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United Nations Office for Disaster Risk Reduction

Disaster Damage and Loss Information System

Based on DesInventar Sendai

Training workshop in Disaster Loss Databases and Sendai Framework Monitoring

Gandhinagar, Gujarat 13-15th November

NATIONAL DISASTER MANAGEMENT AUTHORITY • INDIA •

german cooperation
DEUTSCHE ZUSAMMENARBEIT

SAARC
Disaster Management Centre

Experiences sharing on developing and institutionalizing disaster loss databases

Session 3: 13rd November, 16.30 to 17.30

Session Outline

1. Country experiences in the ***process to develop disaster*** loss databases
2. **Development approaches** and tools
3. Institutionalization processes
4. **Enabling environment and conducive factors**
5. Lessons learned and best practices on disaster information systems

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Exercise 4: Identify the key steps of developing DLD in your country/State

- *Please discuss the key steps for developing a Disaster Loss Database in your country and/or state:*

  - If existing, reflect on your experience
  - If does not exist, identify what steps do you think are required

- *Identify who has lead or should lead each process*
- *Identify the main triggers for the development of DLD in your country/state*

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Process to develop disaster loss databases

Step1:Ensure enabling environment

Step 2: Identify the appropriate “home”

Step3: Establishing the Disaster Loss Database

Step 4: Data collection, entry and validation

Step 5: Data analysis, data management and use for sustainability

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Development approaches and tools

- Assess capacity and information sources
- Incorporate lessons learned from previous efforts in data collection
- Define end-use and identify end-users needs
- Agree on methodologies for data collection and software tools
- Define data collection processes and sources
- Identify interlinkages and define interoperability criteria
- Collect and validate historic data
- Systematically collect and register data

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Understanding the needs to develop the data model

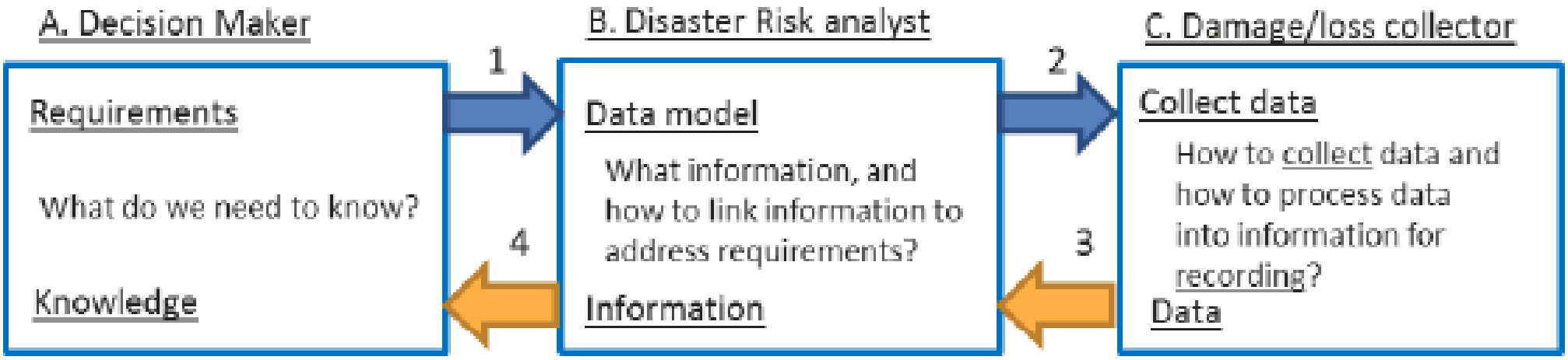

Figure 4. Requirements determine the data model that in turns determines the data to be collected

