



**GLOBAL
SHELTER CLUSTER**

Coordinating Humanitarian Shelter and Settlements

**TECHNICAL
Community of Practice**



Advancing Context-Specific Damage Assessment Methodologies and Damage Classification Standards

**DAMAGE ASSESSMENT
Technical Sub-CoP**

**1st webinar – 16 October 2025
12.30-14-00 (CEST)**

HOUSE KEEPING

- Uses the Q&A chat to share questions adding to whom it is addressed (*not the usual chat*)
- Use the usual chat for reflections, comments or to share relevant resources and links
- Please keep your microphone muted when not speaking
- Turn on your camera when you speak, if your connection allows
- Be mindful of time and keep your contribution concise
- Respect and welcome different perspectives, backgrounds, ideas and ways of working

Please note the meeting is being recorded to be shared on GSC Technical CoP webpage

Agenda

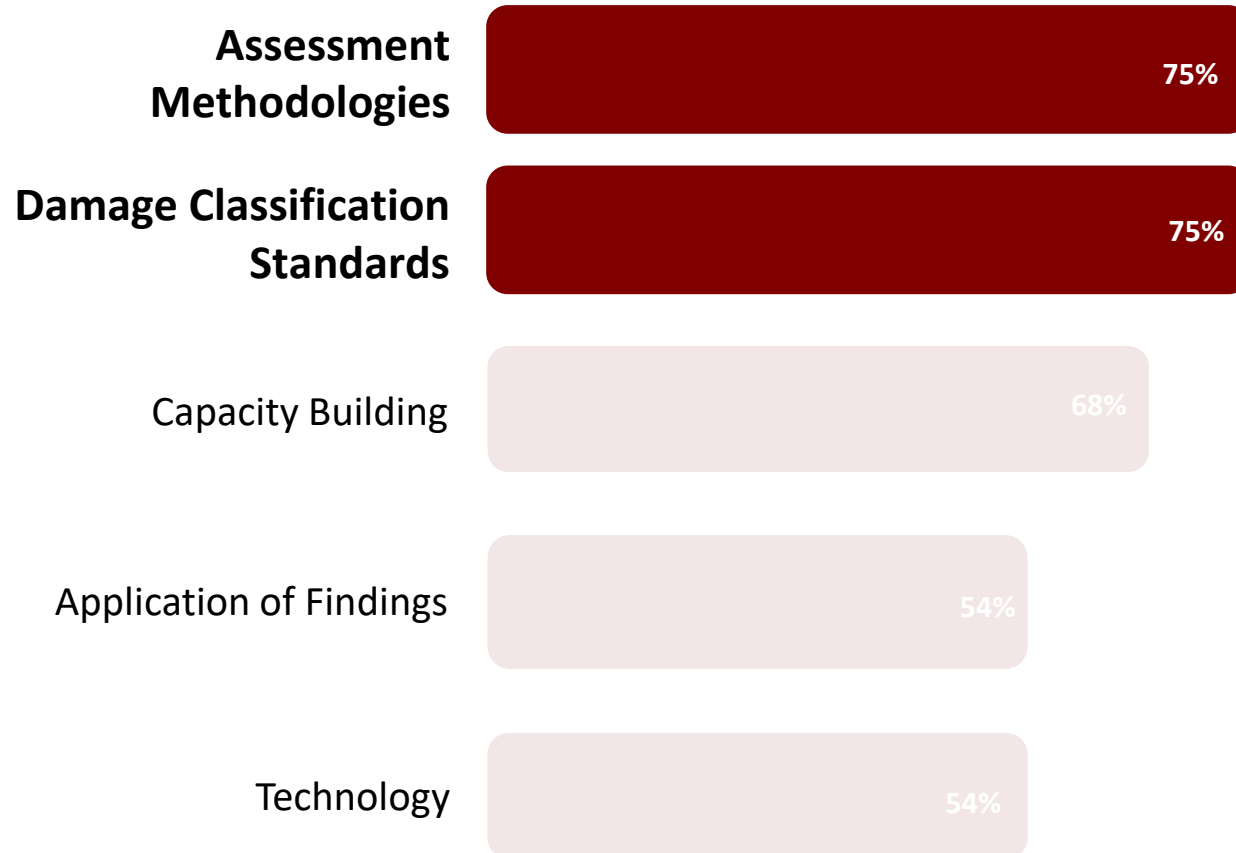


Technical Community of Practice
Damage Assessment T.Sub-CoP

Description	Speakers	Duration
Welcome and introduction of the webinar topics	Pascal Panosetti - GSC/IFRC, Technical CoP moderator Arnold Njogu - UNDP, DA T.S-CoP committee member	10 min
Critical differences between Damage Across Contexts	Bill Flinn - consultant and lecturer at Oxford Brookes University	10 min
Damage Assessment in Fiji : Still Under Construction	Keith Hornby - consultant	15 min
Damage Assessment Preparations: Practices from Ethiopia	Mamuney Legesse - IOM - Shelter Cluster Ethiopia	10 min
Myanmar earthquake - Repairing What Remains: Smarter Shelter Solutions After Crisis	Gareth Lewis - NRC	15 min
Exchange with Participants - Q. & A.	Plenary	25 min
Conclusion	Pascal Panosetti, GSC/IFRC, Technical CoP moderator	5 min

Background topic and sub-topic survey

Priority Topics



Respondents: 70

Priority Sub-topics

