GLOBAL PROGRAM FOR SAFER SCHOOLS

SAMOA

215
registered schools and no demand for additional classroom capacity

USD $10 MILLION
projected annual losses due to natural disasters

4
major natural disasters since 2004

RECOMMENDATIONS

- Consolidate data on the existing building stock and hazards into a geospatial asset management tool and user friendly resource.
- Develop site selection and planning guidelines to inform the planning process for new education infrastructure.
- Support the Ministry of Education Sports and Culture (MESC) to develop engineered model designs for reconstruction of education infrastructure.
- Develop an assessment tool and provide training to identify the structural vulnerabilities in schools which are specified as community evacuation centres for natural disasters.
- Develop retrofitting guidelines to address structural vulnerabilities in education infrastructure.

GFDRR Global Facility for Disaster Reduction and Recovery
ARUP
WORLD BANK GROUP

ASSESSMENT

Hazard Assessment
Exposure to tsunamis, cyclones, heavy rainfall and earthquakes is an ongoing risk in Samoa. Public awareness of hazards is improving and the government are currently preparing evacuation protocols and installing early warning systems. Detailed hazard maps for land use planning don't currently exist, although the Disaster Management Office (DMO) are planning to develop these.

Existing Education Infrastructure
There is currently no demand to increase the number of schools but the need to replace existing infrastructure is increasing. Approximately 15% of all primary schools have less than 100 students, resulting in an opportunity to consolidate the number of schools. Data on the existing building stock is fragmented which inhibits prioritisation of infrastructure projects. Three structural typologies were identified and some school buildings appeared to be non-engineered structures.

Implementation Process
Education infrastructure needs are identified by local School Committees and reviewed by the MESC and the Planning and Urban Management Agency (PUMA). Limited consideration is currently given to hazard exposure when selecting sites. No standard model school design is endorsed by the MESC with school designs typically developed on a case by case basis by the private sector. A model school design developed by the Japanese International Cooperation Agency (JICA) has been used previously, but could be optimised to improve building performance and reduce construction costs. The Ministry of Public Works Transport and Infrastructure (MPWTI) tenders construction to a short list of approved contractors and carries out periodic site inspections. Maintenance is the responsibility of school committees who often lack the skills, experience and financial resources to do this.

Regulatory Environment
The National Building Code of Samoa (NBCS) (1992) is currently being updated by the MPWTI and does not provide guidance on retrofitting structures. The MWTI issues building permits but they have limited capacity and capability to fulfil their role inspecting projects during construction to ensure compliance with the NBC. Quality assurance of construction is challenging as building inspectors lack resources to fulfil this mandate and consultants are only intermittently engaged to monitor works on site. Many schools are built by community groups wholly outside the public system. Samoa has good, albeit limited volume, of technical capacity including several international firms and a dedicated Institute of Professional Engineers Samoa (IPES). This capacity could be expanded to provide a more comprehensive regulatory environment.

Financial Environment
There are a variety of mostly donor funded programmes to rehabilitate and build education infrastructure. Unfortunately, each programme adheres to different, or in some cases, non-existent technical standards which is a concern to the government and other stakeholders. Greater clarity is needed on who holds design responsibility and assuring the quality of workmanship and materials during construction.

This study was conducted in collaboration with the World Bank and GFDRR as part of the Global Program for Safer Schools. The objectives were to assess the vulnerability of existing education infrastructure in Samoa to natural hazards, some of which are anticipated to increase as a result of climate change, and contributing factors of risk in order to help the Government to develop a school reconstruction / retrofitting program with World Bank support. It was conducted over a two week period which included a 4 day fact finding mission in September 2015. For more information, please contact:

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