Source: JRC/EU

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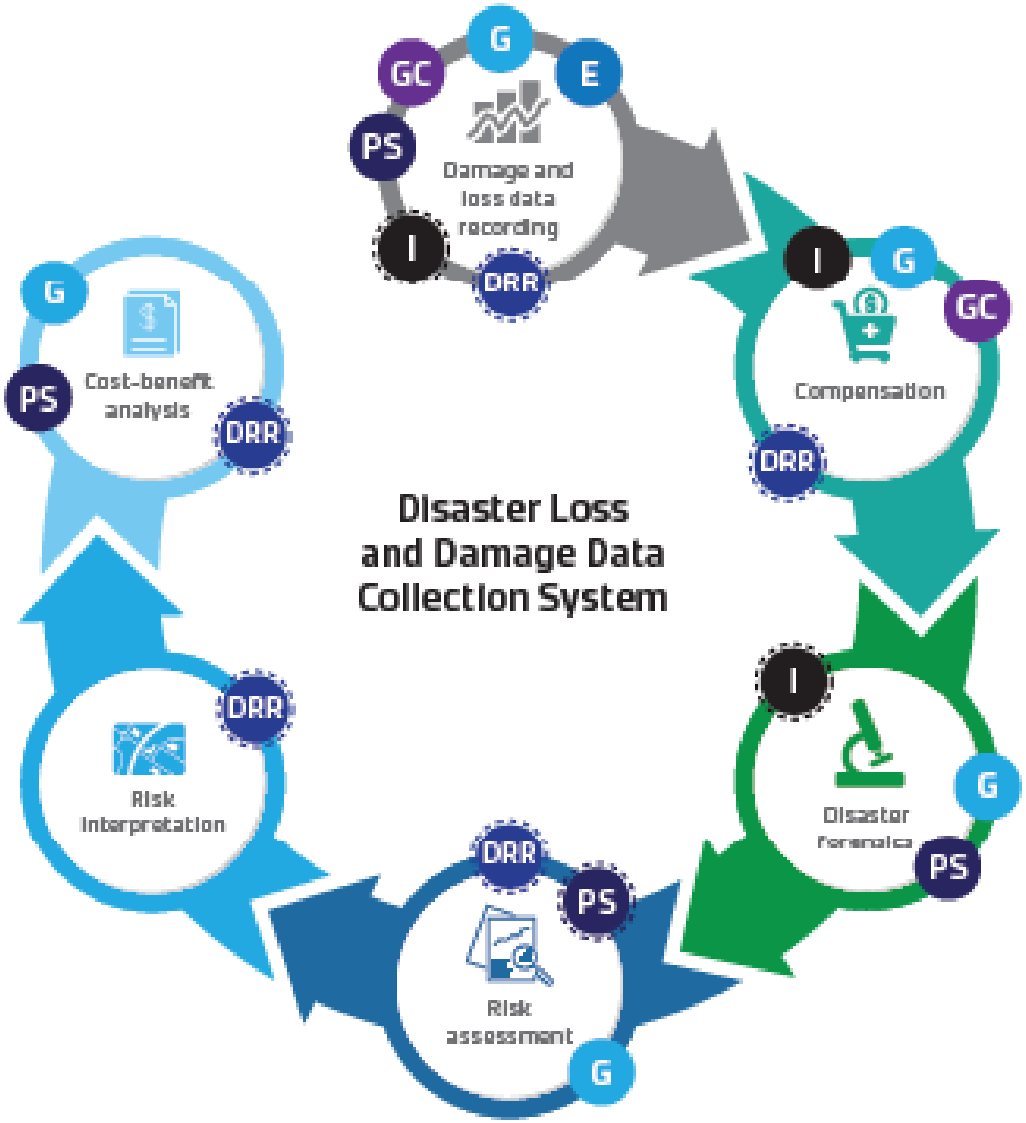
Disaster Loss and Damage data collection system: multi-sectoral approach, full-range of data capture