1. Development of guidelines, templates, and SOPs for consistent use
2. Rapid vs detailed assessments
3. Structural vs non-structural assessments
4. Common terminology and categories (minor, moderate, severe, destroyed)
5. Alignment with international and national frameworks
6. Application across multiple hazards (earthquake, floods, cyclone, conflict)
7. Multi-hazard and context specific tools (vernacular/mud buildings)



Critical challenges for Damage Assessment across contexts



Bill Flinn
Consultant

Critical challenges for Damage Assessment across contexts

1. Context
2. For whom?
3. Why? What is useful?

Some concluding challenges

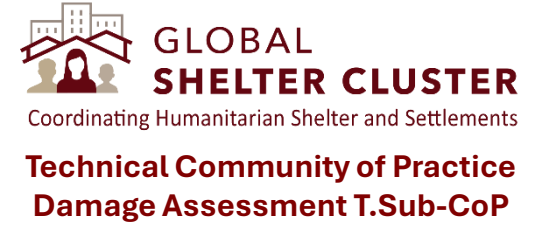


Critical challenges for Damage Assessment across contexts

Context

- Cause – conflict, earthquake, storm, flood, fire.
- Risk and hazard
 - Continuing and/or compound
 - Safety
 - Structural safety
 - Other kinds of safety
 - Falling from height
 - Accessibility
 - Broken glass
 - UXO
 - Protection
 - Adequacy and health
 - Privacy; water; sanitation; bathing facilities; housing related health
- Typology – and a diversity of typology
 - Multi-storey; single storey, low rise
 - Light-weight, heavy, framed, load-bearing, timber, steel, concrete
 - Toxic and hazardous materials – asbestos.

Critical challenges for Damage Assessment across contexts



For whom?

- Engineers
- Implementing Partners
- Households
 - Assisted
 - Self-recovering
- Advocacy, donors, budgets

Different requirements for different audiences

Critical challenges for Damage Assessment across contexts

Why? What is useful?

- What is likely to happen anyway?
- Consider the context holistically – both safety and adequacy in the widest senses.
- "Standards" or guiding principles

Safe is the enemy of safer





TC Winston destruction (2016).

