

**IMPROVING RESILIENCE AND RESILIENCE
IMPACT OF NATIONAL LAND AND
GEOSPATIAL SYSTEMS**

**UN-GGIM ACADEMIC
NETWORK FORUM**

The SDGs Connectivity
Dilemma: Urban
Settlements, Resilience
and Sustainability

Disasters – a worldwide problem

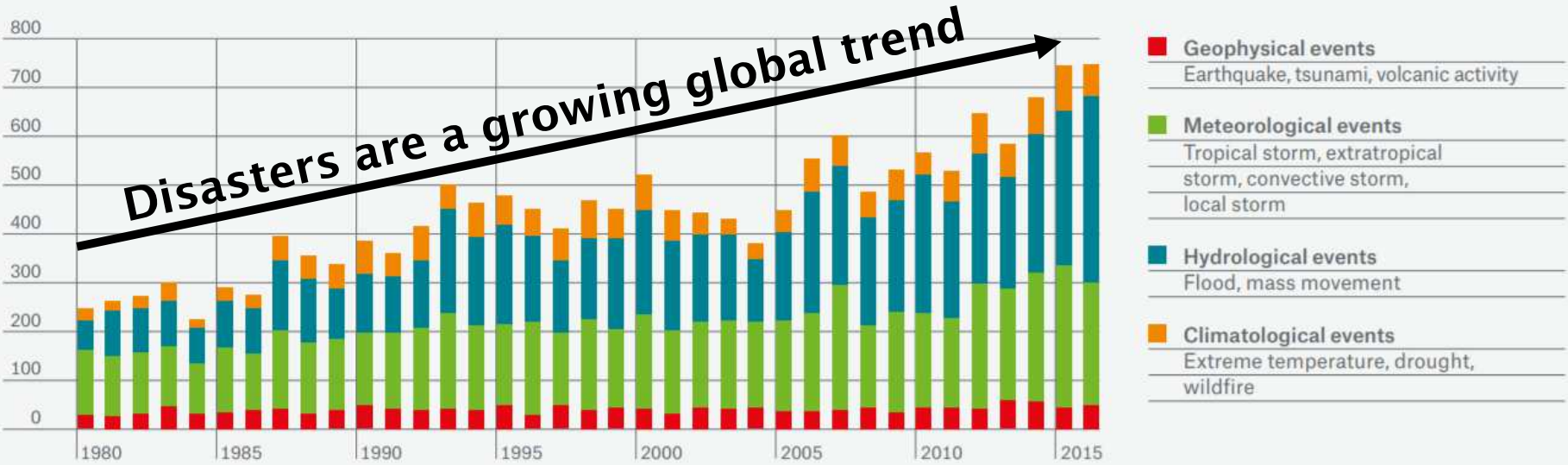
- Disaster events are increasing in frequency and severity



