

Improving Resilience and the Resilience Impact of National Land and Geospatial Systems: A Program for Assessing and Planning



THE UNIVERSITY OF
MELBOURNE

Land Resilience Program: Principles, Tools and Impact



- Background of land and geospatial information in DRM
- Guiding Global Frameworks

- Contextual Analysis Questionnaire
- Pre and Post Disaster Recommendations Based on good practices

- Implementation of a Country Action Plan

Land Resilience Program: Principles



With Disaster Events Around the World Increasing in Frequency and Severity, **Better Access to Land and Geospatial Information is Critical to Disaster Risk Management Activities.**

- National land administration systems and geospatial data infrastructure have a **fundamental role** to play in **DRM**.
- They facilitate **Tenure, Land Use, Land Valuation and zoning** information, for **planning, monitoring and implementing responses before, during and after disasters**.

Global Development Frameworks

2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

HYOGO FRAMEWORK

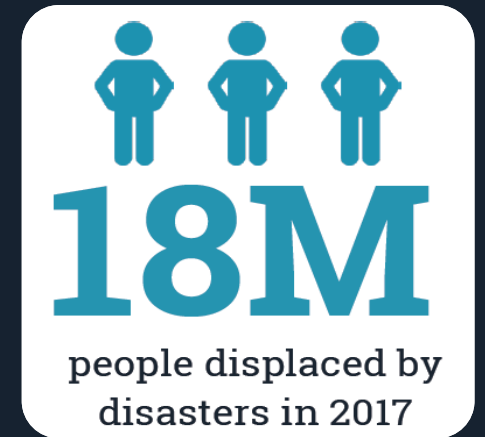
SENDAI FRAMEWORK

INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK

- Several key initiatives aiming to build resilience to disasters have emerged around the world in recent years
- Themes of:
 - data integration
 - making use of existing resources – such as the provision of reliable land data for resilience building activities
 - strengthening of capacity of national data systems

Land and Geospatial in DRM

- When people are forced to leave their homes behind, land records offer **critical protection of their property rights** (and often their main asset)
- Land and geospatial information are key to ensuring that land records are **comprehensive and secure** - **informing the what, who, where, how much.**
- Without this information, it is **almost impossible** for countries to develop proper disaster response or preparedness plans.



When disasters displace people, land records and geospatial data are key to protecting their property rights and building resilience

Land and Geospatial in DRM

TENURE SECURITY

- Tenure security enables **housing reconstruction, food security** and **recovery of production systems**

