



Seismic risk reduction activities in the regions

Hrachya Petrosyan

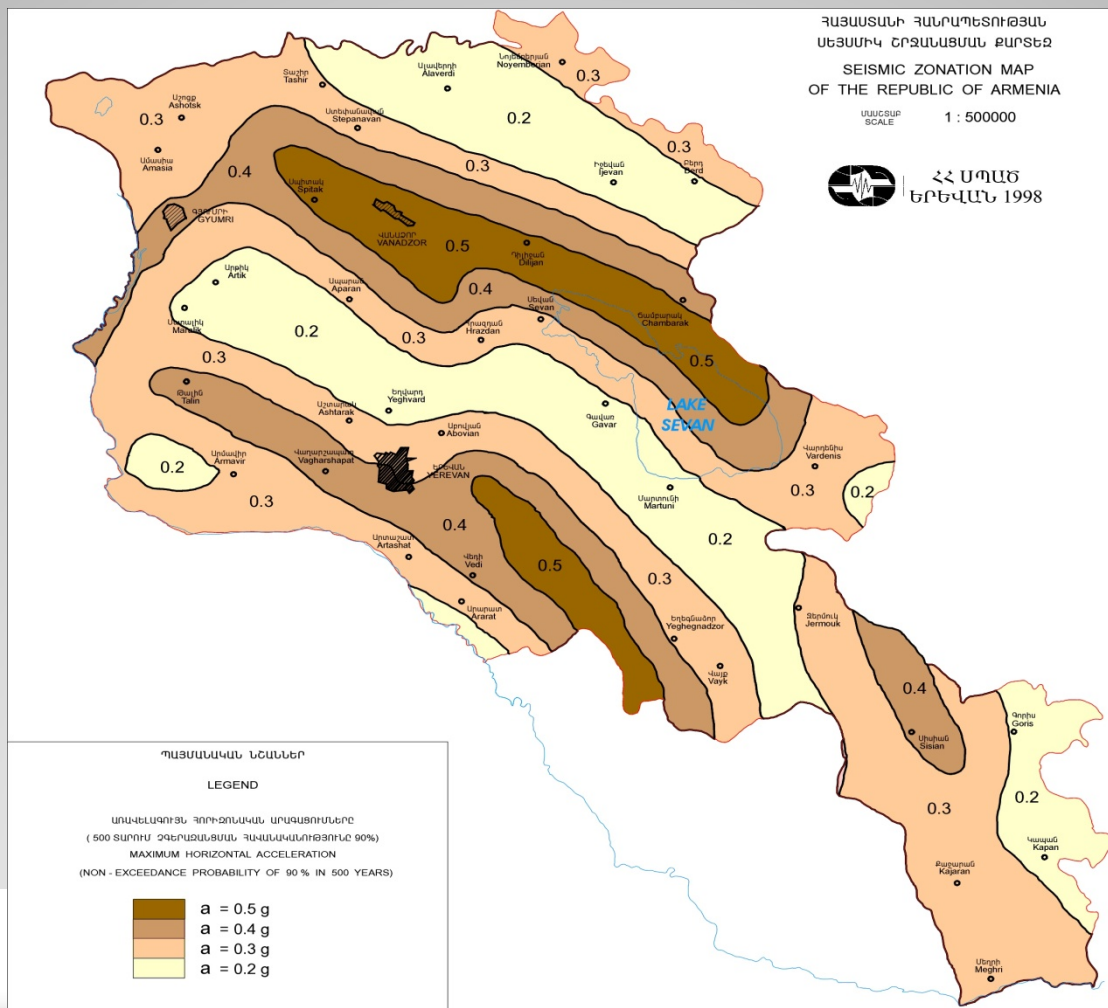
Armenian National Survey for Seismic Protection

Ministry of Territorial Administration and Emergency Situations of RA



1. LONG-TERM SEISMIC HAZARD ASSESSMENT

a) Map of long-term seismic hazard (seismic zonation) for the 1:500,000 scale of RA territory





