

IMPROVING SCHOOL INFRASTRUCTURE SAFETY IN THE KYRGYZ REPUBLIC

Ensuring a safe learning environment for children

AT A GLANCE

Country Kyrgyz Republic

Risks Earthquakes, landslides, mudflows, glacial lake outburst floods, and avalanches

Area of Engagement Promoting resilient infrastructure

In the Kyrgyz Republic, the Government is investing in its schools to improve their safety and functionality and ensure that they are more resilient to natural disasters.

KYRGYZ CHILDREN AT RISK

An estimated 2.5 million students attend over 3,000 public school facilities in the Kyrgyz Republic. There is general knowledge throughout Central Asia of the seismic vulnerability of its residential and school buildings built during the Soviet era.

However, through a recent national-level probabilistic risk assessment, the Kyrgyz Republic was able to quantify and identify regions in the country where the seismic risk is concentrated, including the capital, Bishkek.

The assessment provided compelling evidence of the high vulnerability of the existing school infrastructure. It found that the combined total value of school buildings across the country is estimated to be \$1.5 billion.

It also showed that potential fatalities in the education sector are alarmingly high: fatalities were estimated to exceed 7,500 in school buildings, while a lower number is expected in residential buildings.

80% of schools in the Kyrgyz Republic are vulnerable to earthquakes



A NEW CURRICULUM FOR SAFER SCHOOLS

In 2015, the government established the State Program on Safer Schools and Preschools of the Kyrgyz Republic 2015–2024 to improve the safety of all its 2,222 schools and 806 preschools.

The State Program provides the initial framework to reduce the vulnerability of school infrastructure nationwide, technical and financial support will be required to support the Government to reach their stage.

In addition to safety and resilience challenges, the project aims to improve quality learning environments in existing facilities through measures such as higher energy-efficiency; updated Water, Sanitation and Hygiene (WASH) facilities; and inclusive education, which are not in adequate condition due to lack of school budget.

GFDRR and the World Bank have provided support to the government in implementing this forward-looking strategy through the Enhancing Resilience in Kyrgyzstan Project.

LESSONS LEARNED

Locally applicable solutions enable sustainable management.

The program tailors affordable and effective engineering solutions for 3 typical school building types in the country to improve seismic performance to meet international standards. The solutions take into consideration the local constitution environment and the capacity building of the local technical community, so that the solutions can be widely applied in the country by the local technical community.

Finding the most efficient investment plan is a key to scale up the impact.

The program develops an intervention strategy and investment plan, enabling the optimization of the safety benefit with limited investment. Informed by the optimized solution, decisions can be geared towards more efficient development of the seismic resilience of schools and benefit as many students as possible.

Involvement of wider stakeholders can lead to greater adaptation of the strategy

The program operated under the country's institutional, legal and regulatory framework, and included the participation of key stakeholders involved in school infrastructure. The wide involvement of stakeholders facilitates the building of local capacities to enable a better and wider implementation of the framework. In the meantime, potential opportunities could be identified to improve this framework.



Improving safety for 2,222 schools and 806 preschools

Photo: Nick van Praag / The World Bank

NEW RETROFIT SOLUTIONS

Affordable and locally-applicable retrofit solutions were designed for 3 of the main types of school buildings in Kyrgyz Republic. These solutions are design in an incremental approach to efficiently ensure satisfactory seismic performance according to different conditions.

STRONGER ANALYSIS

The project introduced a new tool to conduct seismic risk assessment, intervention strategy optimization, and investment prioritization for school facilities. The tool has been applied to 300 eligible schools to inform the decision of investment plan. The analysis produced a solution that would enable nearly 80% of the schools to become seismically resilient with about 30% of the total investment needed.

LIVES AND FUTURES PROTECTED

Informed by the analytical results and following the optimized solution, 10 schools with about 8,500 students are estimated to benefit in the short term with \$12 million investment under the project, covering 4 oblasts with the highest seismic risk. The benefits include seismic safety, energy efficiency, and WASH improvements.

"I really knew little about these problems before that, but today I was convinced that this project is not easy one. We need to engage fully, and at the same time, this project will provide a guarantee to ensure the safety of our students and our population."

-- Kalys Ahmatov, Deputy Minister of MoES of the Kyrgyz Republic.