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**"NATIONAL SURVEY FOR SEISMIC PROTECTION"
MINISTRY OF TERRITORIAL ADMINISTRATION AND EMERGENCY
SITUATIONS OF REPUBLIC OF ARMENIA**



COUNTRY REPORT: REPUBLIC OF ARMENIA

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LOCATION OF ARMENIA AND NEIGHBORING COUNTRIES



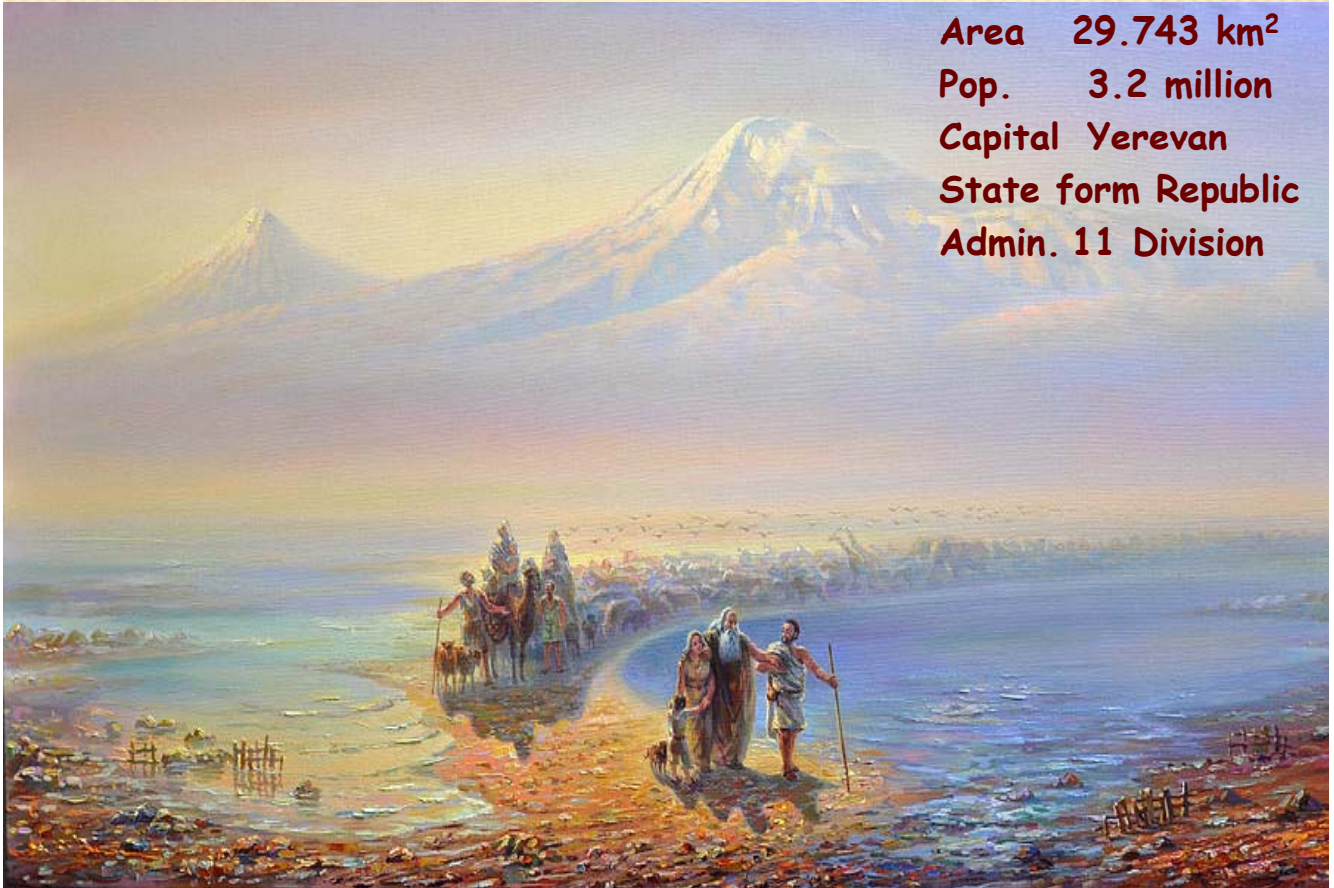
ARMENIA STRADDLES THE LESSER CAUCASUS MOUNTAINS. IT IS BORDERED IN THE NORTH BY GEORGIA, IN THE SOUTH BY IRAN, IN THE EAST BY AZERBAIJAN, AND IN THE WEST BY TURKEY.