Image Credit: New Zealand Defence Force

Content

- **Fiji Housing and Hazard Profile**
- **Fiji Post Disaster Assessments**
- **Other Assessment Approaches**
- **How best to appropriately refine Local Damage Classifications?**



Keith Hornby
Housing Policy
Consultant

Fiji Post Disaster Damage Assessment

Housing Profile

884,887 Total population

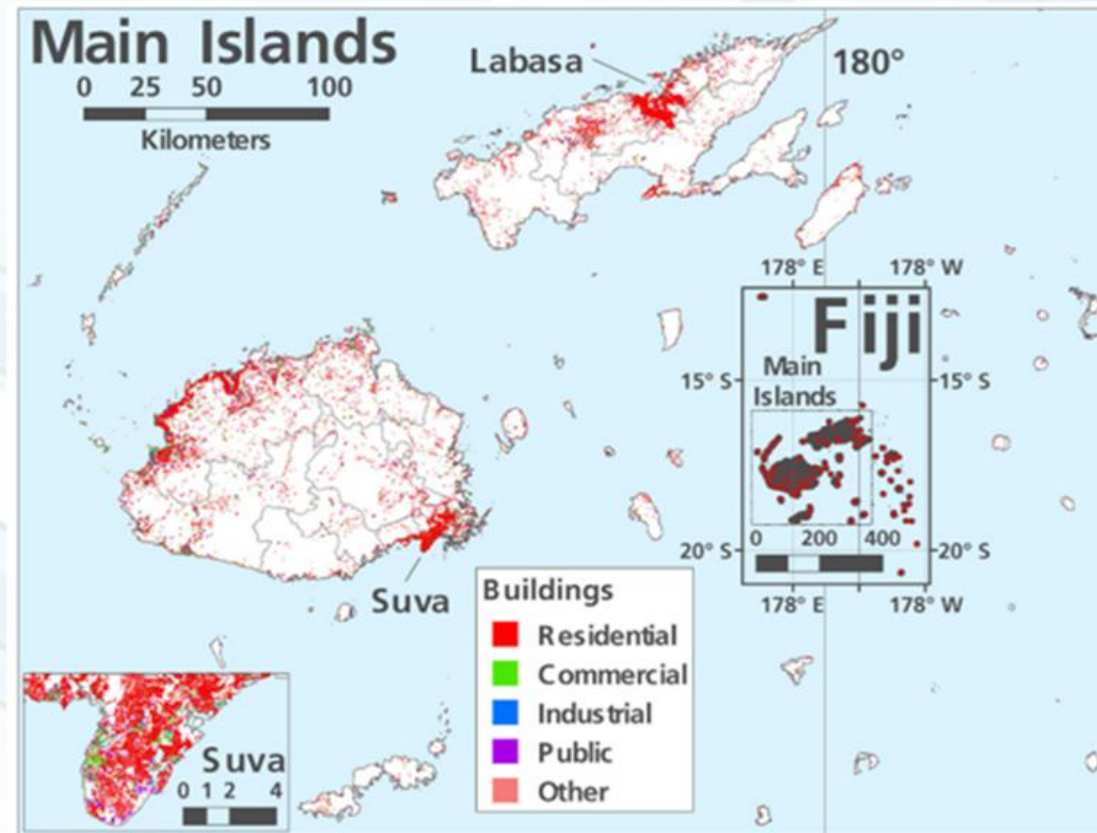
- **191,910 houses, or dwellings, in Fiji.**
 - **57%** (108,715) located in urban areas
 - **43%** (83,195) in rural areas
- **4.7** Average number of people per household

Rural

- **54%** (44,925) living on customary tenure, majority (39,000¹) within 1,172 registered villages
- **29%** Formal leasehold
- **12%** Freehold

Urban

- **24%** living on Freehold land
- **42%** living on formally Leased land
- **24%** (26,092) Renting in urban areas
- **24%** (25,378) informal dwelling within over 250 informal settlements
- **2.1%** (2,686) total pop. in social and public housing*



