



GLOBAL PROGRAM FOR SAFER SCHOOLS

Assessment, Recovery and Resilience of
Educational Infrastructure in Nepal

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Australian Government

Department of Foreign Affairs and Trade



GFDRR
Global Facility for Disaster Reduction and Recovery

Nepal – April 2015



Damaged school in Nepal, April 2015

Impact of the April 25 Earthquake



School in Sindhupalchok, May 2015

- 9,000 affected schools
- 20,000 collapsed classrooms
- 30,000 damaged classrooms

Impact of the April 25 Earthquake



School in Lalitpur, May 2015

- 479 students dead
- 45 teachers dead

Planning the Recovery...

Key Cooperation in the Education Sector



Government of Nepal
Ministry of Education



UNIVERSITY GRANTS COMMISSION



**Australian Embassy
Nepal**



ASIAN DEVELOPMENT BANK



Japan International Cooperation Agency



USAID
FROM THE AMERICAN PEOPLE



WORLD BANK GROUP



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Reinforced
concrete frames



Metallic frame with
stone masonry
walls



Confined masonry



Historic brick masonry
walls



Brick masonry
walls



Unreinforced stone
masonry walls

Planning the Recovery...

Priority Pillars of the Trust Fund

Pillar I

**SIDA - STRUCTURAL
INTEGRITY AND DAMAGE
ASSESSMENT**

Pillar II

**PIP - PRIORITIZED
INVESTMENT PLAN**

Pillar III

**MANAGEMENT AND POLICY
REFORM**



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Collapsed school in Sindhupalchok, May 2015

Planning the Recovery...

A Rational Approach

**Emergency
Response**

Planning Phase

Reconstruction Phase

April 25, 2015

2 months

10 months

> 12 months

RVA

SIDA

DE

PIP

Regulatory and Institutional Reforms

- Post-earthquake Educational Infrastructure Baseline

Key:

RVA – Rapid Visual Assessment

SIDA – Structural Integrity and Damage Assessment

PIP – Prioritized Investment Plan

DE – Design

Planning the Recovery...

SIDA – Structural Integrity and Damage Assessment

Aims

- Prioritized Investment Plan (PIP)
- Baseline for long-term risk assessment and DRM
- Web-based platform

Initial Scope

- **Phase 1: 8 districts**
3,120 schools
133 higher educational facilities
- **Phase 2: 6 districts**
2,639 schools
41 higher educational facilities

Planning the Recovery...

SIDA – Design of SIDA

- Participation of local and international experts
- Field work planned and executed by local engineers
- All process designed in collaboration with local authorities



Nepali engineers conducting SIDA, September 2015

Planning the Recovery...

SIDA – Methodology

SIDA Guide

2.6 Is there a landslide risk?

Purpose:

This provides information on whether there is a known landslide risk on/ near the school site.

Guidance:

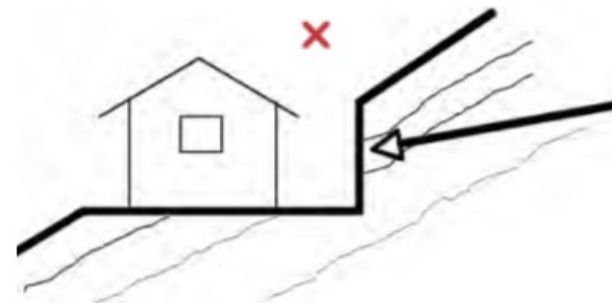
This information should be gathered during the interview with the school contacts and through observation during the site campus walk around. This will include evidence of previous landslides, heavy erosion, whether mitigation measures have been constructed such as a retaining wall, stabilisation of slope.

If there is a risk of landslides further details should be sort, such as, history of last landslide event (year).

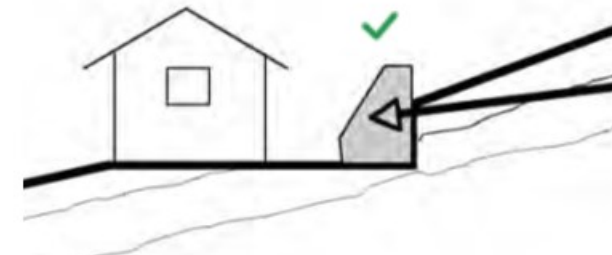


Ref: Towards Safer School Construction – A community based approach, 2015

Unstable soils: In seismic areas, sites with known or suspected soils that could become unstable in an earthquake are at risk to landslides.