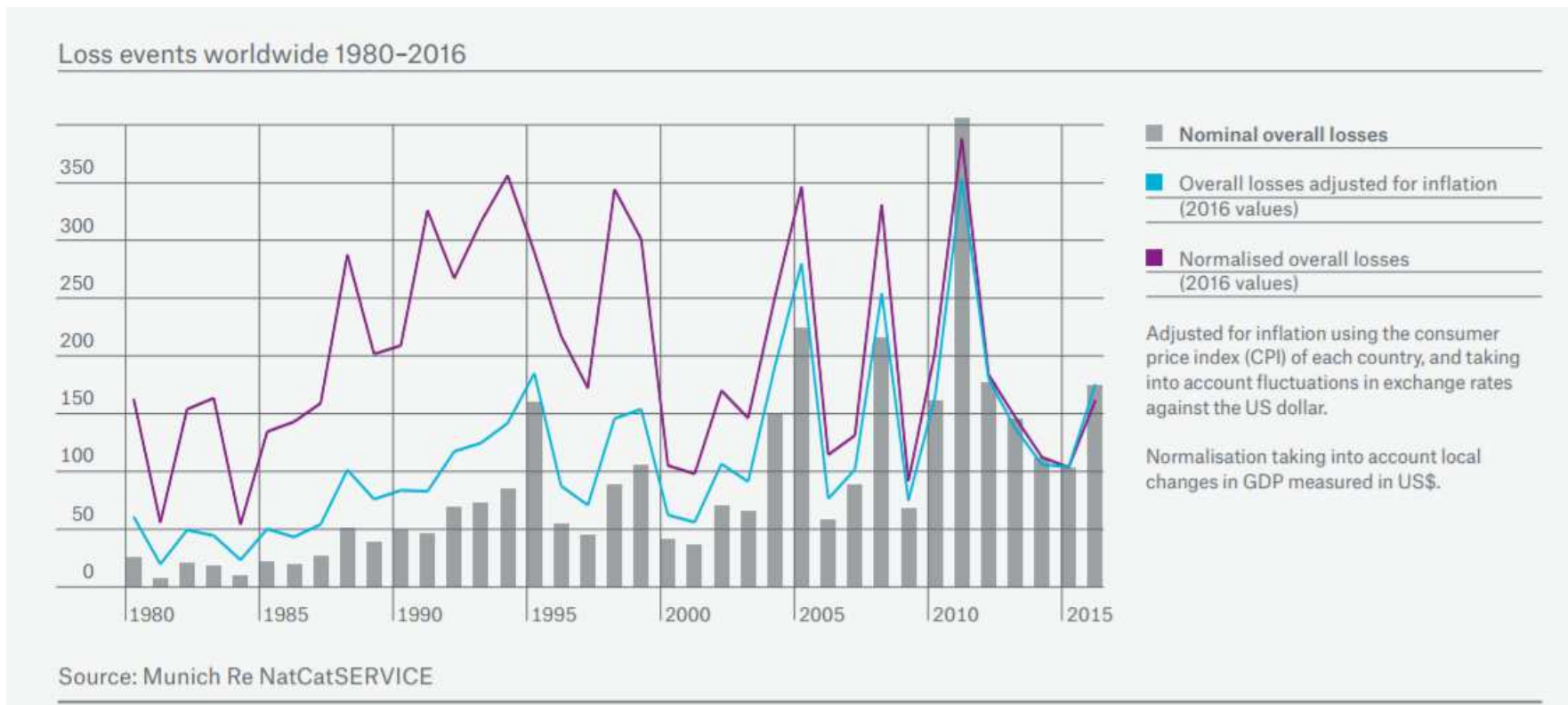
- Often as a direct result of manmade activities such as:
 - unplanned urbanization and land-use
 - climate change
 - population growth
 - over-exploitation of natural resources

