

RESILIENT INFRASTRUCTURE

GLOBAL PROGRAM FOR SAFER SCHOOLS

Taking action at scale for safer and more resilient school infrastructure

Each year, natural disasters and climate change around the world have a devastating effect on children's education. They cause direct harm to children, teachers, and the school community, damaging or destroying school infrastructure. The Global Program for Safer Schools (GPSS) aims to promote and facilitate informed, large-scale investments for the safety and resilience of new and existing school infrastructure at risk from natural hazards, contributing to high-quality learning environments. The focus is primarily on public school infrastructure in developing countries.

WHAT WE DO

-  Work to make schools and the communities they serve more resilient to natural hazards. Resilient schools result in reduced physical impact on school infrastructure, minimized disruption to educational services, and lives saved in the event of a disaster.
-  Leverage support by linking activities directly to large school investment programs.
-  Bring together governments, the private sector, and civil society to enable countries to access the best experience and technical expertise.
-  Use technology and data analytics to quantify the level of risk and prioritize actions in order to guide risk-reduction investments.

1.2 billion

children are enrolled in primary and secondary education worldwide.

875 million

schoolchildren live in earthquake-prone regions of the world.

2.5 million

children will be safer in Peru after GPSS launched a risk assessment that paved the way for a national risk-reduction strategy of

\$3.1 billion

OUR APPROACH

Developing Global, Evidence-based Knowledge

GPSS is at the forefront of generating global, evidence-based knowledge on the safety and resilience of school infrastructure.

- » At the global level the Program is developing the Global Library of School Infrastructure (GLoSI) a repository of data and information about the structural performance of school buildings and alternatives to reduce their seismic vulnerability.
- » At the country level, the program is working with governments to make schools and the communities they serve more resilient to natural disasters – from targeted policy reforms and investment in physical infrastructure to national strategies focusing on risk reduction and quality learning environments. The program's goal is to promote solutions at scale by supporting governments in the design and implementation of long-term national strategies focused on reducing the vulnerability of new and existing school infrastructure.

Integrating Risk Reduction into Education Projects

GPSS is working alongside education teams at the World Bank to integrate risk reduction considerations into projects that finance school infrastructure. The program has developed guidance notes like the Roadmap for Safer Schools, which provides governments and development partners with tools and resources to improve the safety of schools. To support teams working in post-disaster contexts, the GPSS will launch the Recovery and Reconstruction Roadmap for Safer Schools in 2018.

Providing In-country Technical Assistance

The program has provided countries with an estimated US\$10 million to design and implement safer school activities. GPSS also works to diagnose school safety at a country level through state-of-the-art technical approaches and in-country visits. The program has carried out rapid, country-level diagnostic visits in Afghanistan, Armenia, Indonesia, Fiji, Mongolia, Samoa, Tonga, and Vanuatu.

Technical assistance begins with diagnostic field visits, which provide a rapid assessment of the vulnerability of existing school infrastructure to natural hazards, and identify factors that contribute to risk. This includes collecting available school infrastructure baseline data, mapping key stakeholders in charge of managing school infrastructure, and understanding the local construction

and financing environments. Such visits help to identify potential opportunities where GPSS technical assistance could support countries in the design of risk reduction strategies and investments in safer education facilities.

Sharing Knowledge

GPSS is also developing a web-based platform and e-learning courses to disseminate knowledge and results from the Program to a wider audience, and to reach policy makers, project leads, educators, development partners, civil society members, and other stakeholders. By working to develop tools that make data easily accessible and available worldwide, GPSS aims to inform investments at scale that reduce the vulnerability of schools, and to promote a long-term, systematic approach to improving the safety of school infrastructure.

Building Partnerships

The Global Program for Safer Schools is building partnerships with academia, the private sector, and development partners to advance the safer school agenda. The program has partnered with University College London, University of Los Andes from Colombia, and the Swiss Federal Institute of Technology in Switzerland to establish a working group to develop the Global Library of School Infrastructure. The GPSS is also developing in-country partnerships with stakeholders working on the ground, including United Nations agencies such as UNICEF, and development partners such as the Asian Development Bank (ADB) and the Japan International Cooperation Agency (JICA).

