Reducing the Disaster Risks in the Kyrgyz Republic

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High-altitude relief of the country - from 350 to 7439 meters above sea level and 94% of territory at the height of more 1 km stipulates development of landslides, rockfalls, mudflows and floods, avalanches, earthquakes, underfloodings, breakthrough-threat lakes and other risks.
• About 20% of 1,000 high-altitude lakes in the country have the breakthrough threat
• There are 30,000 avalanche areas, 772 of which are having the direct threat for the population and infrastructure
• 5,000 landslides that are having the threat to about 7.5% of population (509 settlements)
• Mudflows and floods occur within the basin of 3,103 rivers, and about 1,000 of settlements are exposed to dangers
• The country territory is located within the seismic zone with 8-9 magnitudes or more (MSK-64), there is the threat for breakthrough lakes and hydro technical structures
Statistic of Emergency Situations for the period of 2006-2015

<table>
<thead>
<tr>
<th>Year</th>
<th>ЧС</th>
<th>Погибли</th>
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</thead>
<tbody>
<tr>
<td>2006</td>
<td>186</td>
<td>84</td>
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<td>2007</td>
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<td>2008</td>
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<td>2009</td>
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<td>2010</td>
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</tr>
<tr>
<td>2011</td>
<td>228</td>
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<tr>
<td>2012</td>
<td>458</td>
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<tr>
<td>2013</td>
<td>228</td>
<td>95</td>
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<tr>
<td>2014</td>
<td>177</td>
<td>62</td>
</tr>
<tr>
<td>2015</td>
<td>229</td>
<td>53</td>
</tr>
</tbody>
</table>
Man-made hazards: more than 2 million industrial enterprises use about 20 thousand dangerous substances (gas or high-toxic substances).

There are 92 sites with radioactive and toxic wastes, including 33 uranium tailing ponds and 25 waste dumps – there is the risk for landslides and pollution of water resources in the Ferghana Valley.
Annual direct losses and damages from ES is USD 30 – 35 mln.

Budget financing to prevent and liquidate the Emergency Situations USD 7mln.

Financial and material losses caused by Emergency Situations exceed the real capabilities of the population protection system more than by 5 times.
Scheme of the Kyrgyz Republic Management during the Emergency and Crisis Situations

Coordination

General Management

In daily routine

President – the Commander-in-Chief of the Armed Forces of the Kyrgyz Republic

Prime-Minister – Head of the Civil Defense of the Kyrgyz Republic

Minister of Emergency Situations – Chairman Deputy of the Civil Protection Interdepartmental Commission of the Kyrgyz Republic

Civil Protection Services Heads, Heads of Ministries and Agencies of the Kyrgyz Republic

Governors – Heads Oblast Civil Protection Mayors – Heads of Civil Protection Systems (CPS) of Bishkek and Osh Cities

Mayors – Heads of Civil Protection Systems (CPS) of Oblast subordination towns

Administration Heads – Heads of Rayon CPS

Mayors – Heads of Civil Protection Systems (CPS) of Oblast subordination towns


Civil Protection Services Heads, Heads of Oblast Administrations, and Bishkek and Osh Cities

Civil Protection Services Heads, Managers/Heads of Rayon Departments and Units (Cities)
Strengthening Disaster Response and Risk Assessment Capacities in the Kyrgyz Republic and Facilitating a Regional Dialogue for Cooperation Project

- **Financing:** Government of Japan
- **Project Cost:** USD 1 mln 460 thousand.
- **Implementation Period:** 2013-2014.
- **Client:** Ministry of Emergency Situations of the KR
- **Executive Organization:** UNDP in the Kyrgyz Republic

Disaster Risk Management Project

- **Financing:** International Development Association (World Bank)
- **Project Cost:** USD 1 mln 450 thousand.
- **Implementation Period:** 2012 – 2014
- **Client:** Ministry of Emergency Situations of the KR
Unified Management Information System (UMIS) under Emergency and Crisis Situations (UMIS Components: CSMC, OKSION, EGDDS-112)

Analysis, Management and Coordination

Warning

Receiving the Information

CSMC

OKSION

EGDDS-112

Emergency Response and Rescue Services
System – 112 is introduced in:
- Bishkek city;
- Osh city;
- Karakol City;
- Jalalabad City;
- Talas City;
- All rayons and towns of Batken and Osh Oblasts;
- Cholpon-Ata City;
- Toktogul City;
- Tokmok City;
- Balykchi City;
• Reducing the average time for comprehensive response by emergency operation services to emergency and crisis situations - by 30%
• Reducing the number of victims and dead in emergency situations and incidents in Kyrgyzstan - at least by 10%
Mobile Command Points with Mobile Satellite Communications Terminal
### Major Advantages at Organization of Population Warning System about ESs