**ARMENIAN
NSSP**

General Information

Area 29.743 km²
Pop. 3.2 million
Capital Yerevan
State form Republic
Admin. 11 Division



100TH ANNIVERSARY OF THE ARMENIAN GENOCIDE 1915-2015



ARMENIAN NATIONAL SURVEY FOR SEISMIC PROTECTION

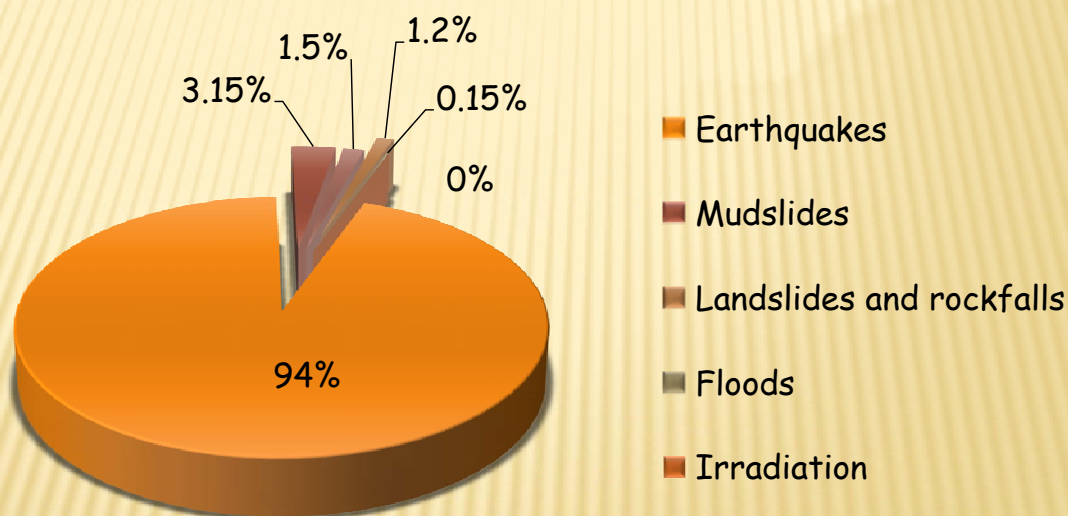
DISASTER RESPONSE AND MANEGMENT IN ARMENIAN NSSP



National Survey for Seismic Protection of Ministry of Territorial
Administration and Emergency Situation of RA

www.mtaes.am

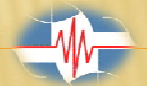
THE DISASTERS IN ARMENIA



ARMENIAN
NSSP

STRONG EARTHQUAKE IN SPITAK 1988, M=7.0

- 25.000 people losses
- 250.000 injured
- 500.000 homeless



ARMENIAN
NSSP


Armenian National Survey for Seismic Protection (NSSP)

was founded under the Government of the Republic of Armenia on **July 17, 1991**. Armenian NSSP is under the Ministry of Territorial Administration and Emergency Situation.

LAWS AND REGULATIONS

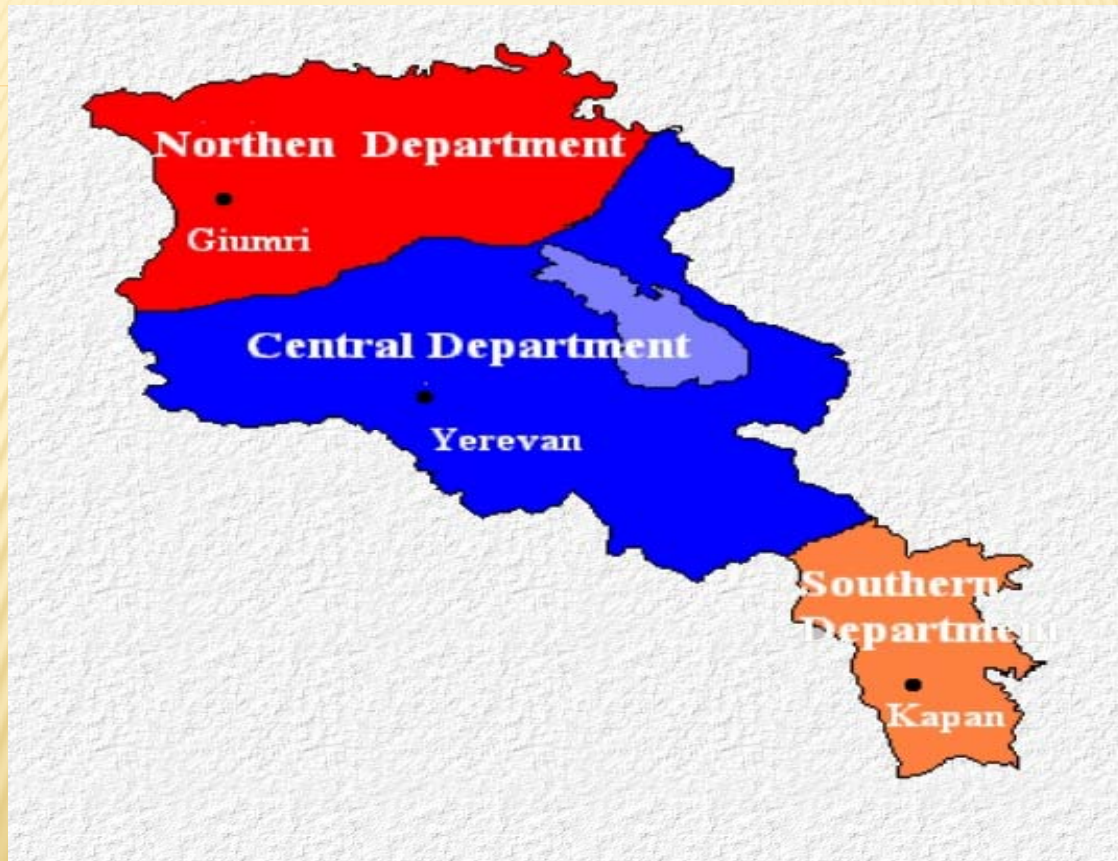
Seismic Protection activities are regulated by a number of laws and legislative acts and national programs of the Republic of Armenia:

Law of RA	The Law of the Republic of Armenia on Seismic Protection (2002)
Resolutions of Government	The Complex Program of Seismic Risk Reduction in the RA Territory (1999)
	The Complex Program of Seismic Risk Reduction in Yerevan city (1999)
	The Resolution of the Government of RA on establishment of the list of critical important and general facilities in the field of seismic protection (2003)
Regulation	"National Survey for Seismic Protection" Agency (2008)



The basic goal of NSSP is Seismic Risk Reduction in Armenia.

Armenian NSSP has developed two Strategic National Programs on "Seismic Risk Reduction in Armenia" and "Seismic Risk Reduction in Yerevan-city". The Programs, adopted by the Government of the Republic of Armenia on the 10th and 7th of July in 1999 are designed for 30 years. All the Ministries and other Governmental, non-Governmental and private organizations will implement these National Programs under the general coordination of Armenian NSSP assigned by the Government as a responsible body for the Seismic Risk Reduction Strategy development and implementation.



There are four types of seismic network in Armenia:

- Guralp Network
- Vayk Network
- Regional Network
- Global Seismograph Network Station (IRIS)

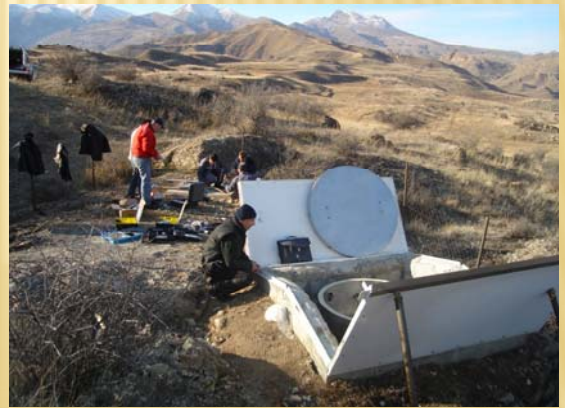
In Garni, at the geophysical observatory, installed seismic recording station. This station included in the IRIS Global Seismographic Network (GSN) and providing seismographic data to research earthquake hazard mitigation and the verification of a Comprehensive Test Ban Treaty (CTBT). It is also the goal to provide real-time access to its data via satellite. GSN Garni station meet this goal.