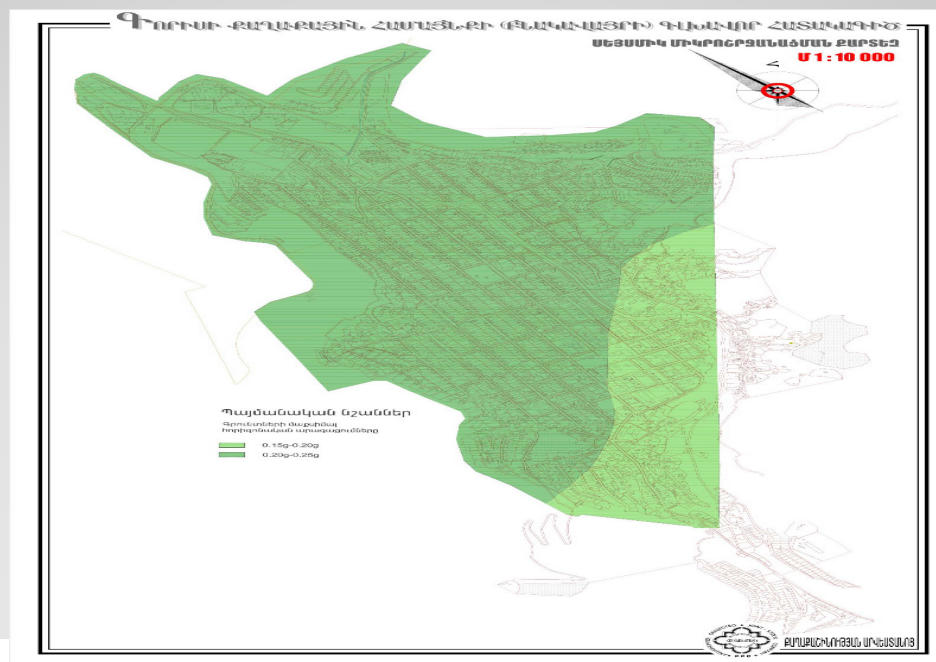
b) Seismic Microzonation Maps of different scales for RA cities and settlements

- 16 seismic microzonation papers were presented to the RA Ministry of Territorial Administration and Emergency Situations in 2014.

- Expertise conclusions were provided for all of them.

The presented maps were approved by the RA Minister of Territorial Administration and Emergency Situations.

As an example we present the seismic microzonation map for Goris City made in 2006





2. SEISMIC RISK ASSESSMENT

a) Seismic risk assessment of cities

Seismic risk assessment was implemented for Yerevan city in cooperation with JICA international organization

There were developed seismic risk maps for 12 Armenian cities: Gyumri, Vanadzor, Stepanavan, Artik, Spitak, Tashir, Maralik, Noyemberyan, Ijevan, Dilijan, Berd and Alaverdi.

There were developed the assessment map of seismic risk for Shushi city of RNGH.



b) Enhancement of seismic equipment of schools

“Disaster Damage Prevention and reduction of vulnerability of children in Armenia” program was implemented by finance of USAID and Technical assistance of UNICEF.

60 most vulnerable, most risky schools of existing schools in the Republic of Armenia built by 20 typical projects of RA territory are chosen and thoroughly investigated.

Recommendations were given on enhancement, recovery and reconstruction of seismic equipment of schools

9 from 60 schools were built in Syunik marz.

Here are presented the photos of secondary school of Shinuhayr.





c) Study of seismic security of water reservoirs



At the moment there are 84 water reservoirs in RA, from which 35 have dams of height more than 15 meters. There were fulfilled study on existence of seismic control-measuring devices and their working condition of 32 water reservoirs in RA territory.

Seismic control-measuring devices situated on the 6 reservoirs (Spandaryan, Azat, Her-Her, Marmarik, Tavshut and Zangagatun) of studied water reservoirs which are most dangerous are subject to recovery.

Here we present as an example the photos of Aparan water reservoir and typical Seismic control-measuring devices.