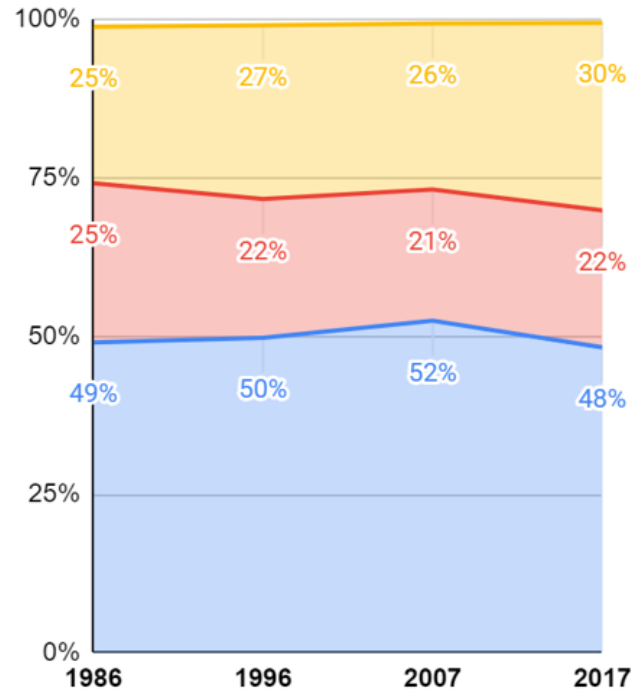
Housing Profile

- **Use of Modern materials, particularly CI**
- **40% of Houses in Poor-Average condition**

Urban Housing Building Material

Outer wall material use 1986-2017

■ Tin & Corrugated Iron
 ■ Wood (All types)
 ■ Concrete & Bricks

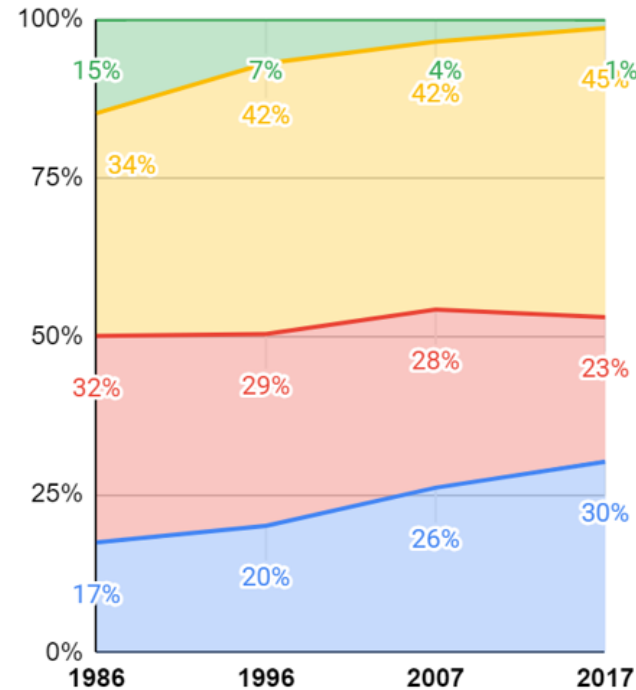


Source: FBoS Census 1986, 1996, 2007, 2017

Rural Housing Building Material

Outer wall material use 1986-2017

■ Bure
 ■ Tin & Corrugated Iron
 ■ Wood (All types)
 ■ Concrete & Bricks

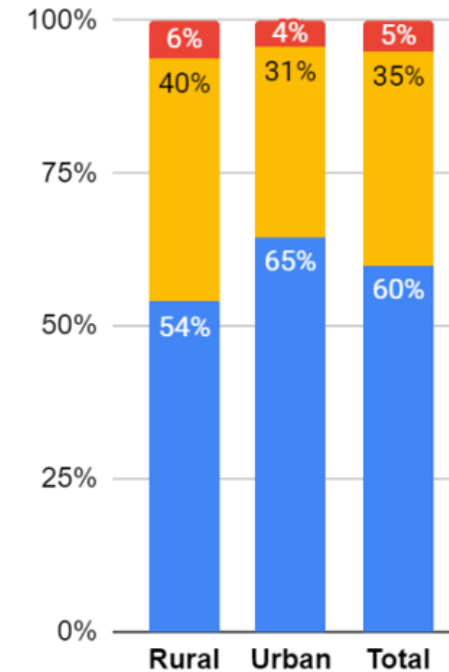


Source: FBoS Census 1986, 1996, 2007, 2017

2017 Dwelling Condition

Assessment of structure (walls)