GURALP STATION

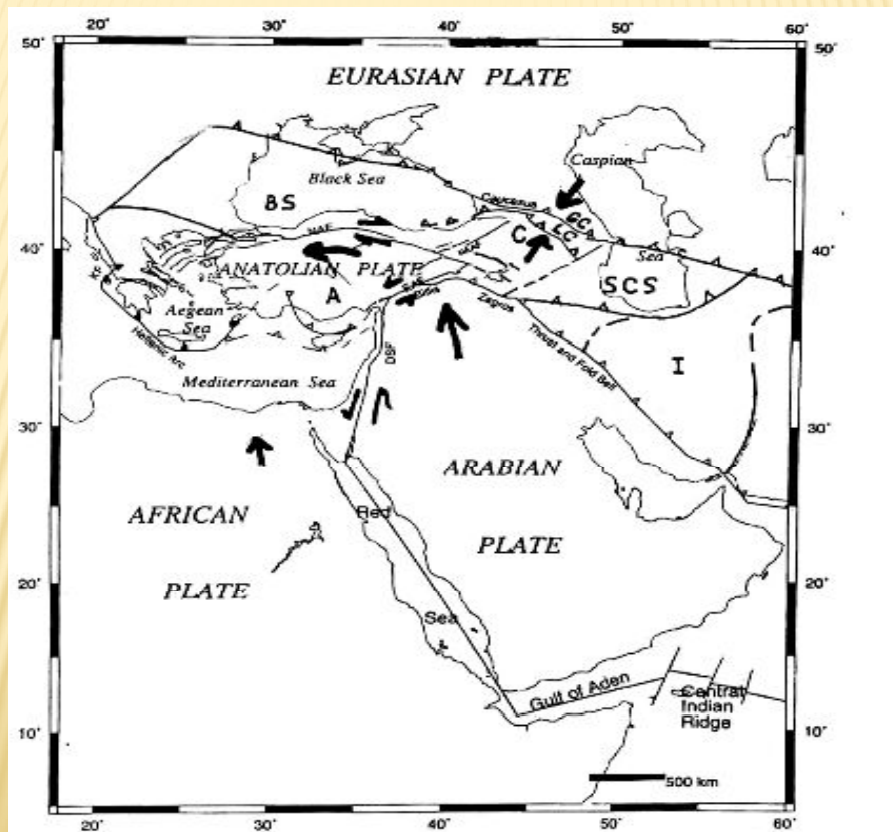


VAYK STATION

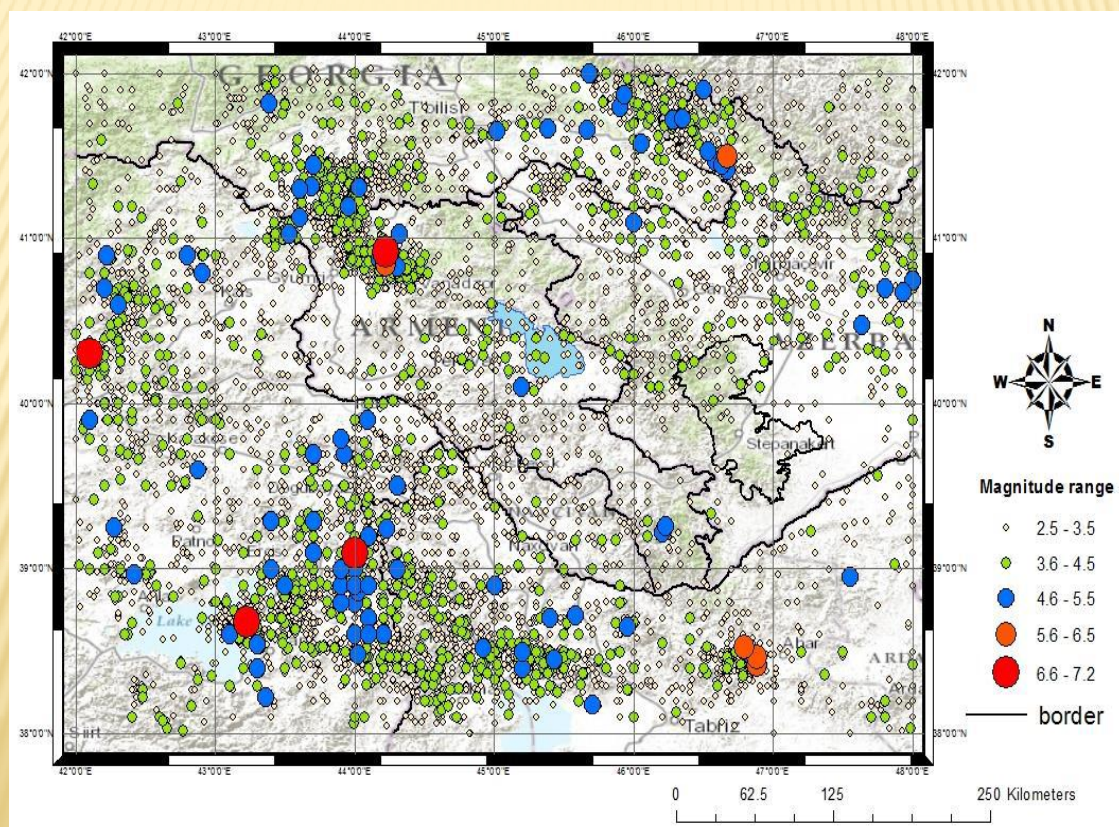


NEW BUILDING OF NSSP IRIS STATION