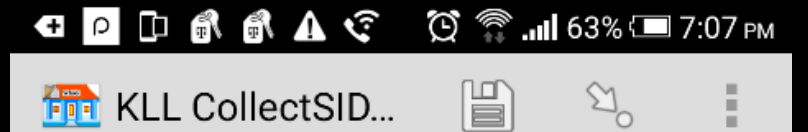
Deep cuts into a slope weakens its stability



Retaining walls can help stabilize slopes weakened from cuts.

Ref: Guidance Notes on Safer School Construction, GFDRR, 2009

SIDA App



Landslide

2.6) Is there a landslide risk ?

Estimate Quantitative Steepness of slope of the topography of the area. Add visual

- ☐ Evidence of slope stabilisation
- ☐ Retaining (retention) wall construction on the site
- ☐ Evidence of rock fall
- ☐ Evidence of avalanche
- ☐ Sign of heavy erosion
- ☐ None

Take Photo

Take Picture

Choose Image

Planning the Recovery...

SIDA – Pilot Tests



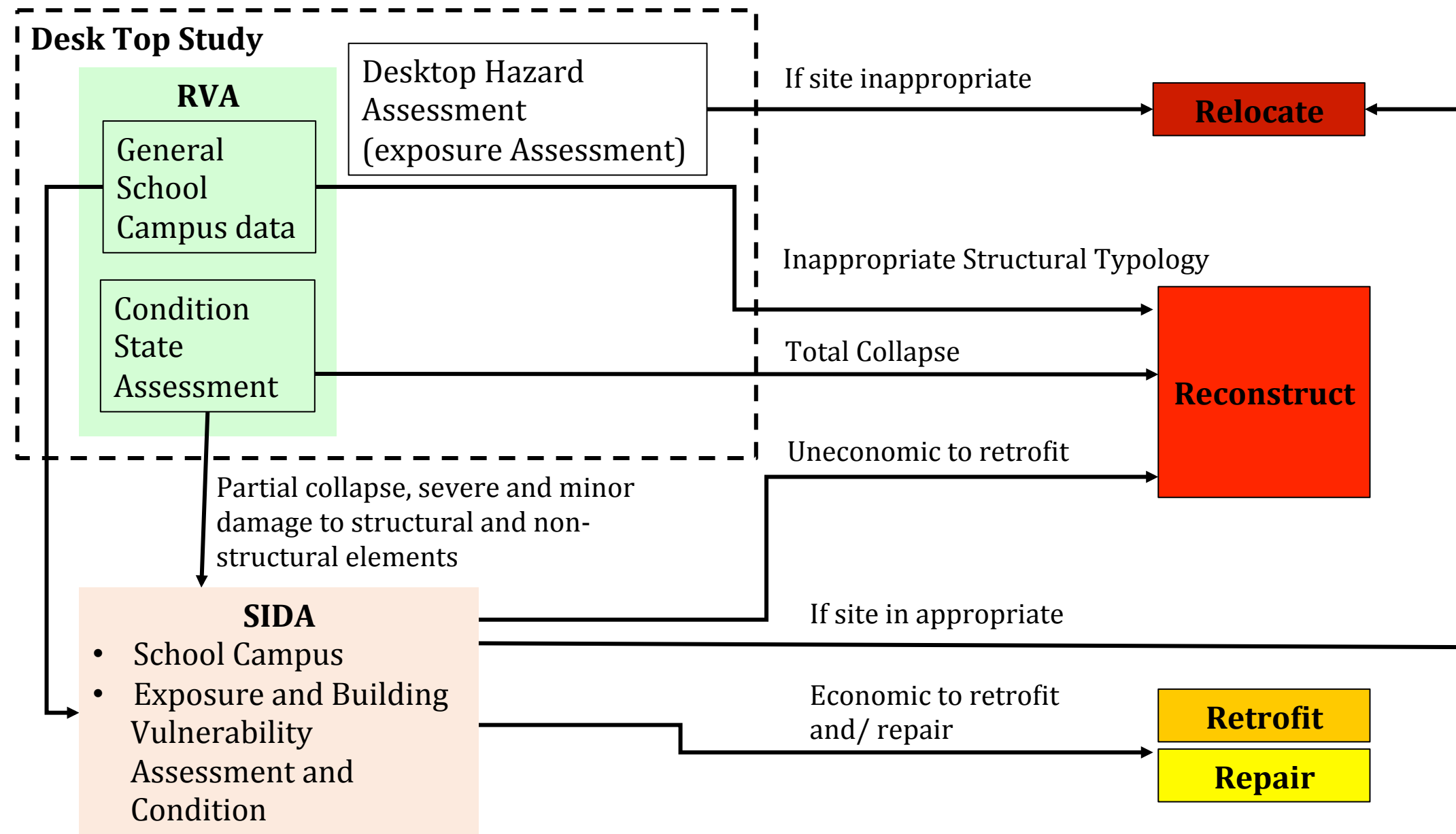
Planning the Recovery...