Figure 1: GPSS Road Map for Safer Schools aims to guide the interactions of project leads with infrastructure managers and stakeholders. Its goal is to mitigate disaster risk by promoting a more informed and structured dialogue on investing in the safety of new and existing school infrastructure.

DIAGNOSIS

Step 1

School Infrastructure Baseline

To establish a baseline of existing school infrastructure facilities and the demand for new school infrastructure

Step 2

Construction Environment

To gain an understanding of the institutional environment and regulatory framework within which school infrastructure is planned, constructed, and maintained in order to determine the factors placing schools at risk

Step 3

Financial Environment

To gain an understanding of the financial environment within which school infrastructure is planned, constructed, and maintained, in order to determine the factors placing schools at risk

ANALYSIS

Step 4

Disaster Risk Analysis

To provide a step-by-step guide to quantifying the potential damage and losses to school infrastructure due to adverse natural events

OPPORTUNITY

Step 5

Safer School Investment Opportunities

To recommend investment scenarios to Ministries of Education that integrate safety into both existing and new school infrastructure

INVESTMENT

Step 6

Project Financing

To implement investment programs to improve the resilience of schools



ACTIVE ENGAGEMENTS

ENGAGEMENT LEVEL: TECHNICAL ASSISTANCE

-  \$500,000 and less
-  \$500,100-\$1,000,000
-  \$1,000,100+

WHERE WE WORK

-  Rapid Diagnostic
-  GPSS Technical Assistance (TA)
-  WB Financing and GPSS TA
-  New Engagements

