

Ninth Regional EST Forum in Asia

Planning and developing disaster resilient Transport Infrastructure

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The Sendai Framework for Disaster Risk Reduction (UNISDR)

- **Replacing Hygo Framework (UNISDR)**
- ❖ Aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors

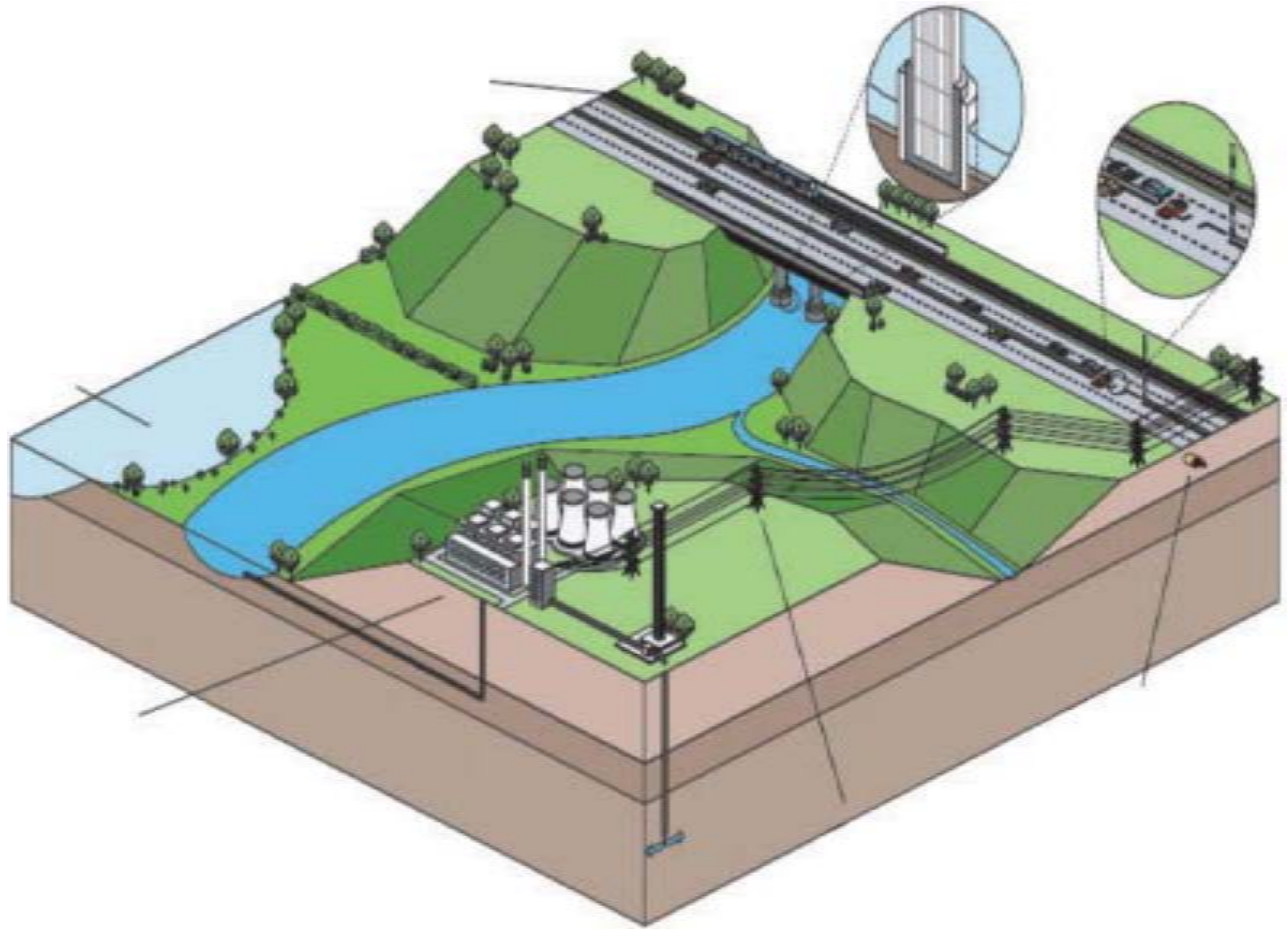
- **Outcome:** The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

- **Priority 1** Understanding disaster risk
- **Priority 2** Strengthening disaster risk governance to manage disaster risk
- **Priority 3** Investing in disaster risk reduction for resilience
- **Priority 4** Enhancing disaster preparedness for effective response, and to “**Build Back Better**” in recovery, rehabilitation and reconstruction

Coastal erosion – Beachy Head, UK



Building resilient national infrastructure



Government challenges in preparing Infrastructure for a changing climate

➤ *Governments can facilitate progress in adaptation*

1. Develop appropriate economic regulatory models
2. Make fit-for-purpose planning systems & Guidance
3. Reduce Risk, especially to interdependencies
4. **Increase adaptive capacity – private sector**
5. Incorporate climate change into investment decisions
6. Improve access to climate change information, evidence & risk disclosure
7. Progress national infrastructure adaptation
8. **Realise potential economic opportunities**
9. **Right-skill/build professional capacity (individuals & organisations)**

Rural Roads – to what standard?



