

Stories of Impact

A series highlighting achievements in disaster risk management

Enhancing Seismic Preparedness in Istanbul



REGION: EUROPE AND CENTRAL ASIA
FOCUS: RISK REDUCTION
COUNTRY: TURKEY



RESULTS:

- GFDRR provided technical and advisory support to the \$1.5 billion Istanbul Seismic Risk Mitigation and Emergency Preparedness Project, which includes \$550 million in World Bank financing.
- With support from GFDRR and the World Bank, 1,086 public buildings have been retrofitted or reconstructed. This includes schools that serve more than 1.1 million students and teachers, and hospitals and clinics that serve about 8.7 million patients each year.
- Through the Public Awareness and Neighborhood Community Volunteers program, 662,000 people were trained in disaster preparedness and an estimated 5.5 million citizens were reached through social and public media.
- In the course of the project, 3,630 civil engineers throughout the country were trained in Turkey's seismic retrofitting code.
- The Istanbul Governorship's new primary Disaster Management Center at Hasdal has been completed and the back-up center is operational.

Located on the vulnerable North Anatolian Fault, Istanbul is highly prone to earthquakes. The city's high population, as well as commercial and industrial density, mean that frequent earthquakes can cause significant economic losses, damage, and human suffering.

To protect the city from this risk, in 2005, the Governorship of Istanbul, with support from the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR), launched a comprehensive program to help the city prepare for and respond to earthquakes.



CONTEXT:

In 1999, the 7.1 magnitude Marmara earthquake shook northwest Turkey. The disaster killed more than 17,000 people and caused \$5 billion in damage, including significant impact to Istanbul's infrastructure. A major economic center and home to nearly 15 million people, Istanbul is vulnerable to earthquakes that can have devastating consequences on the economy as well as human lives.

To reduce damage from disasters like Marmara, the Istanbul Seismic Risk Mitigation and Emergency Preparedness Project (ISMEP) was conceived to enhance preparedness, strengthen critical infrastructure, and improve institutional and technical capacity for disaster risk management (DRM) and emergency response.

APPROACH:

GFDRR provided technical and advisory support to the \$1.5 billion ISMEP project, which included \$550 million in World Bank financing. To help reduce seismic risk, the project pioneered an innovative approach that combined risk reduction investments such as the reconstruction of public buildings, broader programs including public awareness campaigns, and investments to strengthen disaster response. Project activities focused on:

- Enhancing emergency preparedness, including updating emergency communication, information systems, and technology. It also launched a "Safe Life" public awareness campaign communications strategy and workshops for individuals and corporations. Additionally, the project created a state-of-the-art disaster management center to serve as a control center for government emergency response.
- Retrofitting or reconstructing priority public buildings – schools, hospitals, dormitories, administrative and social service buildings – to reduce seismic risk.
- Supporting the enforcement of building codes to ensure compliance with earthquake-resistant design standards. This occurred through improving effectiveness and efficiency of workflows at urban development departments of the pilot municipalities, enhancing transparency of construction and occupancy permit issuance procedures, and establishing business standards and complaint hot lines.

NEXT STEPS:

Building on the lessons learned from the ISMEP, the government of Turkey plans to continue expanding its DRM agenda to other high-risk areas or priority sectors in the country. With support from GFDRR, the government is looking to develop a national DRM program as a multi-stakeholder platform to provide guidance to a wide range of institutions for preparing risk reduction projects. The program will be funded by a wide range of sources, including the national budget, international financing institutions such as the World Bank, and the private sector. The lead agency for this program will be the Disaster and Emergency Management Presidency.

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*ALL MONETARY VALUES IN USD



"The ISMEP project's holistic approach addresses many aspects of disaster management, including softer elements such as public awareness. Through this project, we have made great progress in Istanbul that would have been otherwise difficult."

– Gökay Atilla Bostan, Istanbul AFAD Director

LESSONS LEARNED:

Setting up a strong, highly knowledgeable local team is key to successful project implementation. Projects have greater chances of success when they are implemented by local authorities, engineers, and managers with experience working on earthquake reconstruction projects, as well as those who have extensive knowledge about local and national regulations. The ISMEP program established a Project Coordination Unit (PCU) as an independent team of experienced local experts to fulfill financial and technical requirements for the project. This team was able to quickly focus on project demands and adeptly navigate local needs in prioritizing investment items.

Increasing public awareness is critical to build public support for upgrading schools. In the course of retrofitting schools to be earthquake proof, some parents and students were unhappy that students were temporarily relocated to other schools. To gain public support for the retrofitting project, the PCU prepared seminars and trainings for students, parents, teachers, and administrative staff to inform them of the benefits of the changes once schools are upgraded.