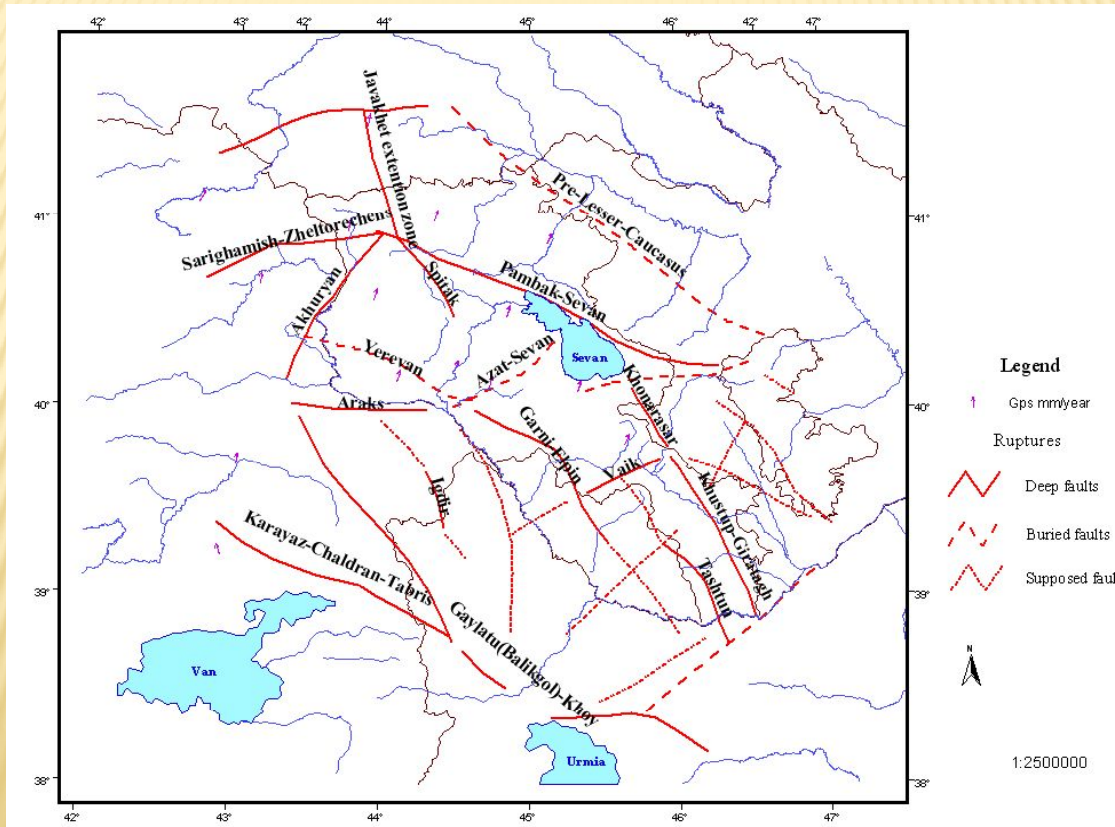




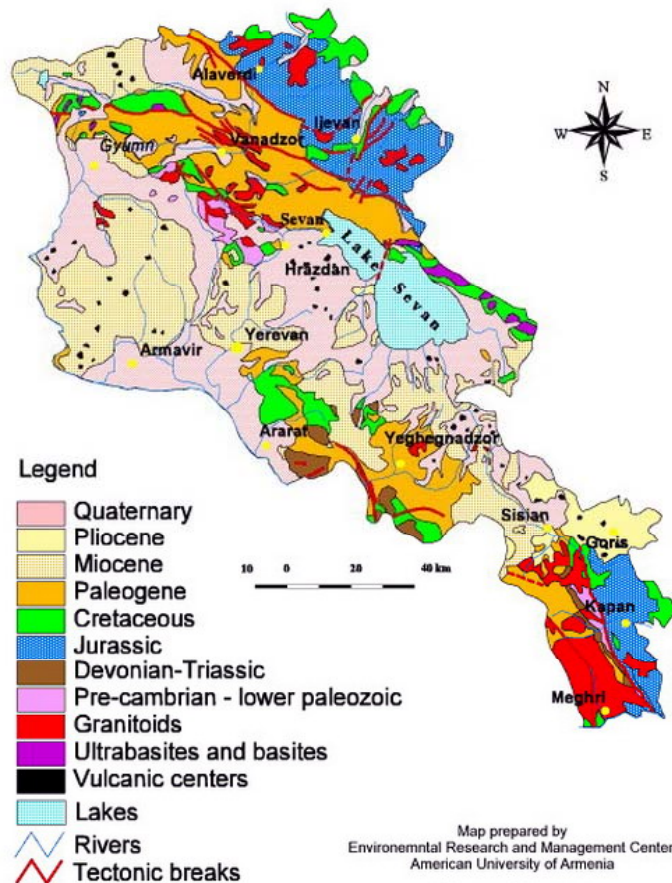
Map of the epicenters of earthquakes with magnitude $M \geq 2.5$ for time period 1962-2015