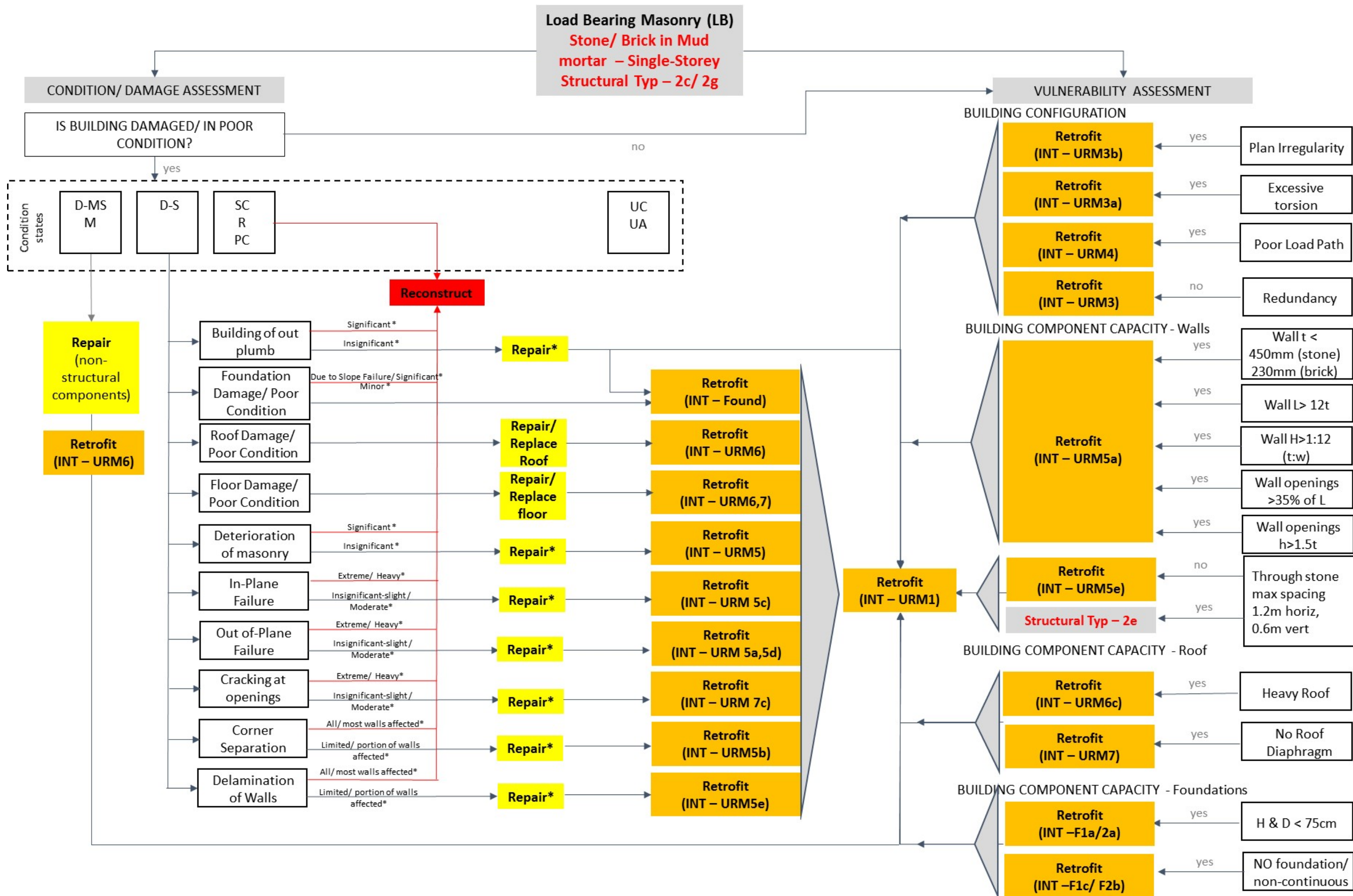
SIDA – Training of surveyors



Planning the Recovery...

