR.

# In regards to Goal 2:

- 1. Book "Monitoring and Forecasting of potential activation of hazardous processes and phenomena in the Kyrgyz Republic";
- 2. List of priority facilities to conduct accident-recovery and design-exploratory works for 2011;
- The World Bank-funded "Disaster Hazard Mitigation Project" aimed at rehabilitation of mine tailings in Mailuu-Suu, Jalal-Abad oblast (period: 2004-2011, total budget: 10,96 mln. USD, executed from 2004 to 2009 – 5,72 mln. USD, budget for 2010 – 2,24 mln. USD);
- 4. The OSCE project "Enhancing disaster preparedness and capacity building of MES" targeted at support of the MES-based Agency on nuclear and radiation safety (budget for 2010 6000,0 Euro);
- 5. The World Bank project "Improving the hydro-meteorological services in Central Asian countries", targeted at modernization of the Agency of Hydrometeorology under the MES KR (period: 2010-2014, total budget: 7,5 mln.USD).

#### In regards to Goal 3:

- Accident and recovery and capital construction works under the programs of the Department of Emergency Prevention and Recovery and Debris flow and Flood Protection Department of MES KR (State budget, for 2010 – 314 mln. KGS, for 2011 – estim. 400,0 mln. KGS, 2012 – 500,0 mln. KGS, 2013 – 600,0 mln. KGS);
- 2. SDPRA Forecasting Plan (State budget, for 2010 32,0 mln. KGS, for 2011 estim. 40,0 mln. KGS, 2012 50,0 mln. KGS, 2013 60 mln. KGS);
- 3. NATO project "Prevention of Landslide Dam Disasters in the Tien-Shan, Kyrgyz Republic" under the "Science for peace and security" Program (implementation period: 2009-2011, total budget 50,100 Euro, for 2010 20,200 Euro).

# In regards to Goal 4:

- 1. The work on adjusting of normative legal acts, regulating MES activity, in accordance with the Law "On Civil Protection" will continue;
- 2. The OSCE project "Enhancing disaster preparedness and capacity building of MES" targeted at building capacity of the MES Rescue Center (budget for 2010 63,000 Euro);
- 3. Programs on training of senior personnel, voluntary rescue teams and population.

# In regards to Goal 5:

International Cooperation Department of MES KR is continuously working on attracting foreign grants and technical assistance into disaster management area. In addition to the above mentioned international projects and programs, there is also an ongoing work on the following perspective projects like:

- 1. Projects under DIPECHO-6 program, funded by the European Commission. These projects are targeted to prevention and mitigation of natural disasters and awareness rising of population about disaster response through implementing mitigation projects, training workshops, etc. Clarification on the total project budget is underway;
- 2. Target program of EurAsEC "Reclamation of Territories of the EurAsEC states affected by impact of uranium mining and milling facilities". This target program provides for landscaping and rehabilitation of mine tailings and waste dumps in Minkush town in Jumgal rayon, Naryn oblast, and Kaji-Sai village in Ton rayon, Issyk-Kyl oblast, through the future pilot projects. Estimated total project cost is 10,2 mln. USD.

#### Resources

Total amount of funding needed for all activities and projects on disaster management for 2011-2013 is at least 250 mln. USD.

(млн.со м)

Agency		Actual spent 2010	2011		Needs	Needs for	Needs
classifi- cation	Name of Agency		Reque sted	Control figures	for 2012	2013	for 2014
	Budget						
45110	MES KR (Central)	46,8	66,9	46,1	73,5	80,8	85,0
45121	MES KR (departments)	503,6	840,6	506,6	924,0	1016,4	1118,0
45141	Special emergency fund	106,3	100,0	100,0	100,0	100,0	100,0
45310	Fire safety Agency	391,3	641,6	387,8	840,8	660,4	720,1
45130	Kyrgyz Hydromet	44,7	66,1	51,5	79,2	82,9	88,6
45211	Mudflow and flood protection Department, MES	112,7	156,8	121,8	200,1	211,5	222,5
	Total:	1205,4	1872,1	1213,8	2217,6	2152,0	2334,2
	Special means						
45121 45310 45130	MES KR (departments) Fire safety Agency Kyrgyz Hydromet	0,5 6,6 0,5	0,5 7,2 0,6	0,5 7,2 0,6	1,0 7,2 0,6	1,5 7,8 0,8	2,0 7,8 1,0
	Total:	7,6	8,3	8,3	8,8	10,1	10,8
	Public Investment Program (PIP)	101,2		155,3			
	Grand Total:	1314,2	1880,4	1377,4	2226,4	2162,1	2345,0

#### 3.1.2 Period: 2015 - 2020

#### Priority for Action 1 provides for:

- Introduction of compulsory insurance of civil liability for causing damage to hazardous facilities;
- Development of normative legal documents regulating disaster risk management issues, and identification of normative risk indicators of natural and manmade disasters, taking into account actual socio-economic conditions;
- Development of economic mechanisms to stimulate entrepreneurship targeted to reduce disaster risks and mitigate their impacts;
- Development and introduction of legal framework for establishment of independent risk assessment system in fire safety and civil protection (establishment of independent expert organizations and specialist institution).