Standardization is Key for data sharing

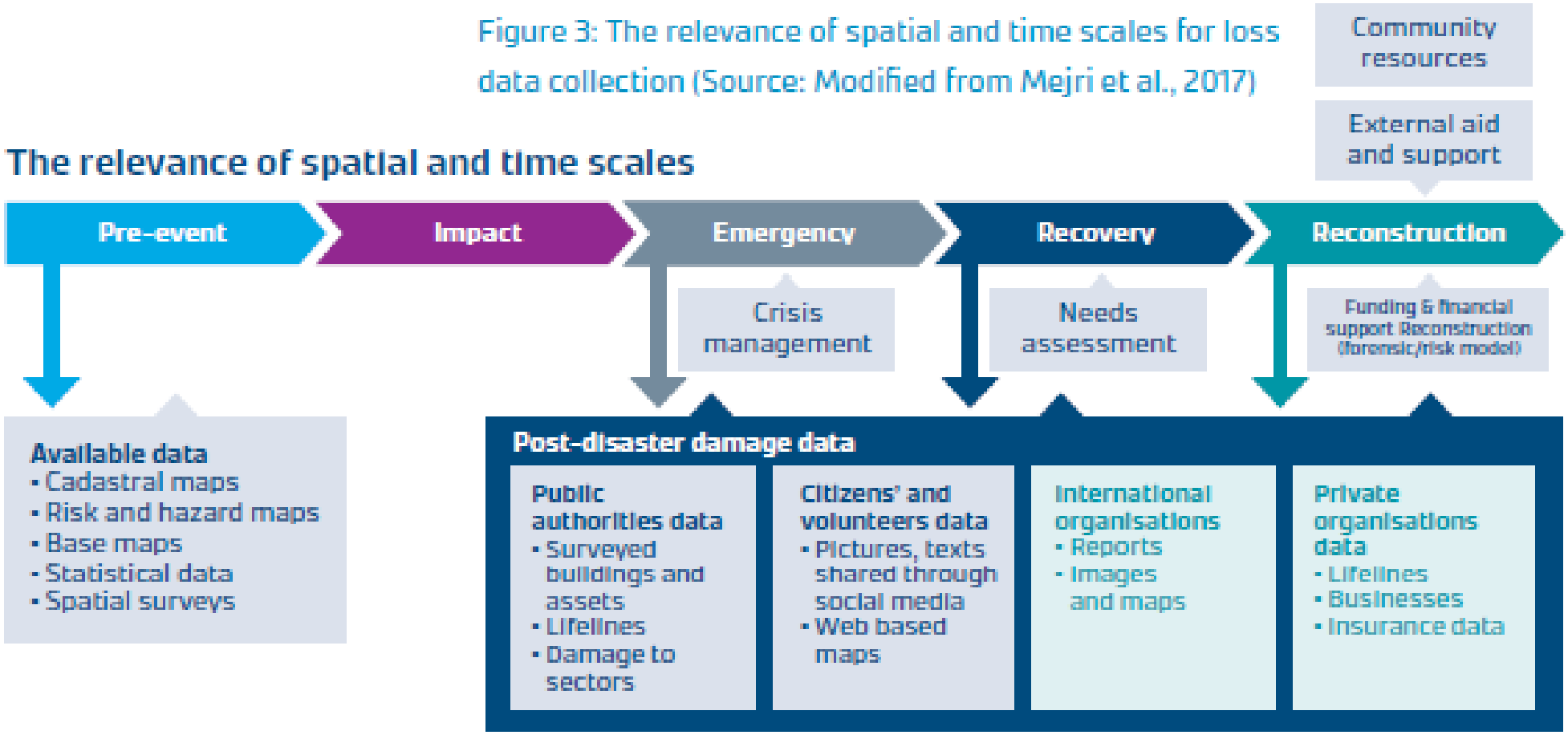
Figure 1: Disaster loss and damage data collection system (Fakhruddin, 2017, modified from De Groeve, 2015)

Legend

Read/Write data access	Read data access	
G	G	Government
E	E	Experts
DRR	DRR	DRR Researchers
PS	PS	Private Sector
GC	GC	General citizenship/ volunteers
I	I	Insurance agents

Time scales for data collection and reporting

Figure 3: The relevance of spatial and time scales for loss data collection (Source: Modified from Mejri et al., 2017)