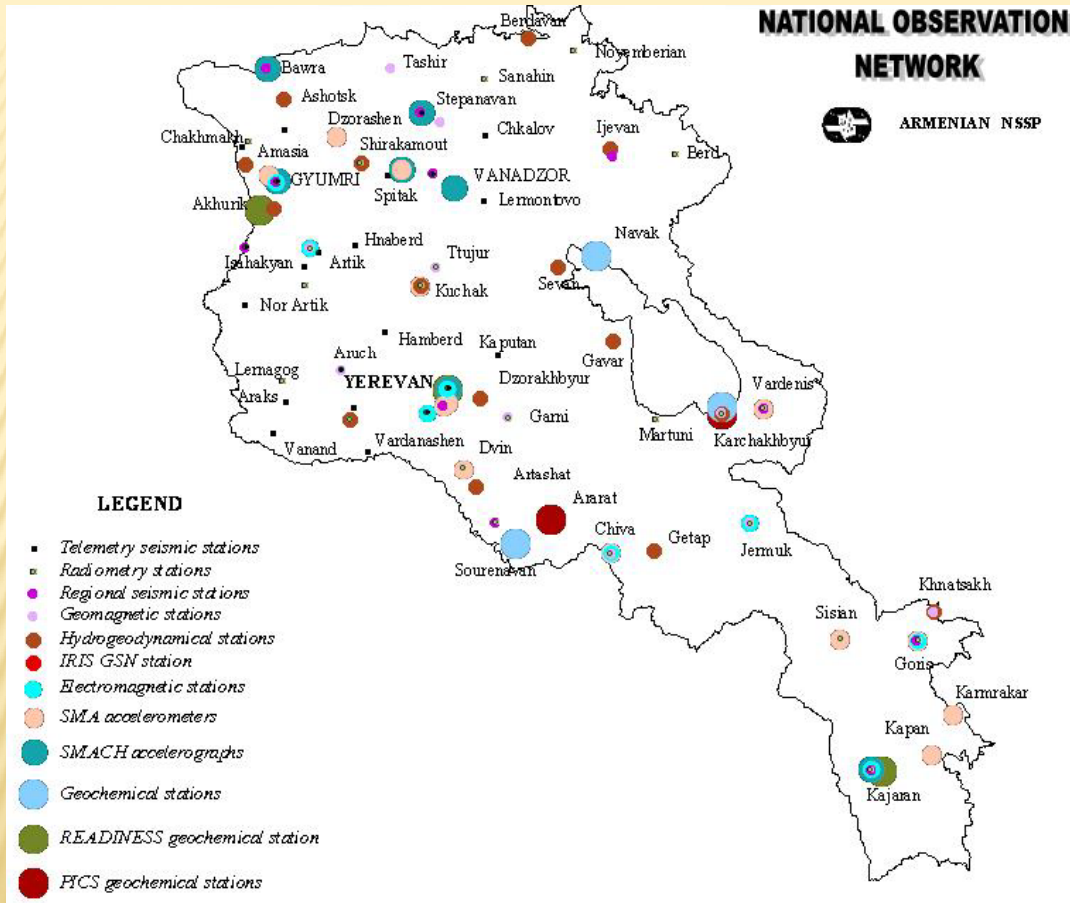


MAP OF FAULTS

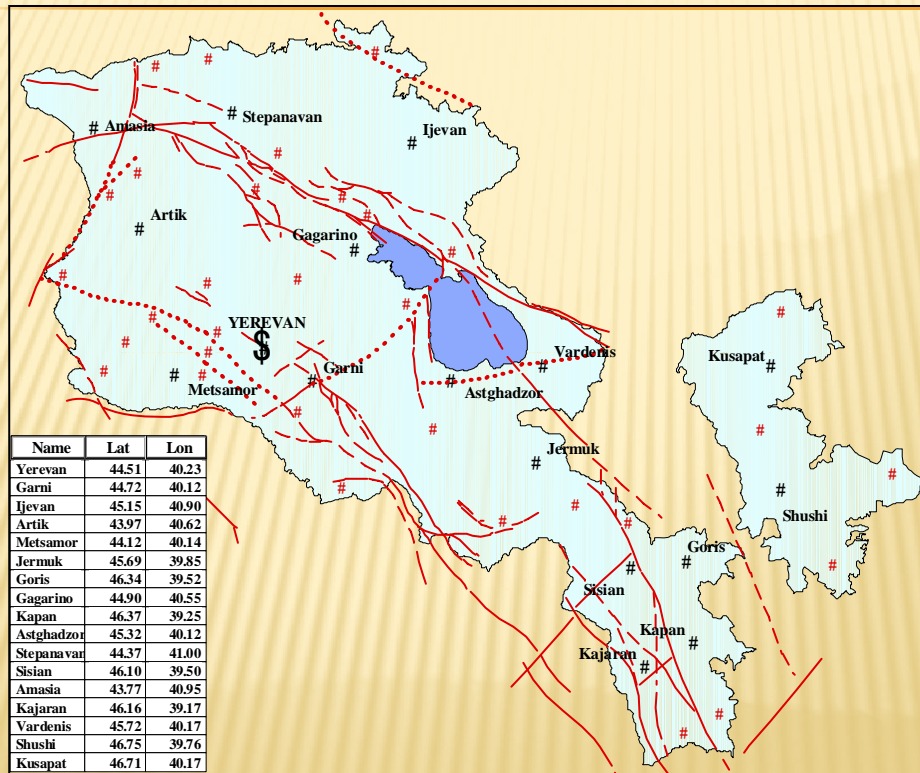


GEOLOGICAL MAP





More than 30 parameters are measured at the more than 150 stations of Armenian NSSP National Observation Network



GPS OBSERVATION NETWORK

GPS stations

Existing

⌘ Permanent (YEREVAN)