1. The Unified Information Management System at the emergency and crisis situations was introduced;
2. Automatic warning of Rayon Services of Civil Protection through telephone
3. Automatic start of electric sirens.
4. Informing and warning the population through the "Interception" of the central TV and radio channels, including regions;
5. SMS warning of population having meteorological changes.
6. United coordination of actions, forces and resources at responding and liquidating the emergency consequences;
7. GEONODE- open platform of risk and danger data was established

### Major Disadvantages at Organization of Population Warning System about ESs

1. Population has got a low level of safety culture
2. The low level of coordination among the state agencies regarding to disaster prevention measures;
3. Insufficient level of population awareness about actions at emergency situations;
4. Lack of automated warning systems;
5. Lack of funding for measures to prevent emergency situations;
6. Long term for warning population through SMS.
Map of Earthquake Epicenters within the Kyrgyzstan Territory for the period 01.01.2015 - 21.09.2015

Comparison of observed values $K_m$ earthquakes at Tien-Shan and Wulff numbers - $W$ for 1900-2014 and forecasted values $K_m$ and $W$ for 2015-2031
Example of Earthquakes in Kemin and Belovodskoe Villages

Isolines on the map show S-waves travel time (in seconds) from the earthquake epicenter to Bishkek.

At the Figure, 3, 6, 7 are numbers of running time P-waves in seconds from the possible earthquake (red dot – location of earthquake in Kemin, 1911) to the nearest stations, based on which it is possible to determine hypocenter and magnitude of the event, numbers ~ 35 are figures of travel time S-waves in seconds to the Bishkek city. Data processing time is 3-7 seconds. The time remaining for the response for Bishkek = 35 - 7 - 3 = 25 seconds.
Experience Received during the Visit

National Level

1. Giving the great importance to Disaster Risk Reducing issues by the country management.
   - **Proposal**: To approve the special Disaster Preparedness Day at the national level that will allow to give great importance by population and country management to disaster risk reduction issues. (For example: 13th of October - World-wide Disaster Risk Reduction Day)

2. Strengthening the capacity of Civil Defense Specialist Training and Re-training Center

3. Close cooperation of disaster risk management department, self-defense forces and other ministries.
   - **Proposal**:
     - Broad attraction of military command authorities and population to participate in trainings on liquidation of disasters;
     - Role of Ministry of Emergency of the KR is to bring its duties and responsibilities more to coordination and providing the assistance in case of large-scale emergency situations;
     - Revision of Disaster Response Plans considering sector approaches;

4. Early planning the arrangements by types of provisions:
   - **Proposal**: To improve early planning by sectors:
     - Providing with drinking water;
     - To organize reservoirs with water for fire extinguishing;
     - To determine points for the storing of assistance received and making the storehouse lease agreements;
     - Providing with transport to deliver assistance to evacuation points;
     - Organization of delivery of hot meals to victims/casualties
1. Interest of municipalities in issues of warning and implementation of 100% coverage of the country territory. Establishing the J-Alert Warning Systems. Establishing and keeping in ready the big amounts of rapid response teams.

Proposal: To complete establishing and development of OKSION Warning System, to attract experts from Disaster Management Bureau of Japan, and develop the cooperation of Ministry of Emergency of the KR with Disaster Management Bureau of Japan based on Memorandum of Cooperation:

- Conducting a video-conference with Disaster Management Bureau experts and determining the priorities for cooperation before 10.2016;
- Organization of visiting by Disaster Management Bureau experts to the Kyrgyz Republic to share experience on establishing the Disaster Warning System;
- Conducting the training workshop on fire safety, warning systems and other issues in the KR with participation of Central Asia and Caucasus countries
- Establishing and developing the mobile fire-rescue teams;

2. Clear separation of municipal and government duties.

Proposal:

- Role of Ministry of Emergency of the KR is to bring its duties and responsibilities more to coordination and providing the assistance in case of large-scale emergency situations;
- Revision of Disaster Response Plans considering approaches by sectors;
- Strengthening the capacity of municipal personnel in the field of Disaster Risk Reducing issues

3. Excellent planning of training: Placing a large amount of rescue team members, militaries and population, including also machinery to be required. A bright example of application of the Non-Interference Principle.

Proposal:

- To apply during the training implementation.

4. Broad attraction of the private sector into Disaster Risk Reducing issues:

- To put into the practice the possibilities on attraction of the private sector including further compensation of costs to be incurred.
1. Awareness of the population and high level of safety culture;

**Proposal:**
- To adopt the principle “Help to yourself and neighbors, do not sit and wait the Ministry of Emergency”, it is time to stray from such concept “The Government should help me”;

2. Voluntary Communities and their big input and contribution regarding to preparedness of local population to emergency situations.

**Proposal:**
- Establishing the voluntary communities to prepare the local population to emergency situations.
- To carry out more trainings with broad coverage of local residents of block areas;
- To determine the responsibility of district committees and house management heads;
- To develop the quality and amount of volunteer fire-and-rescue teams;

3. Good propaganda among the population regarding to right and correct actions by population at the emergency situation;

**Proposal:**
- To define clearly the evacuation points and place schemes of their locations and ways for evacuation.
Thanks for Your Attention