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- **Introduction**
Disasters and Environment Analysis
- **MES Activity**
Prevention, Reduction, Humanitarian Aid
- **Problems and Summary**





•Introduction





R U S S I A

Petropavl



Qostanay



Pavlodar



Oral



Aqtobe



Astana



Qaraghandy



Semey



Os k e m e n



Atyrau

K A Z A K H S T A N

Population 14878,8 thousand people

Area 2724,9 thousand sq.km



Aqtau



Qyzylorda

CHINA

Taraz



Almaty

UZBEKISTAN



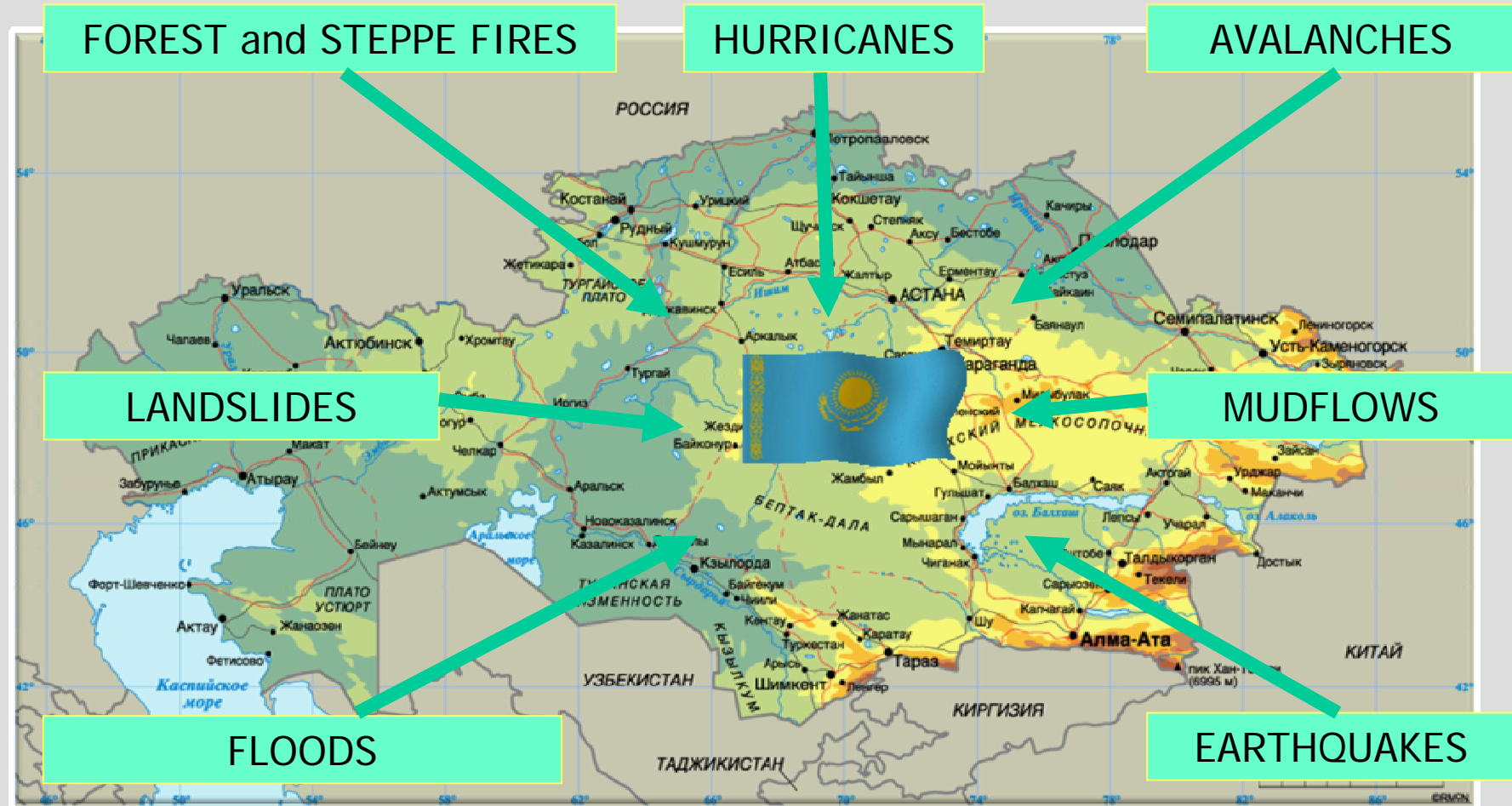
Shymkent

KYRGYZSTAN

TURKMENISTAN



Main Types of Natural Disasters





Earthquakes

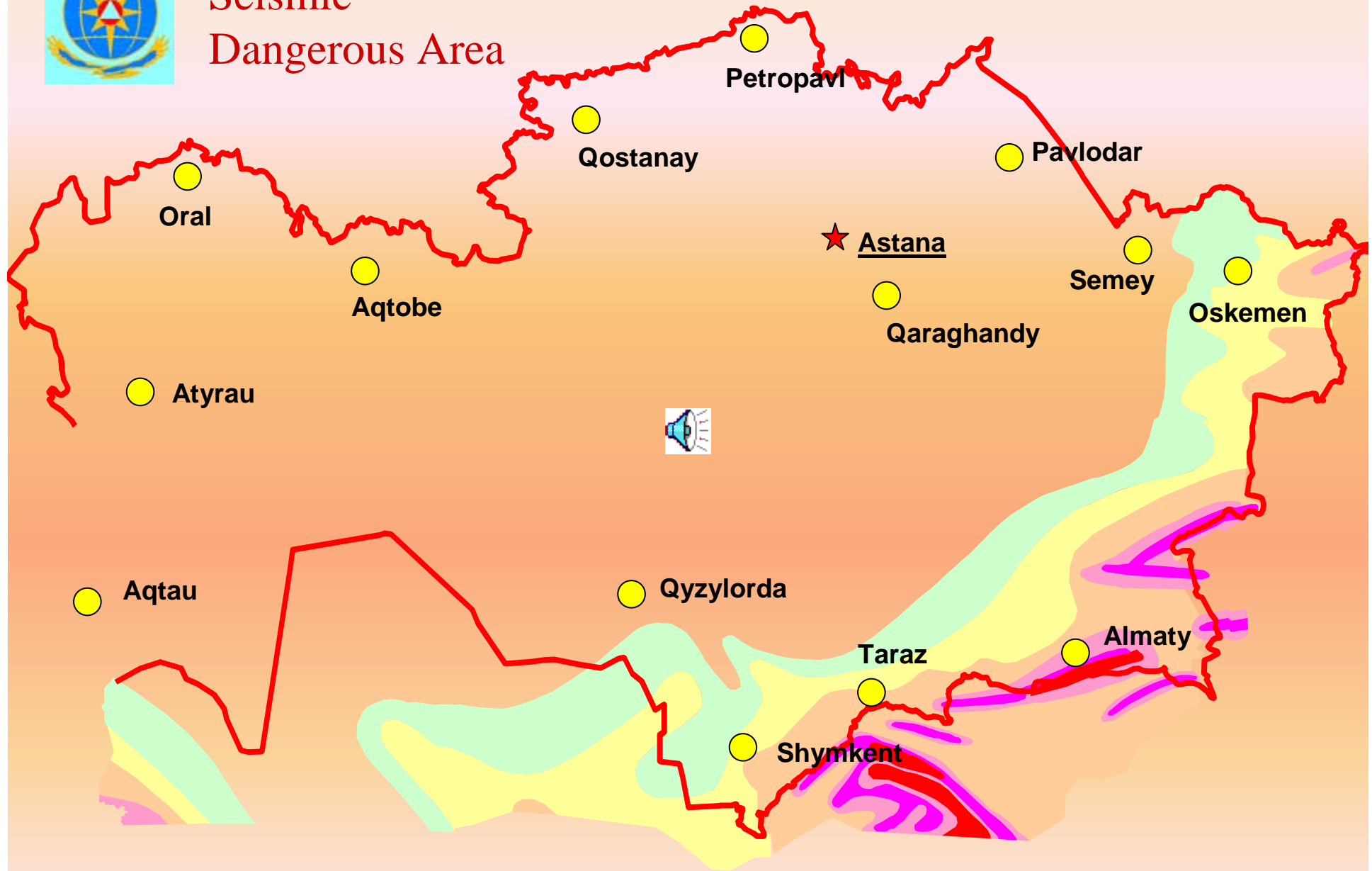


Verny City (Almaty now), Earthquake in 1887(Cathedral Church)

г. Верный, кафедральный собор после землетрясения 1887 г



Seismic Dangerous Area





- **Ministry for Emergency Situations (MES) has estimated that in the case of the 7-8 grade earthquake (Richter Scale) nearby Almaty among 1.5 million of total population 300 thousand can be suffered and 75 thousand died.**
- **About 1/3 buildings can be destroyed**



Mudflows, Torrents





- **At nearby mountain regions 2720 glaciers, 5140 of torrent seats, more than 300 torrent basins and 596 of glacier lakes have been observed by MES prevented services.**



Floods





- **For flood prevention at the Syr-Dariya River in winter time of 2008 and now about 4000 people, tens units of machines, and special equipment were involved, including rescue personnel of five oblasts (prefectures)**



Snow avalanche





- **There are about 800 centers of avalanche formations.**

400 of them are directly threaten to 200 buildings, 350 km of roads and to about 2 thousand people



Landslides





- **106 of landslide centers have been observed over all territory of Kazakhstan which threaten to 496 buildings and to 2600 people, especially around Almaty.**

Forest Fire