Session measurements

Projected

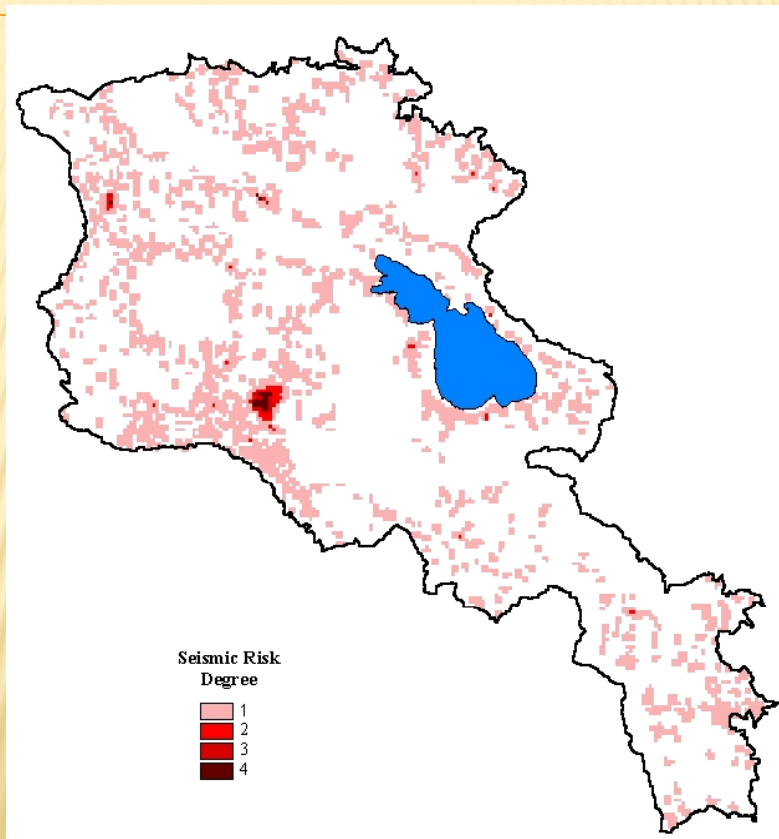
Session measurements
32 points

Active faults

— Proven
- - - Probable
⋯ Buried

SCALE 1:2 000 000

SEISMIC RISK MAP OF RA



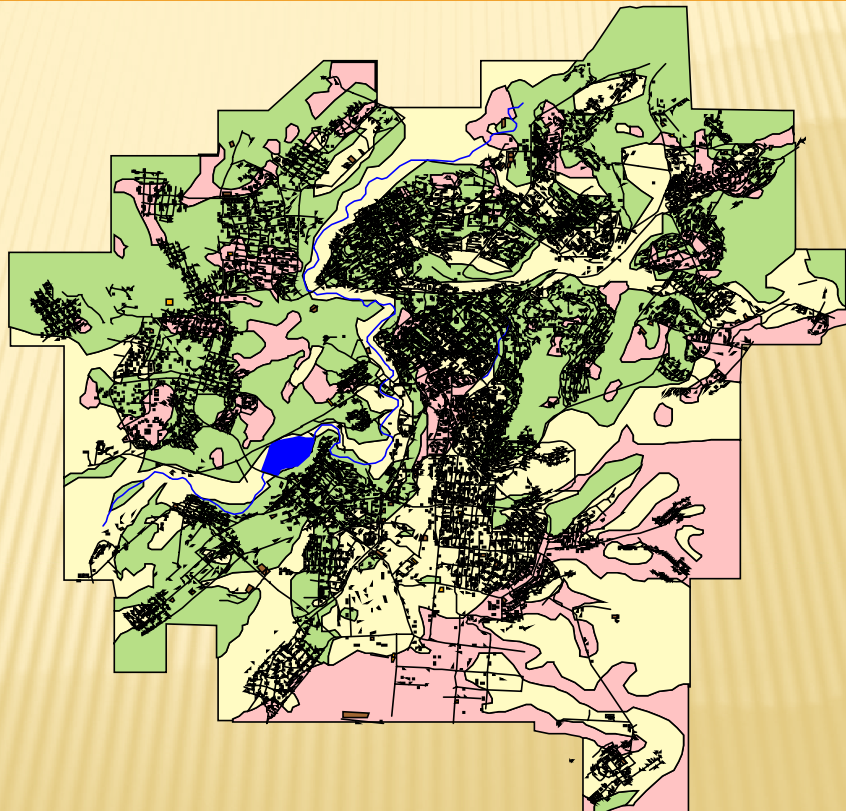
Tasks of Building and Structure Seismic Risk Evaluation Division