■ Poor
 ■ Average
 ■ Good

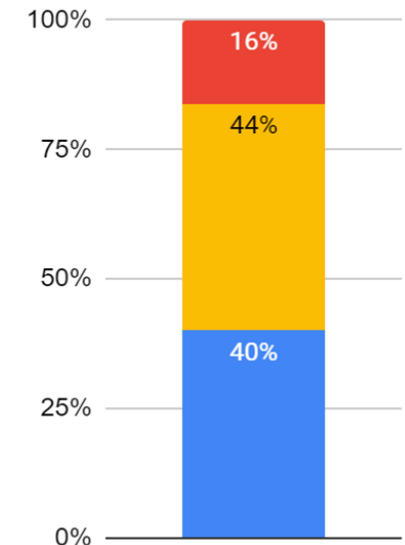


Source FBoS: 2017 Census

2019 Informal Settlement Dwelling Condition

Avg. of 16 Informal Settlements

■ Poor
 ■ Fair to Average
 ■ Good to Excellent



Source: UN-Habitat 2019

Hazard Likelihood



Major Disasters 2011-2020

Total Population Affected



Total Damage

US\$771.52
million

Number of Major
Cyclones in 2011-2020

9

Per cent of Disaster Type
(Major Disasters 2011-2020)



UN OCHA, February 2021 at <http://www.unocha.org/>

TC WINSTON (2016)

The most powerful cyclone recorded in the Southern Hemisphere with Maximum average wind speeds reached 233 km/hour and wind gusts peaked at around 306 km/hour

The estimated value of disaster effects arising from TC Winston in Fiji is

US\$900 million including US\$600 million in damage of destroyed physical assets



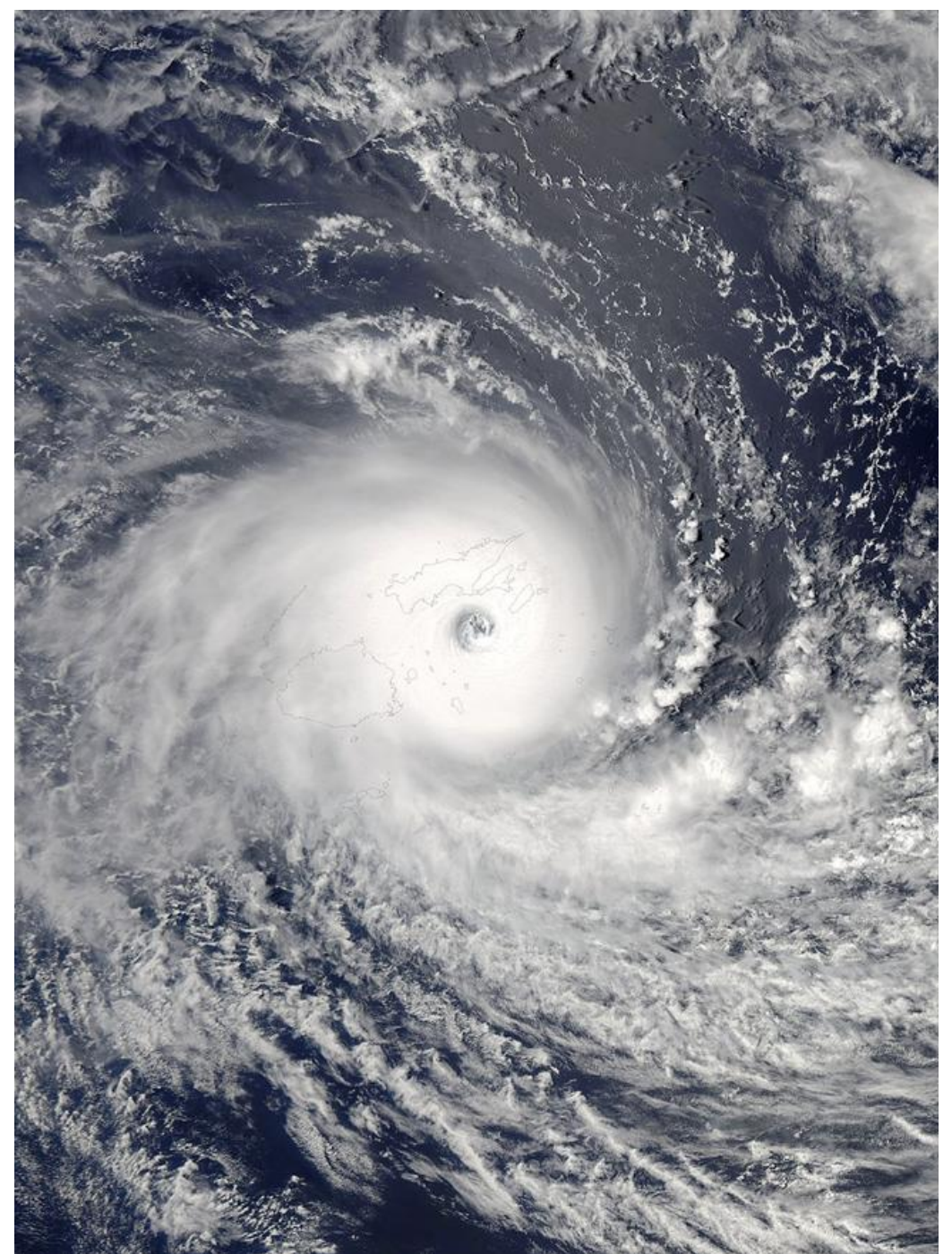
Approximately 62 per cent of the country's total population affected