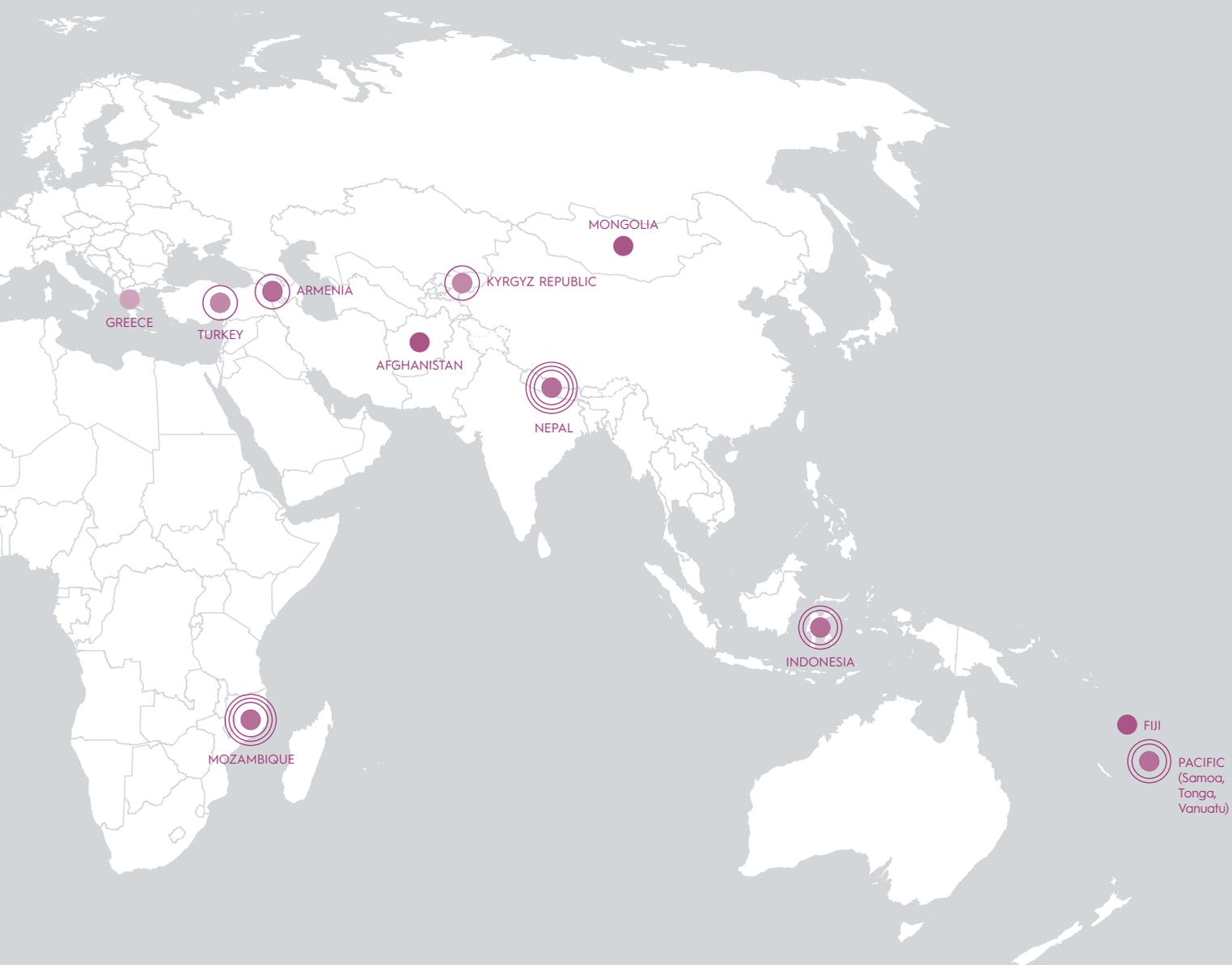


GPSS is now active on the ground in 14 countries:

- » Armenia
- » Dominican Republic
- » El Salvador
- » Fiji
- » Indonesia
- » Jamaica
- » Kyrgyz Republic
- » Mozambique
- » Nepal
- » Nicaragua
- » Turkey
- » Samoa
- » Tonga
- » Vanuatu

GPSS has conducted comprehensive technical reviews of school safety in eight countries:

- » Afghanistan
- » Armenia
- » Indonesia
- » Mongolia
- » Mozambique
- » Samoa
- » Tonga
- » Vanuatu



Next Steps

- » GPSS aims to engage in 20 additional countries in the next five years in order to reach its goal of making 500,000 classrooms safe from natural disasters and to benefit 15 million students.
- » ARUP is supporting GPSS to develop the Recovery and Reconstruction Roadmap, an operational tool that will guide project managers involved in post-disaster recovery and reconstruction efforts.
- » GPSS is working with partners to develop the Global Library of School Infrastructure, which will support school infrastructure projects in countries that lack risk information.

Peru

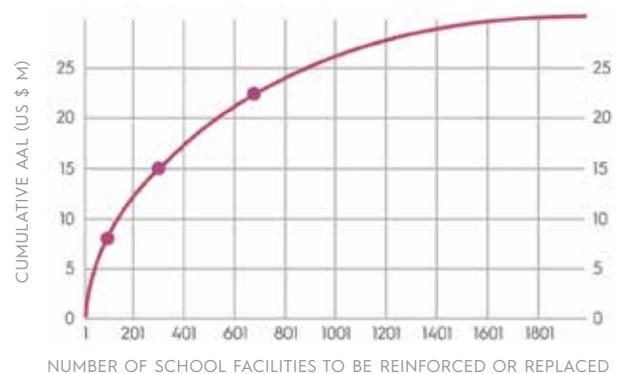
In Peru, a GFDRR-supported risk assessment in Callao and Lima indicated that the Ministry of Education can reduce about 70% of the seismic risk by improving the physical safety of 600 schools—30% of all schools (Figure 2). GPSS extended the risk assessment nationwide and supported the implementation of Peru’s first National Plan for School Infrastructure and a Seismic Retrofitting Program for School Infrastructure.



From 2015–2016, the government has started the implementation of a first phase of Plan Lima, which includes making 373 of the most vulnerable schools resilient—a step that will benefit 278,000 students in the short-term. At least 12,000 schools will be made resilient in the medium- to long-term. In total, an estimated 2.5 million children will have access to safe school buildings.

In order to enhance and accelerate the implementation of these programs, an innovative solution based on incremental retrofitting was implemented for the first time in Peru. In line with this approach, GPSS has also convened the best universities in the country to devise, test, and validate retrofitting solutions for one of the most common and vulnerable types of schools.

Figure 2



“The government of Peru, through the Ministry of Education, is committed to the improvement and rehabilitation of school infrastructure throughout the country. The Program for School Infrastructure has made advancements in adjusting its institutional structure, implementing an ambitious short-term intervention plan in Lima and designing the National School Infrastructure Plan. The World Bank and GFDRR have been strategic partners in this process by providing timely technical assistance.