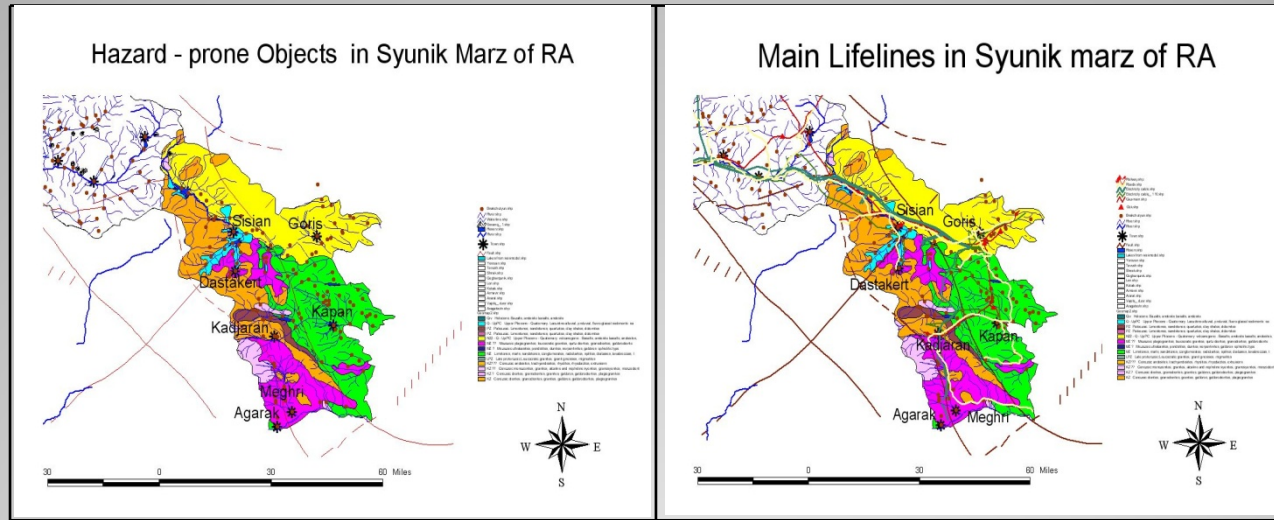




3. REDUCTION OF SEISMIC RISK



a) Auxiliary maps for seismic risk assessment of Marzes



b) Involvement of seismic risk maps in development programmes for Marzes and settlements, foresight of seismic risks reduction measures for emergency situations prevention

- There was adopted the RA Resolution № 1351-N from 25 october 2012 „On involvement of seismic risks assessment maps in development programmes for marzes and settlements of the Republic of Armenia, envisage of seismic risks reduction measures directed to the prevention of emergency situations”.



- Order of RA Minister of Emergency Situations № 550-N from 9 November 2012 "On the establishment of application form for implementation of seismic risk reduction measures and example form for Terms of references of mapping a seismic risk assessment in development programme of a marz, settlement (community) of the Republic of Armenia.

- Marzes/regions and communities are provided with the example form of terms of references for seismic risk assessment mapping and the form for fulfillment of data on objects of special, important and general significance envisaged by Terms of references.

- In the result of realized explanatory work and information given by us generally 238 application forms were accounted and presented to the RA Ministry of Territorial Administration and Emergency Situations by the Heads of 10 regional administrations/marzes and 914 communities of RA, including:



- 43 forms were presented by 44 communities of Vayots Dzor marz,
- 51 forms by 97 communities of Ararat marz,
- 10 forms by 92 communities Gegharqunik marz,
- 56 forms by 67 communities Kotayq marz,
- 1 forms by 114 communities Aragatsotn marz,
- 4 forms by 113communities Lory marz,
- 39 forms by 119 communities Shirak marz,
- 1 forms by 62 communities Tavush marz,
- 8 forms by 109 communities Syunik marz,
- 25 forms by 97 communities Armavir marz .

- Financial means envisaged for seismic risk mapping are involved in the social-economic development programmes for RA marzes /regions.



Thank you