# Priority for Action 2 provides for:

- development of new methods of probability assessment of large accidents at complicated technical systems, conducting probability assessment of natural disasters in Kyrgyzstan;
- enhancing scientific and methodological base for assessment of environmental, social and economic impacts and risks of emergencies for population;
- development of integral disaster risk indicators system to conduct comprehensive analysis and summing up various types of risk and (or) leading to various consequences, introducing of methods of comprehensive disaster risk analysis.

#### Priority for Action 3 provides for:

- establishment of the state system of comprehensive monitoring and forecasting of hazardous natural processes based on GIS-based technologies and distant sounding in the Kyrgyz Republic with the unified coordinating center (Department of Monitoring and Forecasting of Emergencies of MES KR);
- development and adoption of State programs for seismic risk and ground water level reduction, ensuring transport safety.

#### Priority for Action 4 provides for:

- implementation of engineering and technical activities on disaster risk reduction and mitigation, and also establishment and reconstruction of engineering structures;
- development and implementation of measures on withdrawal of worn equipment from production process, and also on reconstruction of housing stock, industrial and social buildings in the areas prone to natural hazards;
- development of rescue centers of MES KR, improving aviation system to provide emergency response to disasters;
- establishment of unified territorial divisions of Civil Protection (MES KR) in order to enhance management, organization and coordination of activities by all rescue powers operating in the area;
- building the civil protection capacity based on quality-based approaches to optimize their staffing and structure in view of establishing of the State Fire and Rescue Service under the Civil Protection in three years time starting from 2012, based on the currently functioning MES-based system of State Fire Service and Rescue Service;
- taking measures on establishment of fire and rescue units maintained at the expense of local budget.
- establishment of the joint centralized warehouse.

# Priority for Action 5 provides for:

- establishment of OKSION system
- opening of postgraduate course for emergency protection specialists.

#### Resources:

In order to implement the second stage of this Strategy it will need available resources and attracted investments. Implementation of the Strategy under the certain programs can use the following sources and resources:

- national and local budgets;
- national and international organizations' projects and programs.

Concrete funding and execution of financial resources are annually considered in the national, regional and local public investment programs. So, for implementation of the first phase of this

Strategy the MES KR has been provided **2,217,6 mln.KGS** from the national budget for 2012 through the public investment program. However, in order to implement all the objectives of the Strategy it will require in the future to provide funding for Program activities by line ministries – co-implementers of the Strategy, at the expense of the national and local budgets. These funds are provided at relevant budget allocation for planned years and in accordance with strategic plans of the national, regional and local authorities - co-implementers of the Program. Considering that the State Budgeting Program is developed yearly and is the analytical document, which gives integral picture of incomes and expenditures of the national budget and, if required, is corrected at the next turn to provide budget allocation to priority sectors, this work should be done on a permanent basis.

In view of rather difficult financial situation in the country, the line ministries, co-implementers of the Strategy, at consideration of their Program budgets have to keep working regularly to attract additional grants and investments, and at implementation of regional programs they have to search out the funding sources independently.

# 3.1 Expected outcomes

Early emergency prevention activities, associated with natural disasters, will provide for:

- prevent and reduce risks of natural disasters;
- improve quality of disaster monitoring and forecasting systems;
- reduce scale of socio-economic damage from natural and manmade disasters;
- ensure safety of population and territories of Kyrgyzstan from natural disasters.

#### a. Favourable factors

For stage-by-stage and consequent implementation of the main tasks on prevention of natural disasters the Kyrgyz Ministry of Emergency Situations has a number of favourable factors:

- Professional staff of officials and military personnel entitled to address tasks on providing comprehensive safety of population and territories from natural disasters;
- Relevant normative legal framework regulating MES activity allowing to interact with other executive power agencies, local self-government bodies, national and international organizations, conduct unified state policy on civil protection, fire, nuclear and radiation safety and hydrometeorology;
- Material and technical base for undertaking natural and manmade disaster management activities;
- Sustainable informational communication system like ERCs and further perspective development of informational and communicational technologies, providing for timely forecasting and monitoring of emergencies, and also efficient response to natural and manmade disasters;
- International cooperation of MES KR in order to attract foreign grant and technical assistance for disaster prevention, response and recovery.

#### b. Plan of Implementation of the Strategy

In order to provide quality and timely implementation of goals and objectives assigned by the given Strategy the Action Plan on the Strategy has been elaborated. This Plan provides for undertaking specific activities, assigns people responsible, sets time and financial resources.

The implementation control over the Action Plan is laid upon the Ministry of Emergency Situations of the Kyrgyz Republic.