Urban – responding to impact of more rain



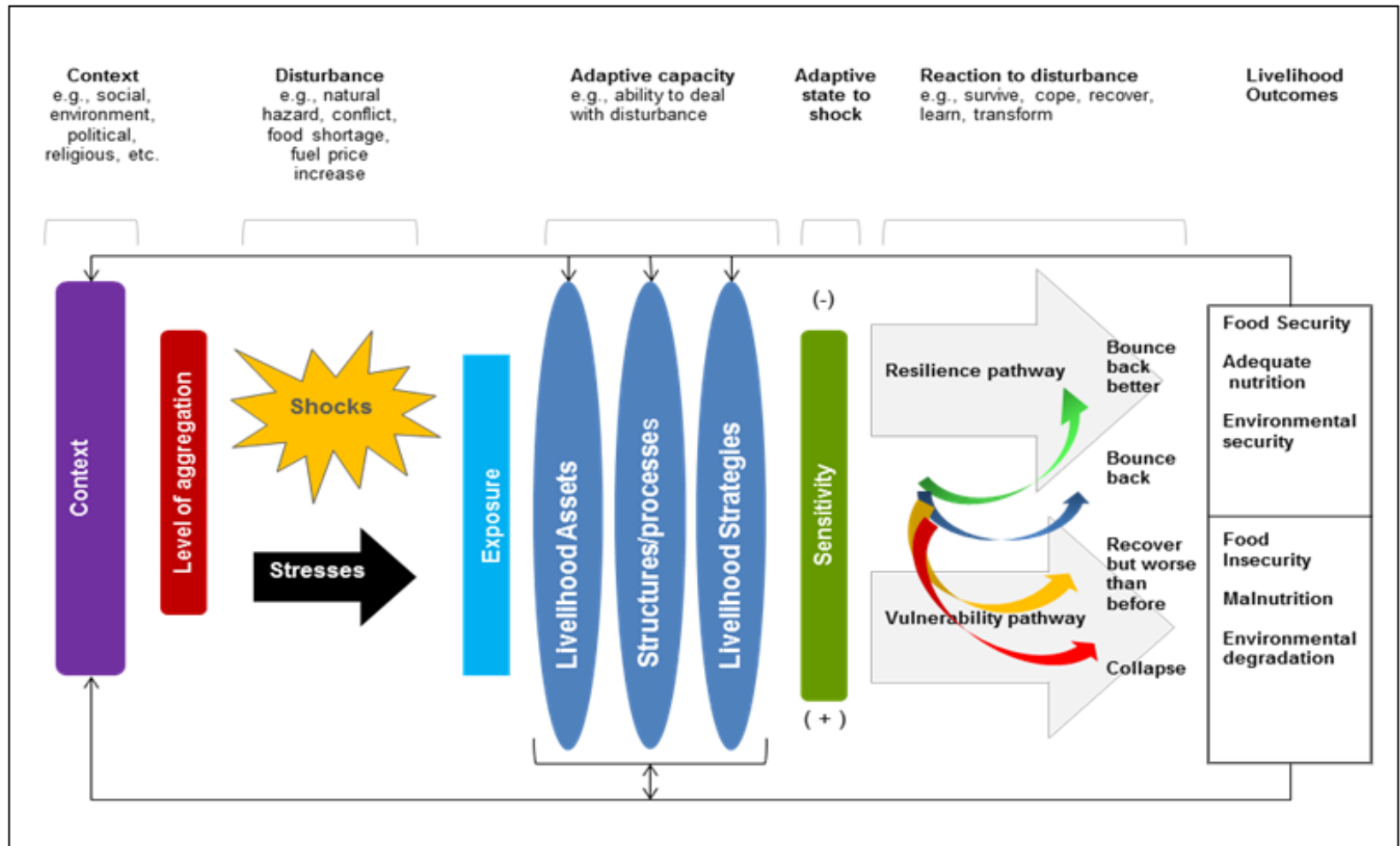
Vietnam – Central Highlands reservoir & road access improvements



DFID Nepal (Earthquake) Resilience *Theory of Change* (Weaker → Stronger)

Target Support	Inputs & Priorities	Activities	Results	Outcomes
National	<ul style="list-style-type: none"> • Support GoN to build seismic risk & Management Systems • Identify priority Hospitals – for retrofit (£tbc) • Support likely “first responders” 	<ul style="list-style-type: none"> • Better land-use planning • Early recovery activities • Hospital(s) more seismically resilient ? • First Aid training & Equipment of High Quality 	<ul style="list-style-type: none"> • Stronger legislation & early recovery drives behavioural change • Other donors add support & GoP prioritises retrofiting • Increased capable cadre & USAR capacity built & equipment pre-positioned 	<p>Attitudinal change & standards change – better building & reduced risk.</p> <p>Increased readiness.</p> <p>Capacity of first responders increased</p>
Communities	Support NGOs – to scale-up	...of High Quality	..as 3 above	As 3 above
Individuals	Support GoN/NGO awareness-raising & guidance campaigns	...targeting most vulnerable	...as 3 above and knowledge leads to behavioural change	..results in actions to increase personal and community resilience

Four elements of a resilience framework (DFID)



TANGO. 2012. Adapted from DFID Disaster Resilience Framework (2011), TANGO Livelihoods Framework (2007), DFID Sustainable Livelihoods Framework (1999) and CARE Household Livelihood Security Framework (2002).

Pakistan Adm Kashmir_ ***Build Back Better***



Manila – CoST - Transparency



Remember - Stakeholders vary !

Thank You – End