Disasters are a growing trend

Number of loss events 1980-2016



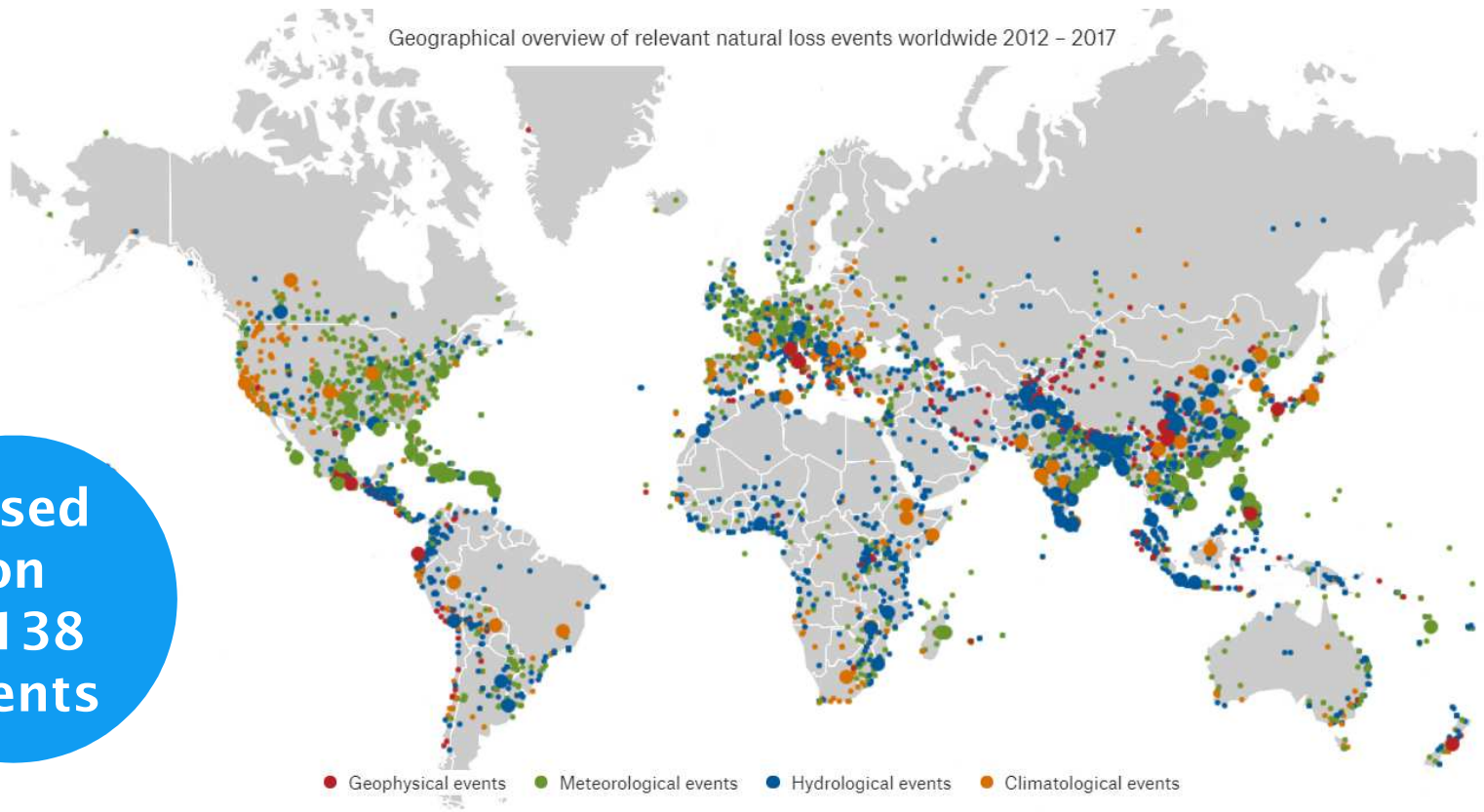
There is an escalating economic cost



RELEVANT NATURAL LOSS EVENTS WORLDWIDE 2012 - 2017

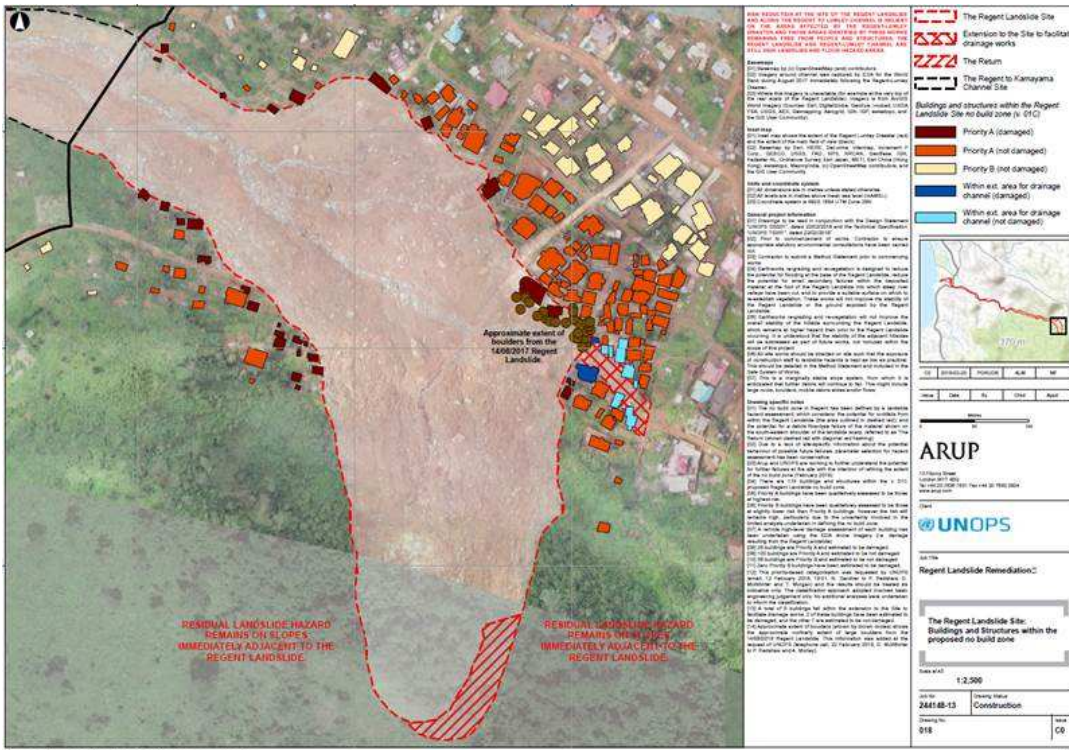
Geographical overview of relevant natural loss events worldwide 2012 - 2017