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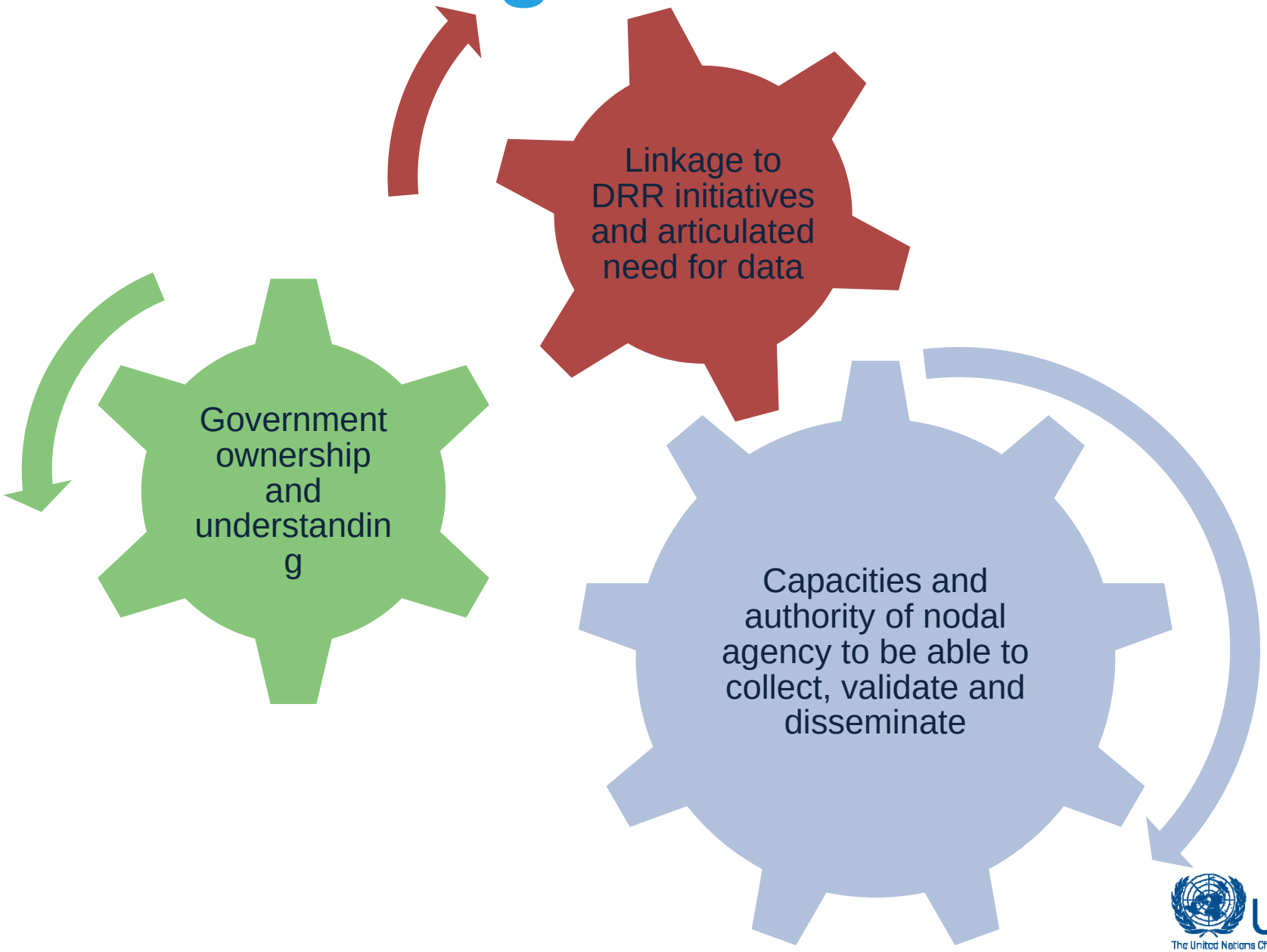
Enabling environment



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Conducive factors

- *Disaster Loss databases are developed as an integral part of Disaster Risk Reduction initiatives*
- *Process of developing DLD is participatory and inclusive*
- *Recover opportunity seized for increased awareness on relevance of collecting disaster data*
- *Agreed standards on disaster loss databases across government levels to ensure data comparability*
- *Data collection and sharing requirements are identified and reflected in legal frameworks*

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Institutionalization

- *Ensure the database becomes parts of the part of government systems and not a standalone one:*

  Legal/ Regulatory framework for data collection and sharing

- *Formalize and document process for data collection, data entry and data validation (institutional memory)*

- *Adopt a progressive step-by-step approach accompanied by capacity development*

- *Develop interoperability functions with other government information systems (risk data platforms/atlases; statistics information systems (census; data, etc.); cadaster information systems, public health information systems*

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Lessons learned on disaster information systems