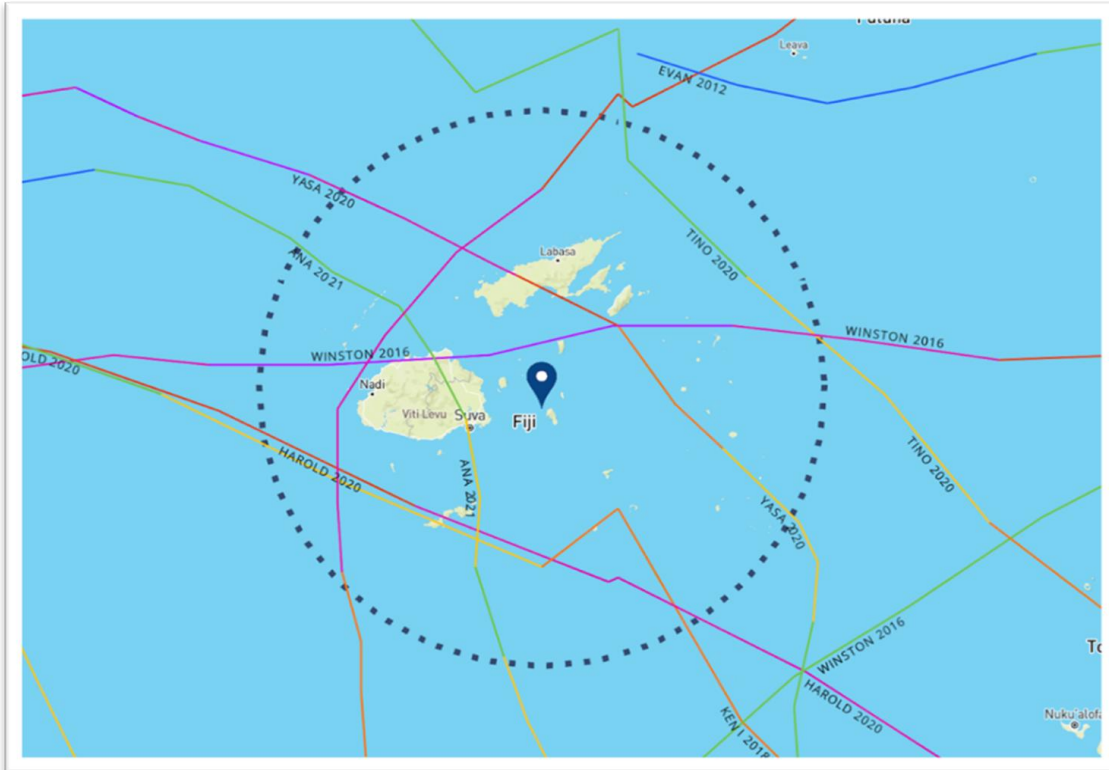
Per cent of Economic Damage and Loss by Sectors