Based on 4,138 events



● Geophysical events ● Meteorological events ● Hydrological events ● Climatological events

Sierra Leone's Mudslide



- August 14, 2017 at the Sugar Loaf, Western Area Peninsula.
- 6,000 people affected of which 1,141 were declared dead or missing.
- Total economic value of the effects of the landslide and floods was estimated at USD 31.65 million) of which almost half of it can be attributed to real state losses.
- Many of the properties were encroaching part of the Western Area National Park.
- Land Administration (Cadastre and Registry) weaknesses have contributed to an environment where there is tenure insecurity, collection of taxes remains difficult, land markets distorted, and urban planning and the associated disaster risk management is undermined.



The SDGs Connectivity Dilemma: Urban Settlements, Resilience and Sustainability

- The rapid expansion of urban settlements and populations have created challenges related to effectively managing **disaster** events
- The SDGs aim to foster efforts to strengthen the **resilience** and sustainability of communities and cities
- Understanding **what** land and geospatial information is available/accessible and **how** it can be used to improve the resilience of urban settlements to disasters at individual country levels can further the SDGs goals

World Bank Project 2017-2018

- Given the wide recognition that **national land administration systems and spatial data infrastructure are fundamental for Disaster Risk Management** by facilitating:
 - pre and post disaster tenure
 - land use
 - land valuation, and
 - zoning information
- But at the same time the extent of the role of land and geospatial information, **the function and responsibility of the institutions** that govern the data, and the **resulting impact** that this data has on the overall resilience of society **has not been extensively explored**
- Therefore, we develop the project “Improving Resilience and Resilience Impact of National Land and Geospatial Systems”
- Collaboration between



Project Motivation:

Stems from two key points

01 Disasters impact not only the economy of a country, but citizens through their most valuable asset: their **land and property**

02 National land administration information and SDI are fundamental for effective implementation of **Disaster Risk Management**



Project Objectives:

To define the rationale, approach and methodologies for **improving the resilience and resilience impact of national land administration and geospatial systems** by:



- 01** Consolidating international cross-sectoral knowledge on land administration, geospatial systems and resilience
- 02** Developing an approach to produce country-level action plans for increasing resilience and resilience impact of national land and geospatial system
- 03** Producing five country level action plans
- 04** Disseminating the results within the Bank and globally through a flagship report and an International Forum

Expected Outcomes

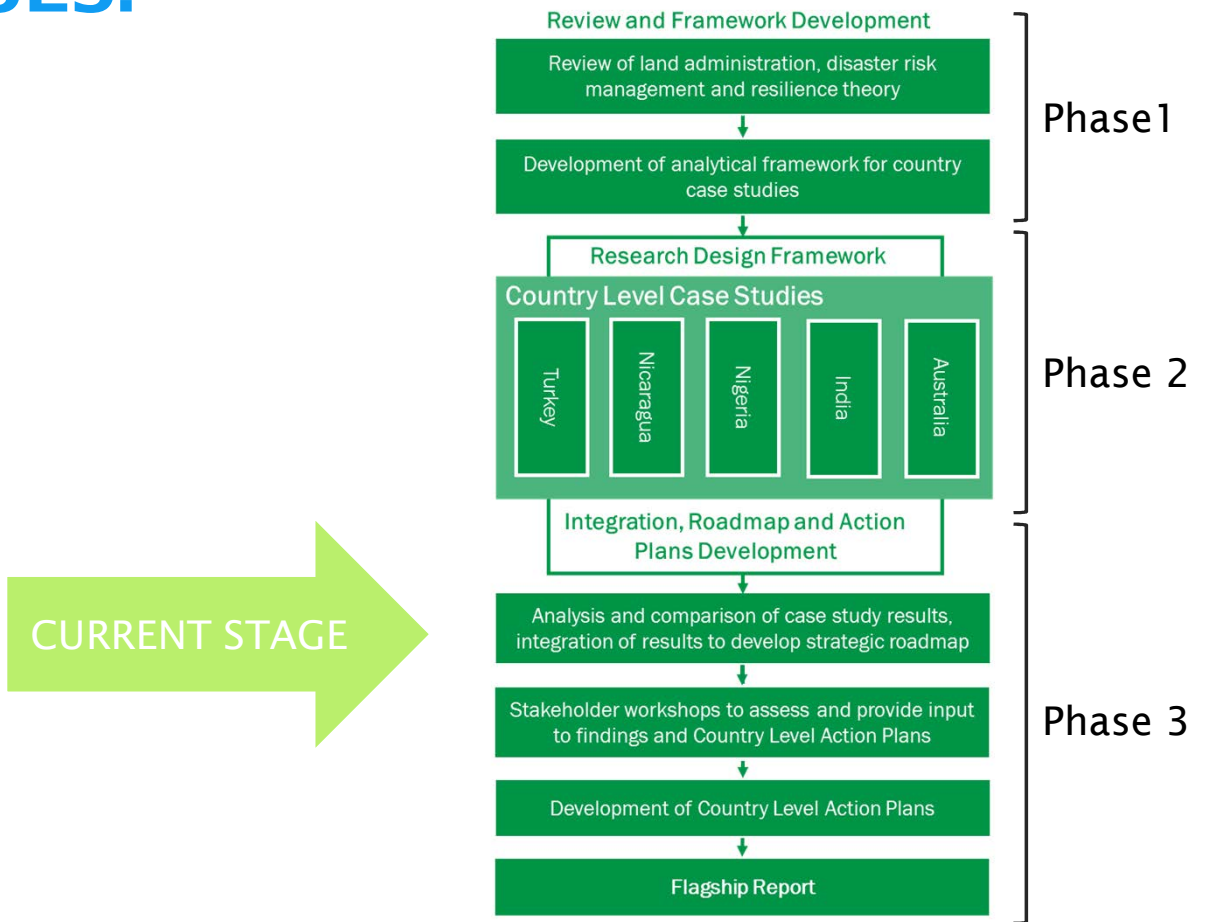
The **expected outcome** of the project is threefold:

1. to **increase the recognition** of the important role of national land and geospatial systems for resilience,
2. to **redirect and generate investments** in increasing the resilience, sustainability and security of land administration and geospatial systems,
3. to increase the **institutional viability, comprehensiveness, data quality and accessibility** of land and geospatial data services for resilience impact.



Better access to information, along with more secure tenure, will yield land use and management decisions that take resilience into account and reduce vulnerability.

Overarching Methodology and Approach


3 PHASES:




CASE STUDIES

 Completed
 Underway / Planned


INDIA




NICARAGUA





NIGERIA





NORWAY





AUSTRALIA




INDONESIA



PHILIPPINES



TURKEY

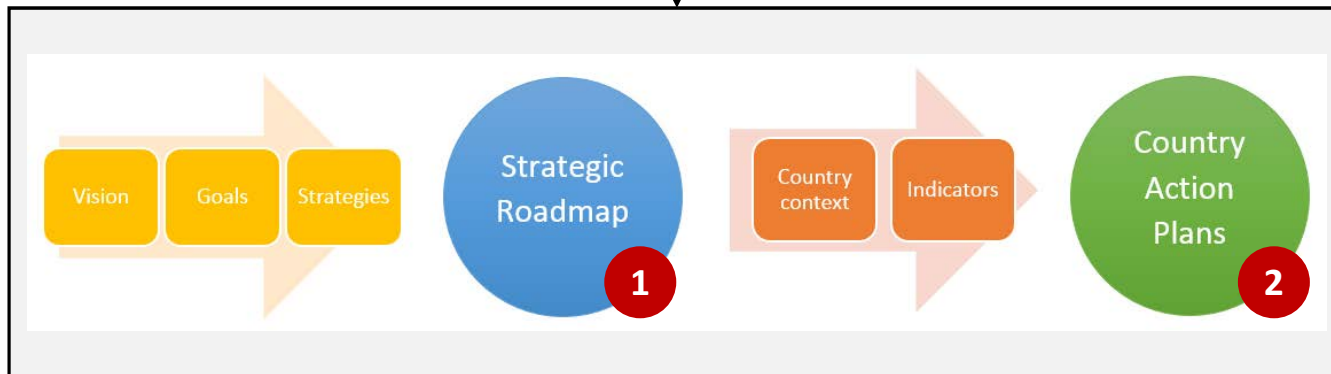


 Analytical **National** Level Study

 Exploratory **Local** Level Study

 Detailed Workshop Study

CASE STUDIES



FLAGSHIP REPORT

PROJECT OUTPUTS

Key project outputs include:

1. A Strategic Roadmap
2. 5 Country-Level Action Plans (CAPs)
3. Flagship Report

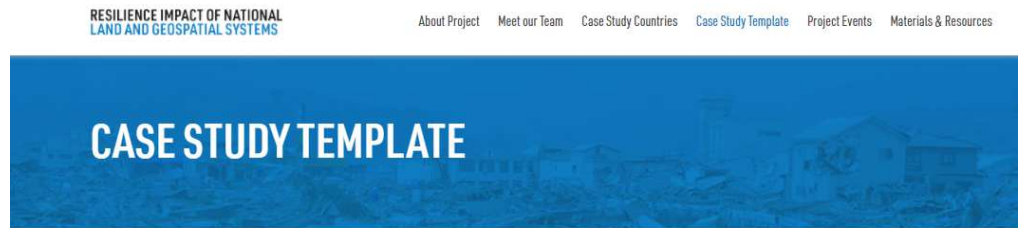
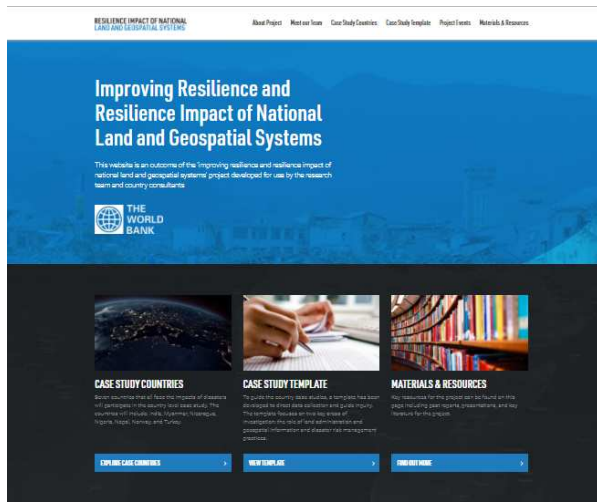
Timeline

Currently analysing the country case studies, and preparing for the final workshops to be conducted.

The Strategic Roadmap has been developed and is being refined using the results of the case studies

Next step is to develop the Country Level Action plans which are informed by the country case studies and the strategic roadmap

LandResilience.org



Template is available for any countries who wish to participate

SECTION 1
Introduction: Why This Case...

The template is divided into 5 sections. Some sections should be completed by the consultant alone, and some sections with input from relevant stakeholders in industry.

SECTION 2
Contextual Analysis

SECTION 1
Introduction: Why This Case...

This section aims to understand the relevance of the topic for each country

[OPEN TEMPLATE](#)

SECTION 3
Land & Geospatial Information Investigation

SECTION 2
Contextual Analysis

This section gathers statistics and disaster event background for each country.

[OPEN TEMPLATE](#)

- A.) Land and Geospatial Information Investigation
- B.) Land Administration Organizational Questionnaire
- C.) Geospatial Organizational Questionnaire
- D.) WSDI Assessment

SECTION 4
Policy and Legislative Frameworks

SECTION 3
Land & Geospatial Information Investigation

This section gathers data on the country's land administration systems, geospatial systems, and spatial data infrastructures. There are four sub-sections:

Land and Geospatial Information Investigation (Part A)

SECTION 5
Challenges and Lessons Learnt



International Symposium and Workshops
**A SMART SUSTAINABLE
FUTURE FOR ALL**
Enhancing Resilience in a Changing Landscape
MELBOURNE, AUSTRALIA | 24 - 26 SEPTEMBER 2018

THEMES



Smart cities and sustainable development



Disaster resilience and emerging or changing global risks



Resilience and the impact of land and geospatial information for disaster risk management



Spatial (3D/nD), BIM and emerging technologies in advancing the UN SDGs



Global policy frameworks and local and national developments



Planning, design and management of critical infrastructures



New generation public safety technologies and platforms



Community resilience and participatory governance

AIMS

The symposium aims to:

1. Explore the state of play (in knowledge and practice),
2. Identify local, national, and global challenges, and
3. Discuss recent research and innovative solutions

That address all facets of achieving our common aspirations for a smart and sustainable future for all

URL

<http://ssf2018.com>



International Symposium and Workshops
**A SMART SUSTAINABLE
FUTURE FOR ALL**
Enhancing Resilience in a Changing Landscape
MELBOURNE, AUSTRALIA | 24 - 26 SEPTEMBER 2018

One stream dedicated to exploring themes related to Resilience and Resilience Impact of National Land and Geospatial Systems Project

WHY SSF2018? Symposium Aims and Objectives



Representation from the World Bank and International representatives from South and South East Asian developing countries

The Strategic Roadmap and Country Action Plans for the Land Resilience Project will be consulted

Roundtable discussions on project themes