LAND USE PLANNING

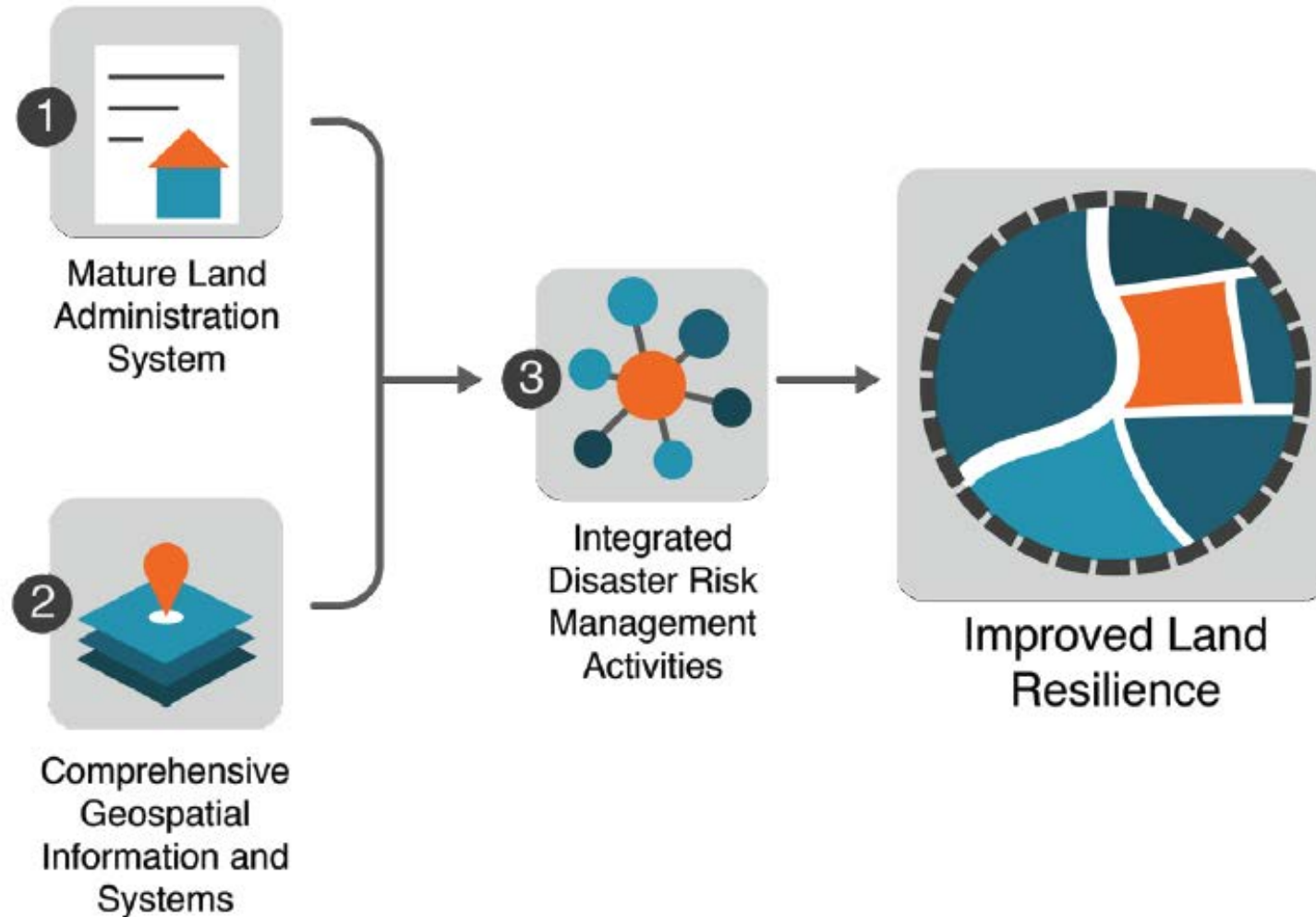
- Flexible land use planning standards can **facilitate reconstruction** aimed at **building back better** and **mitigating the risk of future** disasters

Land and Geospatial in DRM

LAND VALUATION

- Accurate and up-to-date land valuation **supports insurance, compensation, property tax**, compulsory purchase and strategic advice to governments in **disaster recovery**
- **Effective land valuation and property taxation measures** can **support post-disaster emergency response, recovery and reconstruction** activities.

Land Resilience: Building Blocks



Land Resilience Program: Tools

Improving Land Resilience: the Process

1. Contextual Analysis Questionnaire

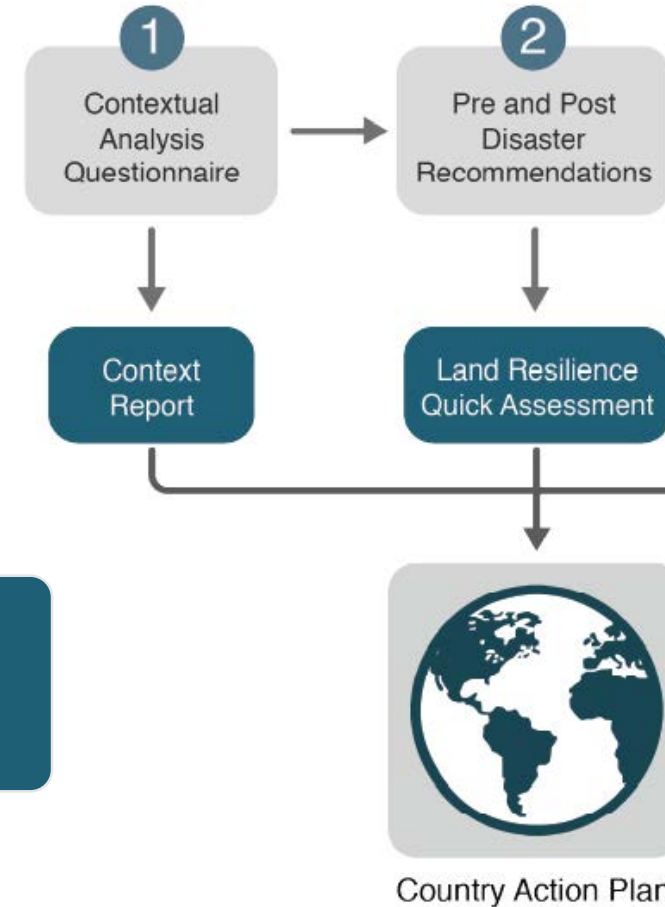
an operational tool used to assess the current status of land and geospatial systems within a country.