FDR, TC Winston 16-2016
<http://www.fiji.gov.fj/infocentre/fiji-disaster-recovery-2016-2017/>
#NO2016 #NO2017 #NO2018 #NO2019 #NO2020

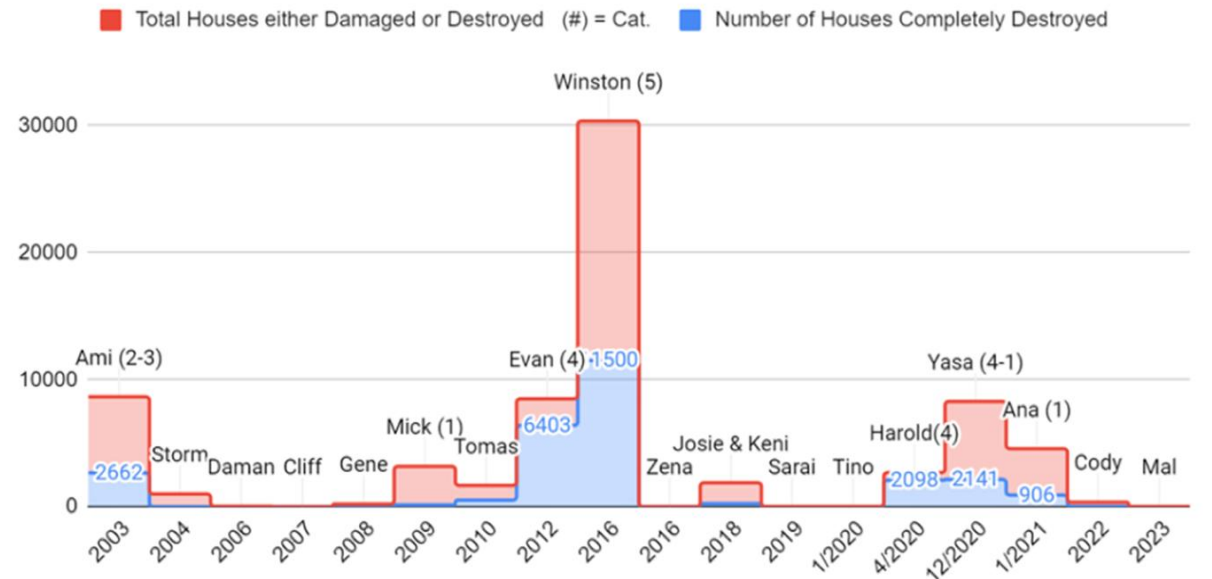


Historical TC Tracks and Damage Profile



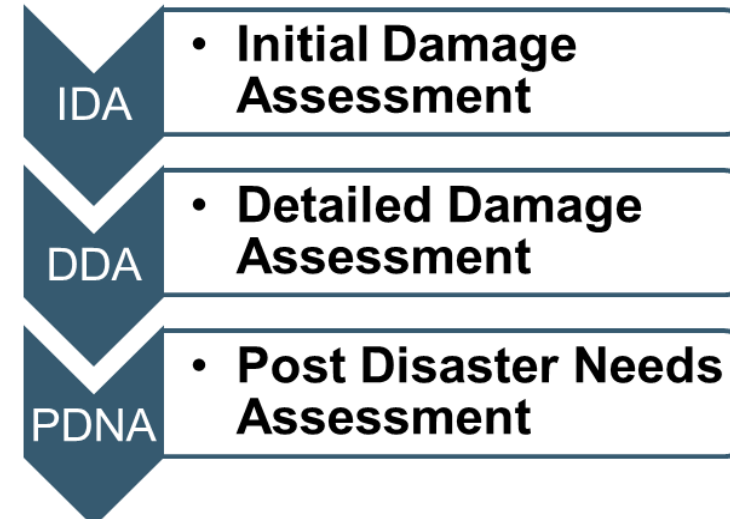