- Data base creation for urban planning of towns and settlements using GIS technology
- Urban planning detailed mapping
- Estimation of facilities' design seismic resistance
- Seismic risk evaluation for towns and settlements
- Seismic risk mapping for towns and settlements
- Rapid damage estimation for towns and settlements in epicentral zone in case of major earthquake.

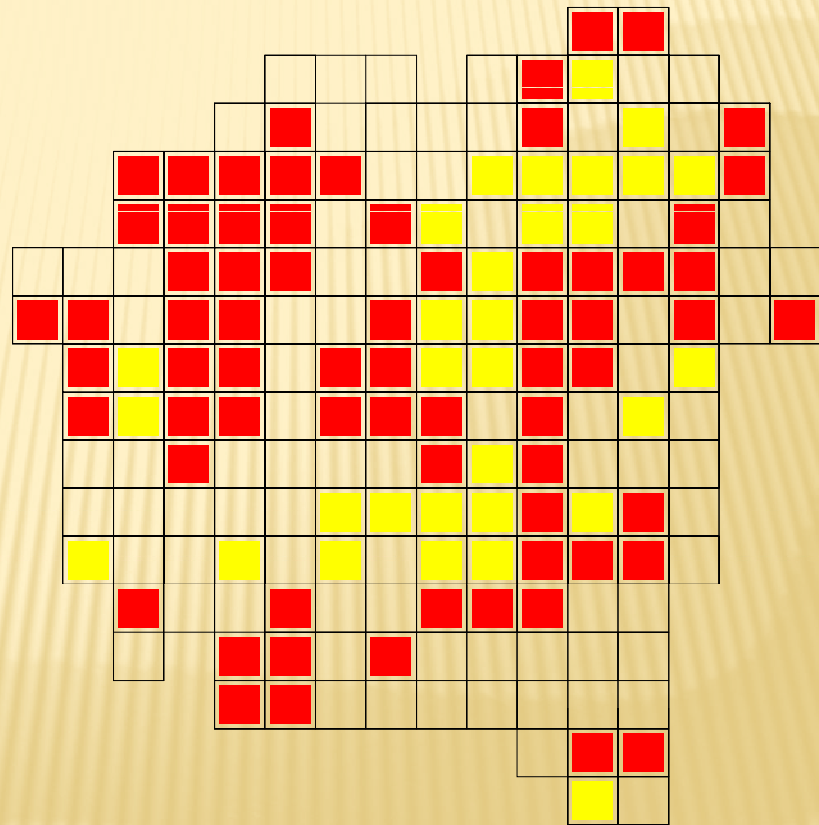
Yerevan city



Seismic Microzonation Map of Yerevan City



SEISMIC RISK DISTRIBUTION FOR YEREVAN CITY



The Armenian NSSP Task Force members

- seismologist-seismotectonist
- seismologist
- geo-technician
- earthquake engineer
- communication engineer
- public awareness expert
- logistics, rescuer
- psychologist

The basic goal of NSSP is Seismic Risk Reduction in Armenia

SRR Strategy includes:

- ✓ Seismic Hazard and Risk Assessment;
- ✓ Vulnerability reduction in urban areas, including reinforcement and upgrading of existing buildings, design of new codes and standards;
- ✓ Public awareness, people education and training;
- ✓ Early warning and notification;
- ✓ Partnership establishment, involving public and private organizations;
- ✓ Risk management, including Emergency Response and Rescue Operations;
- ✓ Disaster relief and people rehabilitation;
- ✓ Insurance;
- ✓ State disaster Law and regulations.



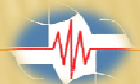
ARMENIAN
NSSP

ARMENIAN NSSP MAIN TASKS:

- **seismic monitoring**
- **current seismic hazard assessment**
- **seismic and secondary hazard assessment**
- **seismic risk evaluation and reduction, early warning**

including

- ✓ earthquake engineering
- ✓ population education and training
- ✓ preparedness of government officials and local authorities
- ✓ development of early warning system
- ✓ compiling of hazard and maps



ARMENIAN
NSSP