2. Pre and Post Disaster Recommendations

identifies key resilience indicators for land and geospatial organizations.

3. Country Action Plan Template

brings together the outputs of the two tools to delineate the dimensions to focus on for improving and enhancing the overall land resilience of a country.



TOOL 1: Contextual Analysis Questionnaire

- Guiding questions to produce an initial background assessment to understand basic functions and operations of the existing land and geospatial environment.
- Arranged into **6 themes of questions:**
 1. General
 2. Governance
 3. Policy and Legislation
 4. Operational
 5. Data and Technology
 6. Financial

Country Contextual Analysis Questionnaire

Introduction to the Questionnaire
This questionnaire is being conducted to better understand the nature and status of land administration systems, geospatial information and systems, and disaster risk management practices in the case country.

1. General Questions

1.1 Fill in the information regarding the case country.

Country Name:	
Population:	
Population Density:	

2. Governance Indicators

2.1 Are there multiple institutions providing registration and cadastral services?
 Yes
 No

2.2 Is land information primarily managed at:
 National jurisdictional level
 State jurisdictional level
 Local jurisdictional level

2.3 Which organization/s are the primary custodians of land information?

2.4 Is geospatial information primarily managed at:
 National jurisdictional level
 State jurisdictional level
 Local jurisdictional level

2.5 Which organization/s are the primary custodians of geospatial information?

2.6 In your country, is there an official coordinating body for the management of land information?
 Yes
 No

2.7 In your country, is there an official coordinating body for the management of geospatial information?
 Yes
 No

2.8 Has a long-term strategic vision towards NSDI development been established?
 Yes
 No

1

TOOL 2: Pre and Post Disaster Recommendations for Land Resilience

- A checklist to aide national level stakeholders involved in disaster management activities.
- **Outlines how land administration and geospatial systems can support pre and post disaster needs and actions, and what preconditions are required for that to be realized**



Achieving Land Resilience

- The tools outlined facilitate an understanding of the **current state of land resilience** in a specific country context. The output of each tool offers **valuable input for improving the overall resilience of land and property to disaster events** in a country.
- Improving land resilience is a **multi-stakeholder, multi-disciplinary task**.
- It requires involvement and input from a **wide variety of key people**.

Land Resilience Program: Impact

Country Action Plan (CAP)

- Output from each of the two tools of the land resilience process guide development of the **Country Action Plan** by identifying:
 - Stakeholders involved in the establishment of land resilience
 - Key land and geospatial organizations and stakeholders
 - Data, technology, systems and infrastructures existing within the country
 - Pre-conditions for disaster land resilience that have not yet been achieved by the country
 - Specific land resilience dimensions requiring attention