Strategy for the PIP – Prioritization of the Recovery

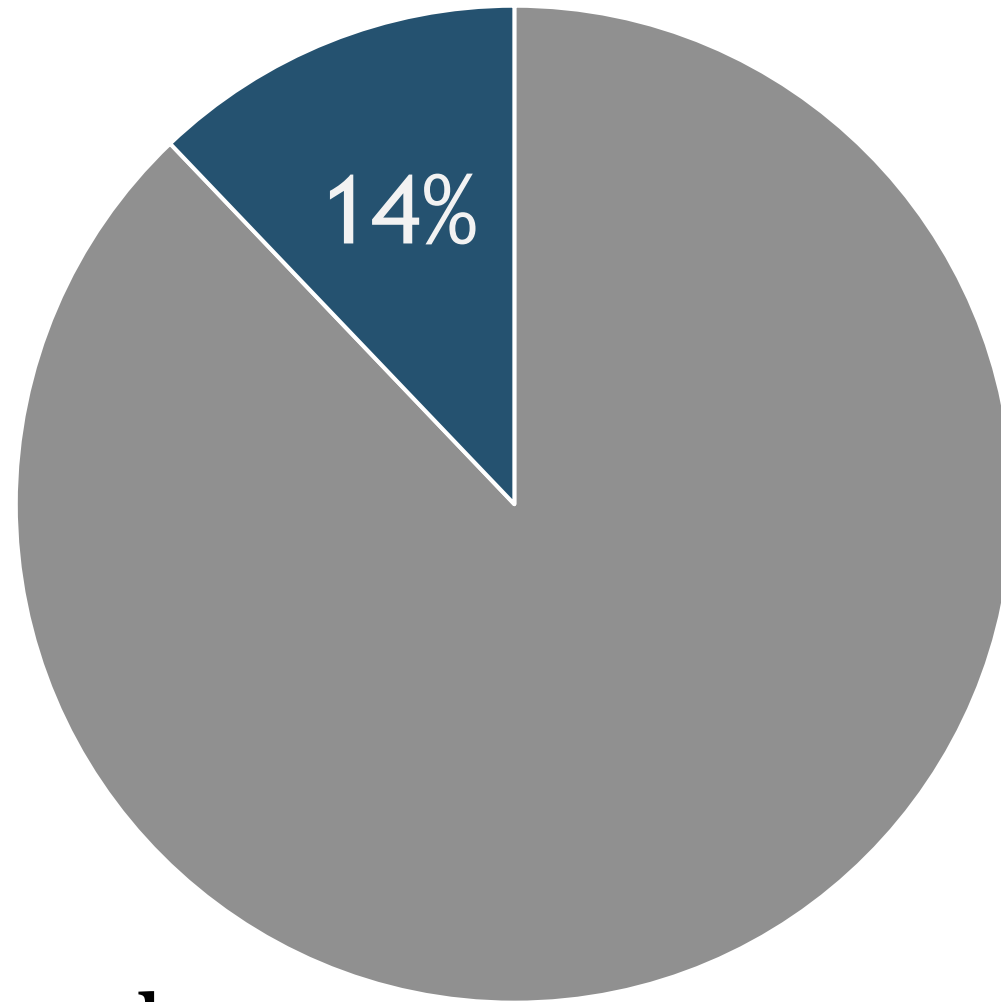




Planning the Recovery...