—Gustavo Canales, Director of the Program for School Infrastructure (2014–2016), Ministry of Education



Nepal

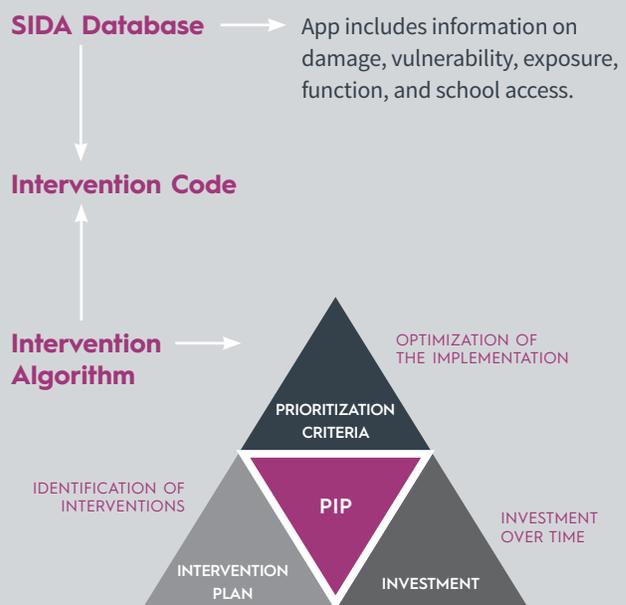
The 7.8 Mw earthquake that struck Nepal on April 25, 2015, affected more than half of the country's 75 districts. Under GPSS, the World Bank and GFDRR have provided technical advice and support to the Department of Education on the planning for reconstruction and recovery of the education sector. GPSS has trained 150 Nepali engineers to conduct a detailed structural integrity and damage assessment (SIDA) of 18,000 public school buildings—an effort enabled by innovations in data collection and analysis.

The results of the SIDA served as essential inputs for the Department of Education, other development partners, and NGOs involved in planning the reconstruction and prioritizing the implementation. The results also provided the vulnerability information needed to plan long-term risk reduction programs in the education sector.

An innovative tool has been developed that automatically analyzes the SIDA results and prepares a prioritized investment plan (PIP) for use in reconstruction and retrofitting of school infrastructure (figure 3). The tool makes it possible to quantify the investment needed in the short and medium terms to recover from the disaster, the investment needed in the long term to improve the resilience of school infrastructure, and the changes in the investment over time. This tool and the results of the SIDA have been integrated into a web-based platform, providing long-term support to risk-informed decision making in the education sector.



Figure 3: SIDA Database and PIP



Turkey

After a six-year influx of Syrian refugees, Turkey is now the world's largest refugee-hosting country, with the government estimating registered Syrians under Temporary Protection (SuTP) at 3.1 million. Rather than residing in camp environments, most displaced individuals in Turkey live in densely populated urban areas—particularly in southeastern provinces, which are also among the least developed areas.

This not only places significant stress on public services, but also increases the number of people at risk in one of the world's most earthquake-prone countries. Approximately 90,000 fatalities have been caused by 76 earthquakes in the country since 1900.

The World Bank, with technical assistance from GFDRR, is administering \$160 million EU-funded project to help the Turkish government respond to the refugee crisis by building safer schools. The project will help the Turkey's Ministry of National Education build 56 earthquake-resistant schools (1,420 classrooms) over the next three years, ensuring access to education for 40,000 school-age children under Temporary Protection and for their host communities.

Moving forward, GFDRR will assist the government of Turkey on its goal of improving seismic safety of all schools nationwide.

GFDRR Engagement Notes

Global Program for Safer Schools

gfdrr.org/roadmap-safer-schools-story

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The Global Facility for Disaster Reduction and Recovery (GFDRR) is a global partnership that helps developing countries better understand and reduce their vulnerability to natural hazards and climate change.

GFDRR is a grant-funding mechanism, managed by the World Bank, that supports disaster risk management projects worldwide.

Working on the ground with over 400 local, national, regional, and international partners, GFDRR provides knowledge, funding, and technical assistance.