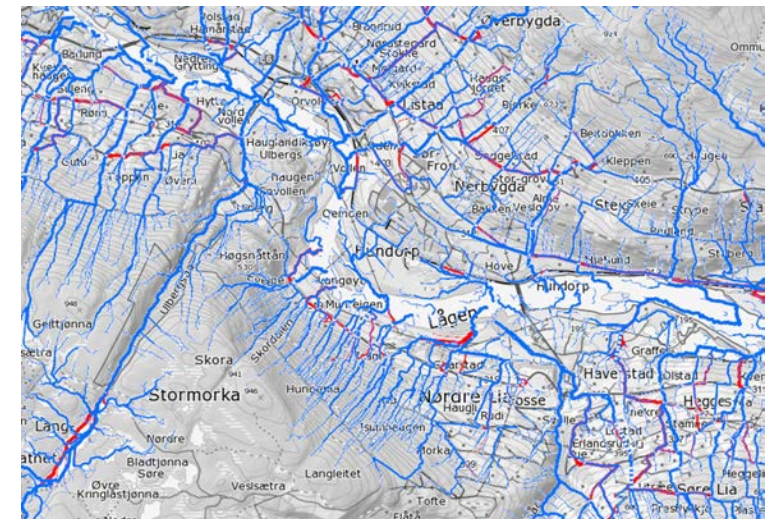
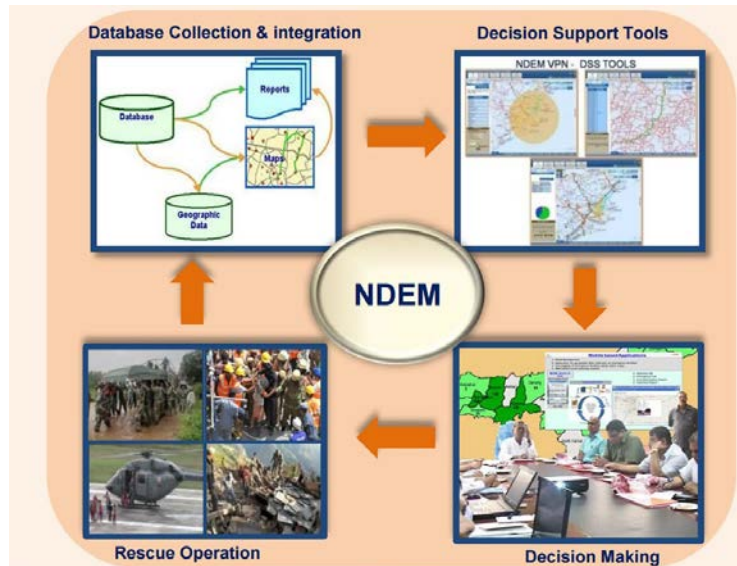
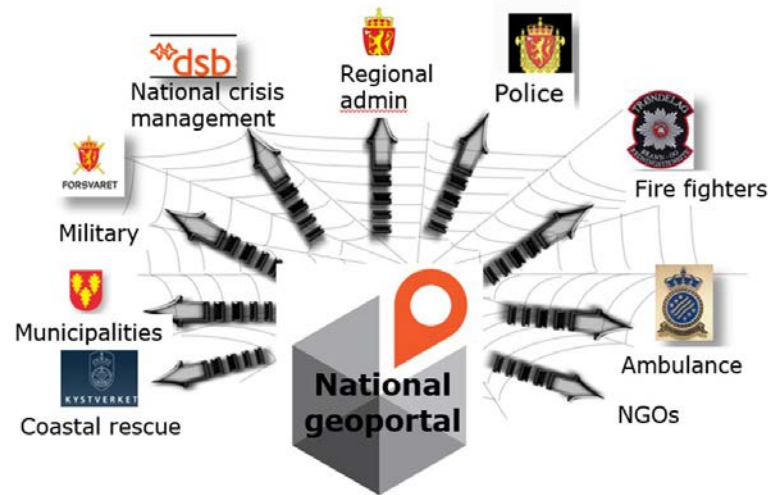
TOOL 3: CAP Template

- **Provides recommended actions** detailing how land and geospatial information can be utilized **to impact and improve disaster risk management** activities in a specific country context.
- The **CAP Template** guides the development of the elements required to **address the gaps** in existing land and geospatial systems
- It ensures all the **necessary information on commitments** required by stakeholders and the agreed upon development and implementation process is documented.

Land Resilience Program: Outputs and Next Steps

Outputs: Country Case Studies

- Chile,
- Colombia,
- India,
- Indonesia,
- Nigeria,
- Nicaragua,
- Tunisia.
- Turkey



Outputs: Tools



Outputs: landresilience.org

PROJECT OUTPUTS

PDF DOCUMENT

Executive Summary

The Executive Summary document is a stand-alone strategic document summarizing the key outcomes of this project. It complements the overarching Flagship Report of this project.