More than 27,8 mln. hectares are in forest fires areas. The risk of fire is very high in rural areas and farms.



- **MES Activity**

- Prevention, Reduction, Humanitarian Aid**

Special Divisions of MES with the purposes of:

- **Monitoring and prevention of mudflows, snow avalanches and landslides;**
- **Construction of mudflow protection barriers;**
- **Prevention operations.**



Supervision and alarm system:

- 127 alerting permanent as well as season posts (mudflows, landslides, floods, etc.)
- Aviation inspection
- 34 stations evaluate all information and provide this to Head Control Station in Almaty. After that information is transferred to Head Office of MES, regional Departments and to local forms of government.



78 protection dams, barriers and dikes.



- **Prevention works are carrying out directly at nearby the mountain lakes as decreasing of dangerous water level or water pumping.**
- **In 2008 such kind of works were performed on 19 mountain lakes.**



Basic Projects of MES which are under Governmental control

- Protection of Astana City against season floods of the Esil River
- Construction of protection dams on the Khorgos River
- Construction of the Koksaray compensating reservoir in the South Kazakhstan Region

Construction budget is more than 500 million USD.



- **Problems and Summary**
- **Promotion of research on a global warming which causes floods in South Area and also desertification in Central Part**
- **In mountain area decreasing of the glaciers square is observed (38% for the last 50 years)**
- **Total square of the moraine lakes has been increased by 4.5 times**



**Middle term Program of MES for 2007-2012
provides:**

- 1. Modern conception of engineering protection against disasters**
- 2. Revising of General Plans for territorial protection**
- 3. Upgrading of the monitoring system**
- 4. Upgrading of alarm and control systems by using satellite communication**



Thank You