Lessons learned

Best practices and guidelines

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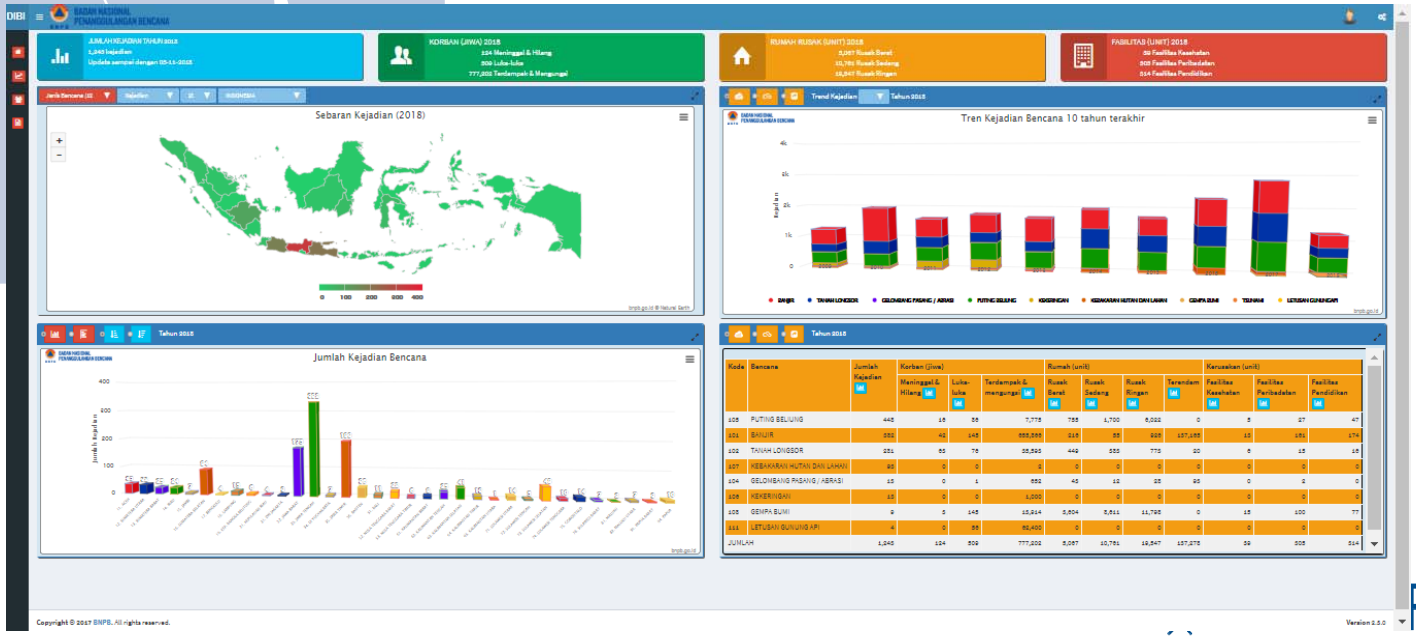
Best practices: customization

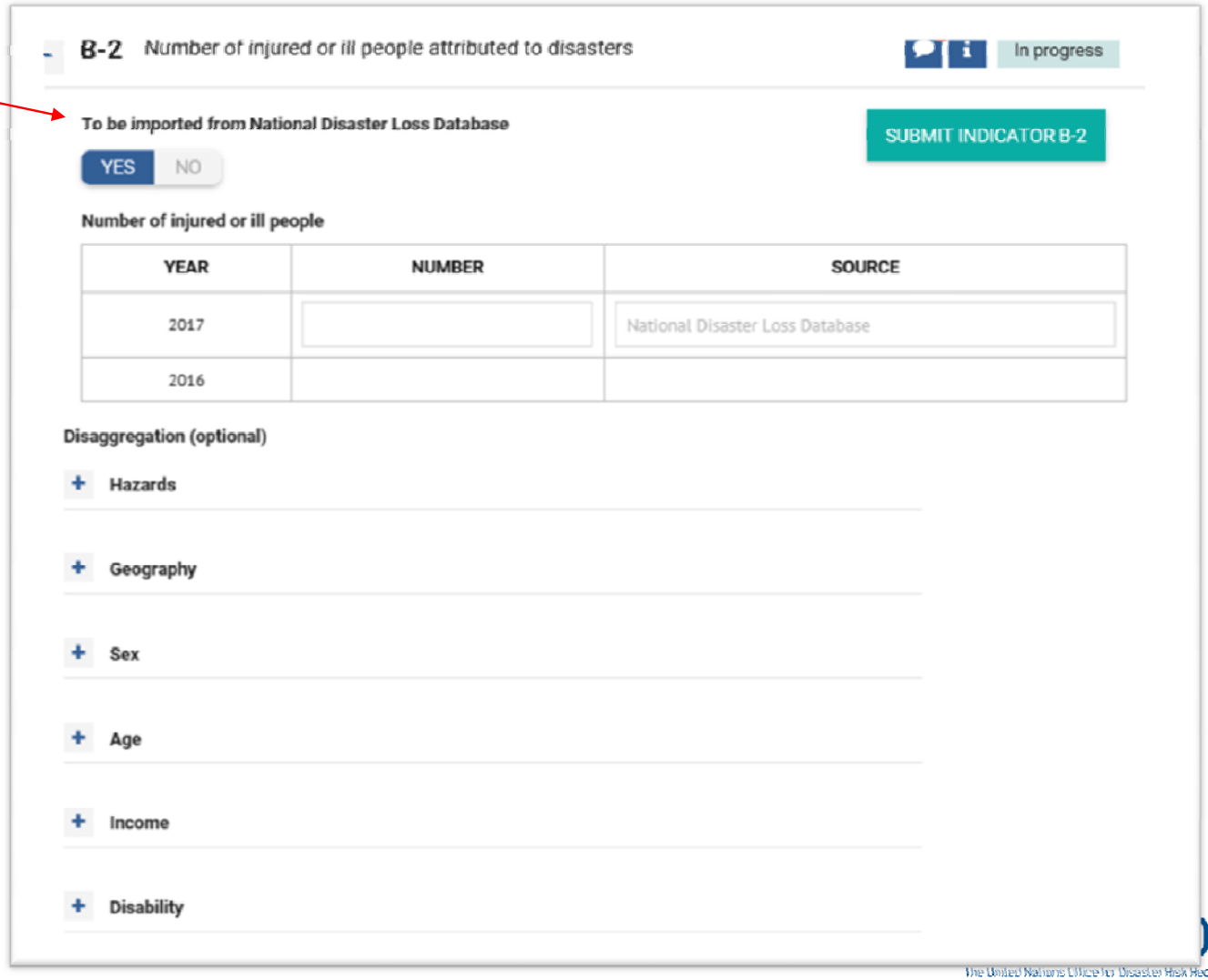
Customization and local adaptation to country needs, this could imply:

Definitions	Extensions	Software customization
Customization of definitions based on local understanding and relevant type of disaster events and hazards •***Branding,*** changes to local languages scripts •***Local Manuals***	Introduce **new variables** or disaggregation levels for existing variables	Develop new functions Interoperability with other national information systems



Best practices: systems interoperability

Good example: Desinventar Sendai to Sendai Framework Monitoring System

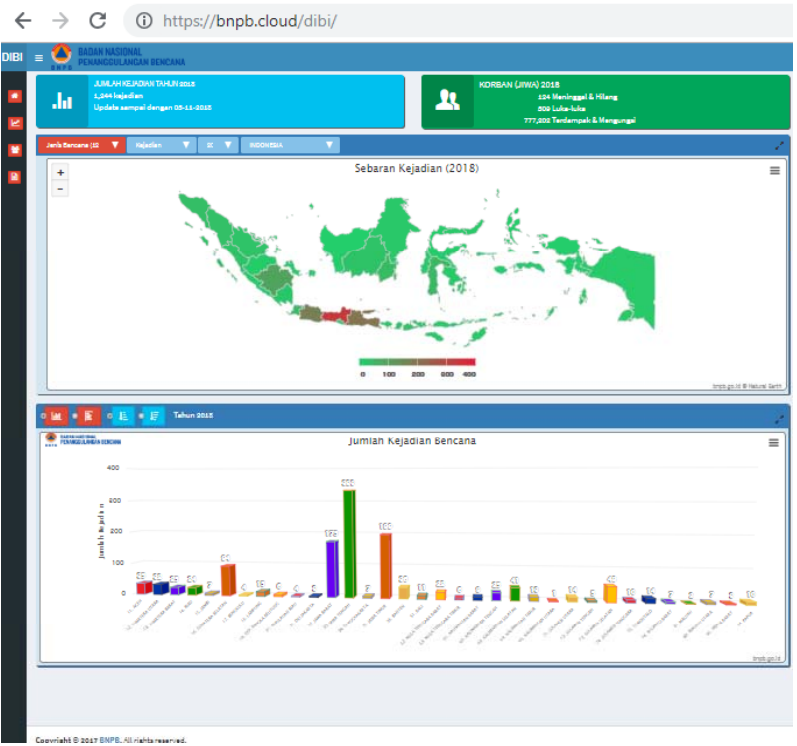


Attention: Proliferation of information systems not integrated

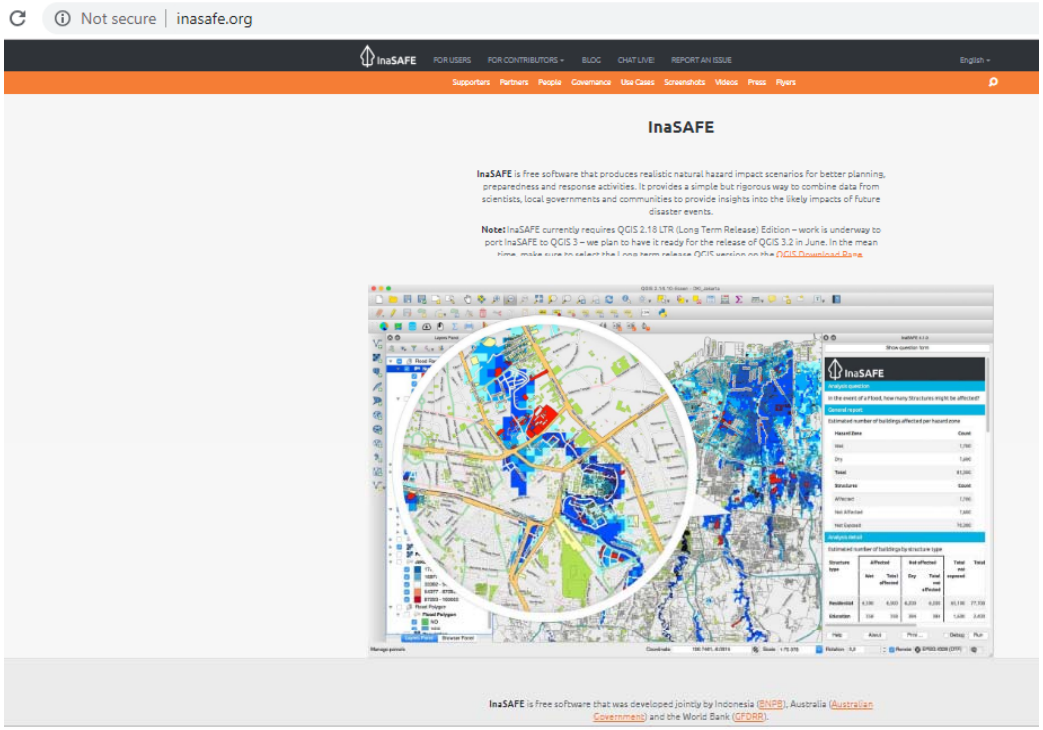
Best practices: interoperability

Indonesia

DIBI



InaSAFE



Linkage ≠ Interoperability

Interoperability: capability to use data from one into other

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Lessons learned: Quality assurance

- *Validation and quality control procedures are applied, but the documentation is not available.*
- *Classification of data sources by level of credibility (Mozambique)*

Intrinsic quality	Accessibility	Contextual quality	Representational quality
• Data accuracy • Reliability • Objectivity • Reputability	• Security access • Cost in acquiring the data	• Data relevancy, value, • Timeliness, completeness and quantity	• Interoperability of data • Comprehensibility • Concise and consistent representation

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Accessibility

Hosted in Desinventar.net allows for data searches and download

- *Some countries' database provides limited access as the data can be viewed on-line but cannot be downloaded.*
- *Some countries' database not accessible but used by Government officials*
- *data ownership, data restrictions, data use provisions and acknowledgment of data sources might apply*

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Lessons learned: Data collection and validation systems

- *Systematize and structure the data collection process*
- *Introduce quality assurance with checks in place, and records available for different levels for quality control, cross checking and final validation.*
- *Separation of duties between data collection and data entry.*
- *Verification to ensure consistency, accuracy, completeness and avoid duplication of records*
- *Sampling of the data, and checking data cards and source of data should automatically be done once data is in the system.*

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Lessons learned on Sustainability

- *Government ownership beyond project initiatives*
- *Appropriate investment in developing required technical capacities*
- *Perceived need, use and value of the database*
- *Analysis conducted on data collected is clear, understandable and relevant to the target audience.*
- *Engagement of Statistics department increase credibility of disaster data and use of disaster data*
- *Production of disaster statistics by Statistics Departments allow for better linkage to Planning processes*

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Exercise 4: what are the lessons learned in your country?

1. *If any attempt has been made to develop a disaster loss database in your country, please identify:*

   3 Lessons learned of the process

2. *With which other government information systems do you think a DLD needs to be interoperable?*

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Thank you for your attention!