[DOWNLOAD EXECUTIVE SUMMARY](#) >



PDF DOCUMENT

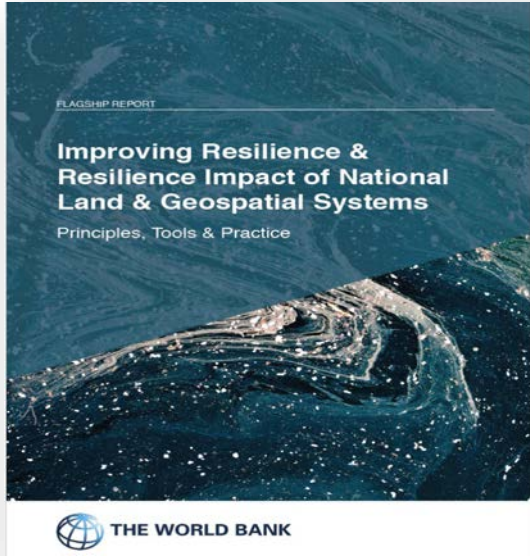
Flagship Report

The Flagship Report brings together the overall findings of the project including the key concepts around land resilience and presents the four operational tools developed to improve land resilience. The four tools to be utilized by land administration experts at country levels assists in identifying the current level of land resilience and facilitates actions to improve resilience.



Outputs: Reports

1. Flagship Report



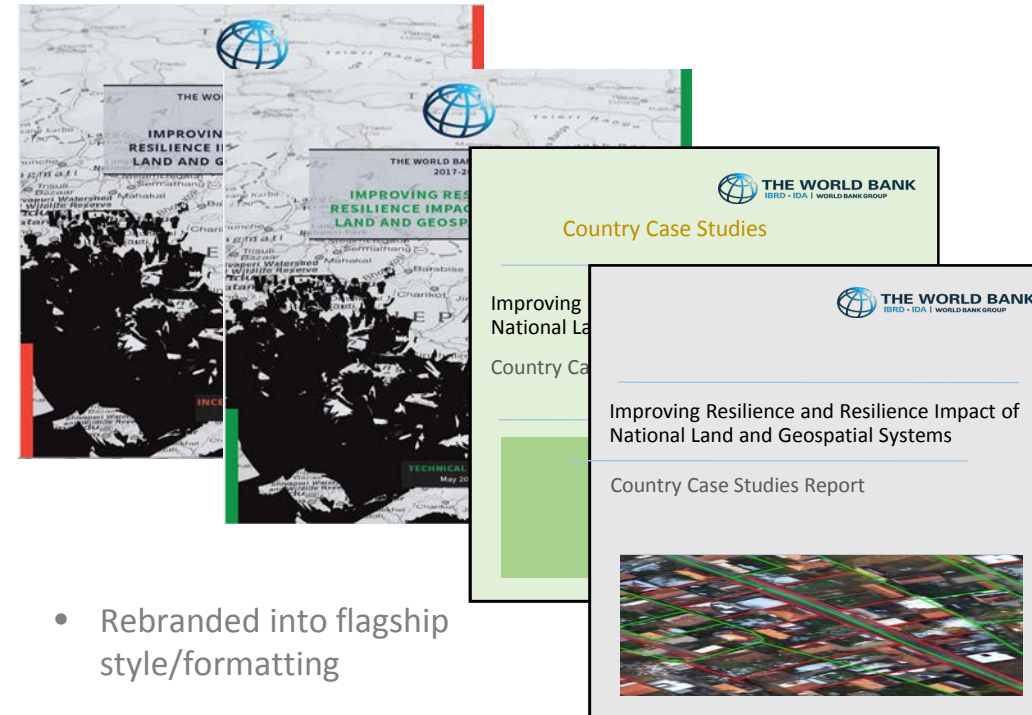
Final Version
Q4 2019

2. Executive Summary Report



- Highlights of the Flagship Report
- Combination of short text and infographics

3. Associated Report Volumes



- Rebranded into flagship style/formatting

Outputs: Knowledge Sharing and Consultations

New York
UN-GGIM 8th

Washington
The World Bank Land and
Poverty Conference 2018 &
2019

Durban
The Resilience Planning
Workshop

Deqing
World Geospatial
Information Congress

Melbourne
The Smart Sustainable
Future for All 2018
International Symposium



Outputs: Next Steps

- Finish action plans and provide WB finance support as required by the Governments of **Nepal, Solomon Islands and Kerala State (India)**.
- Publication and dissemination of the **Flagship Report**.
- Increasing dissemination and knowledge sharing.
- Adding **new countries** into our Land Resilience Program to support them **identifying investment plan activities** to increase resilience and resilience impact of national land administration and geospatial information systems.