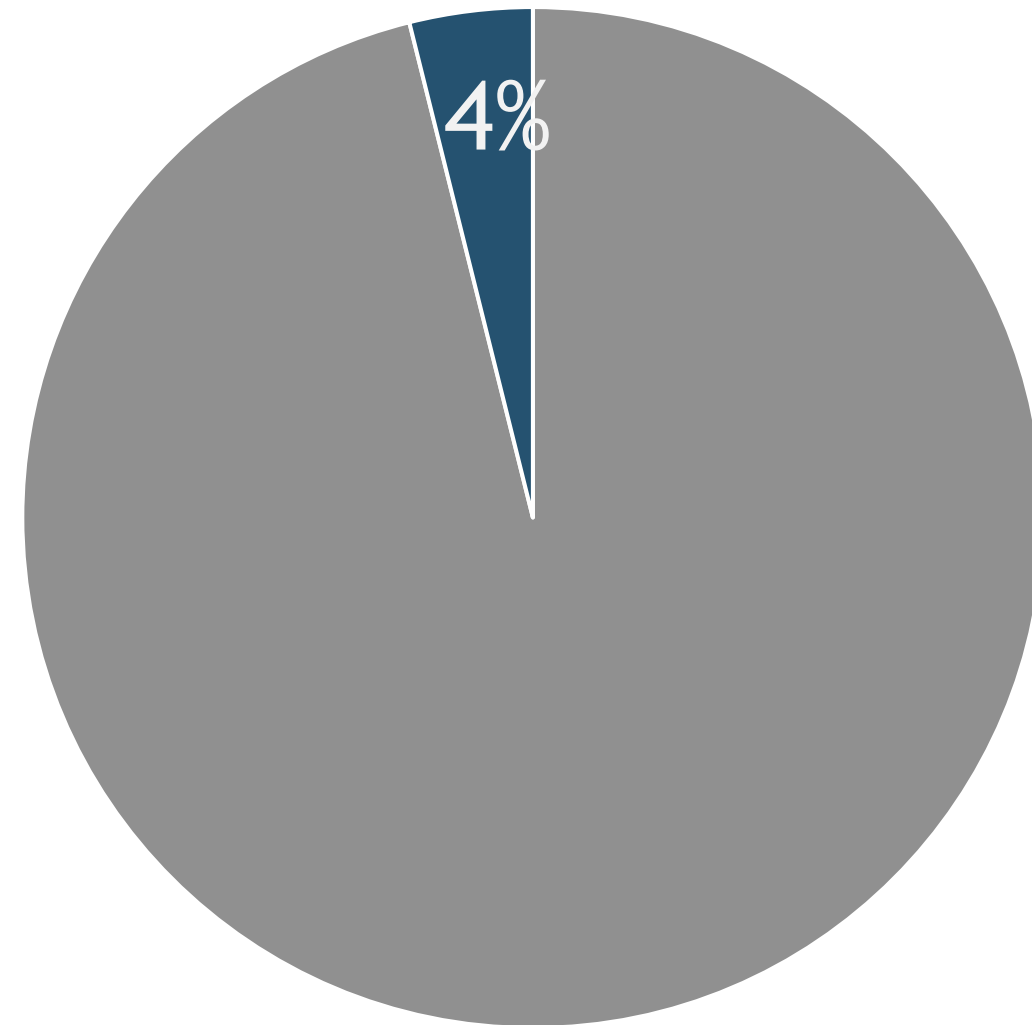
SIDA – Progress to date

14 priority districts



- ✓ 795 schools
- ✓ 2,400 buildings

All impacted districts



Planning the Recovery...

SIDA – Challenges

- Shortage of fuel
- Remote areas
- Landslides
- Floods
- Weather



Long-term agenda...for a resilient recovery

Challenges:

- ☐ School reconstruction financing strategy
- ☐ School retrofitting program
- ☐ Assessment countrywide
- ☐ Institutional capacity
- ☐ Regulatory framework reforms
- ☐ Community engagement



Students attending classes in a TLC in Lalitpur, May 2015



Australian Government

Department of Foreign Affairs and Trade

Working towards a resilient recovery !!

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Students at a collapsed school in Nepal, May 2015



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