Goal of Approach:

Development of Natural Disaster Risk Atlas (interactive web-based and hardcover Atlas) for Georgia.

The goal of the approach was to define the risk zones for natural disasters in Georgia and communicate the risks to national, regional and local governments, affected communities as well as interested general public. The objective to develop the Atlas was to help decision-makers consider natural disaster hazards in the development projects (spatial, economical, infrastructure and social) to avoid, prevent and mitigate risks.

Atlas created for Georgia unites international best practices in DRR and DRM. Included maps have been developed according to the modern technologies and methodologies. The regulatory framework for natural disaster risk management in Georgia is rather weak and DRR is poorly addressed in the legislation. Development of the Atlas created the basis for different state and non-state organizations to utilize a common risk assessment methodology and allowed them to identify the risk zones in the country, which facilitated planning process at the national and local levels.

Input provided by: Caucasus Environmental NGO Network (CENN)

Main elements of the implementation strategy

- Combination of international best practice and national expertise
- Cooperation between State and non-state institutions:

  Different state agencies that are involved in the disaster risk management issues, participated in the creation of the Atlas. These organizations include: Ministry of Environment (National Environmental Agency), Ministry of Internal Affairs (Emergency Management Department), Ministry of Regional Development and Infrastructure (Coastal Protection Department), and Ministry of Economy and Sustainable Development (Spatial Development Department). Furthermore, different scientific institutes were involved in the development of the Atlas: Ilia State University (Institute of Earth Sciences), Tbilisi State University (Department of Natural Sciences), University of Twente (Faculty of Geoinformation Science and Earth Observation), the Netherlands.
- Application of modern technologies and know-how
- Work on historic data and information
- Intensive capacity building and development of national DRR related institutions via training and coaching

Targeted beneficiaries

The key beneficiaries are the national agencies working on DRM, local authorities responsible for local development, affected communities in risk zones, business sector, general public and other interested parties.

The main benefit of the approach is that the beneficiaries can obtain the information on qualitative dispersion of risks in the space that allows them to plan adequately their activities and implement natural disasters and climate change adapted activities in diverse fields like natural resources management, agriculture, emergency management, infrastructure development.

Any significant lessons learned

Even though the State authorities express their full support and understanding of the importance of the DRR concerns, the allocation of human and financial resources in DRR related activities from the State has been a challenge. The competent authorities do not have baseline information on natural hazards and disasters that would allow them precise and adequate allocation of resources. Furthermore, there has been no analysis conducted on the effects of climate change on natural disasters and, thus, little attention is devoted to prevention and adaptation measures. The main efforts are directed towards responding to natural disasters after they occur.

The process of creation of the Atlas also made it clear that in many cases, the information provided by the State agencies

and the local population can differ significantly; therefore, it is important to use the participatory risk assessment approach.

Resource requirements

The data required for creation of the Atlas include: meteorological, hydrological and geological data for the whole country over the last 100 years (some of the historic data is even older); remote sensing data; thematic GIS data (e.g. land cover, soil, geology, climate, administrative territorial division, land use, cadastre data, infrastructure data).

Application of GIS and remote sensing technologies was essential for creation of the Atlas and strengthening the capacity of the representatives of the State agencies (the project partners) who underwent intensive training courses in Georgia and Twente University in the Netherlands.

Creation of the Atlas cost about EUR 200,000 with the largest portions of the amount spent on data collection, analysis and training.

Potential for replication or scaling-up

This type of Atlas is the first effort of similar nature not only in Georgia, but also for all the Post-Soviet Republics. The Atlas was presented at the international conference "Disaster Risk Management Challenge for Development", where the participants from the Caucasus countries expressed their interest to develop similar Atlas for the whole Caucasus region.

The feedback from local authorities was also important, as they requested to create detailed risks and hazard maps for municipalities. Currently, such maps are being developed for five municipalities in Georgia.

Any additional information

Electronic Web-Atlas can be viewed at the following link: www.drm.cenn.org