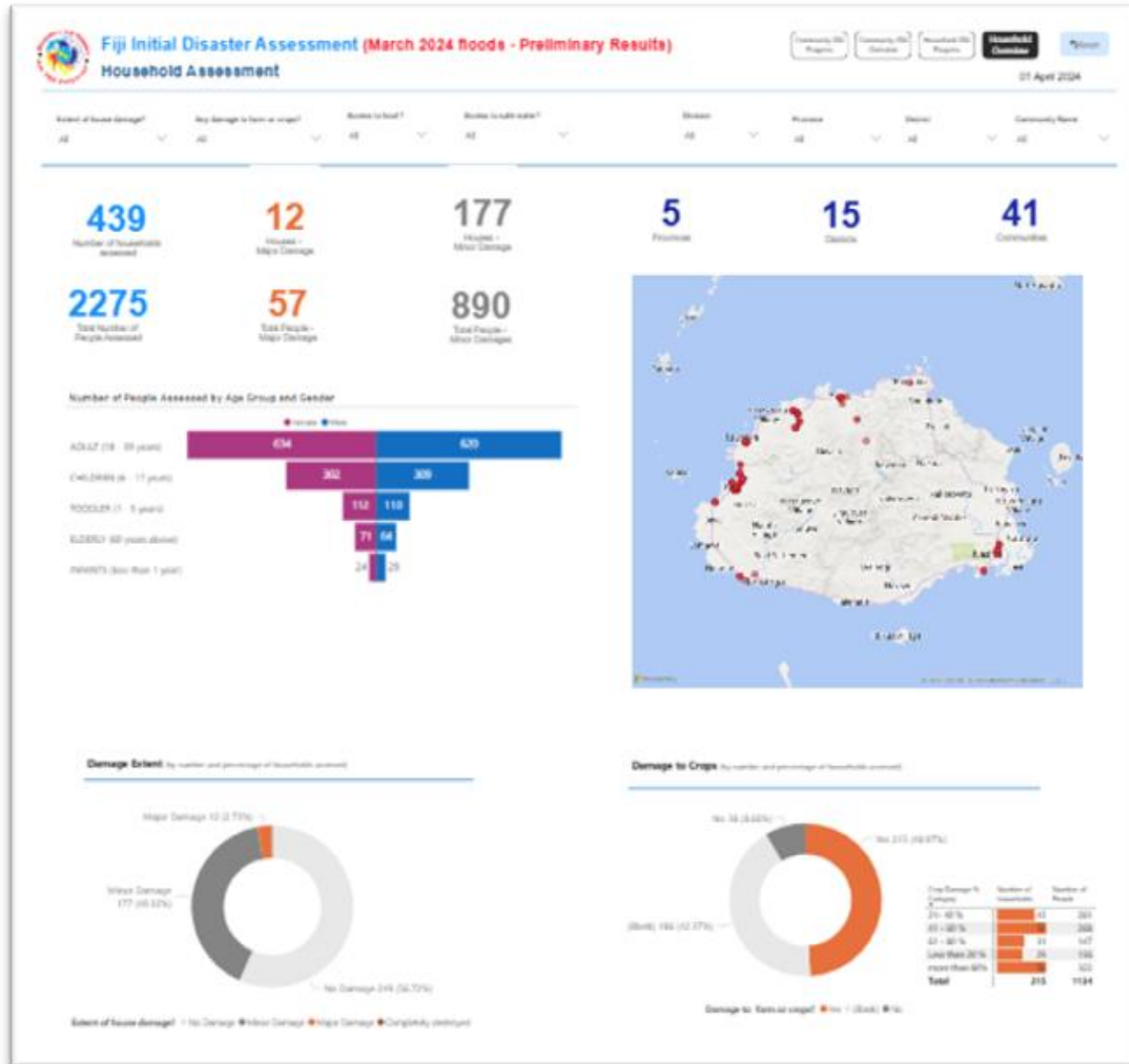
Fiji Housing Stock Destroyed in Disasters 2003-2023

Number of houses affected with select Tropical Cyclone categories noted



Source: Fiji PDNA, Recovery Strategy, IFRC Reports and Desinventar

Fiji Post Disaster Assessments



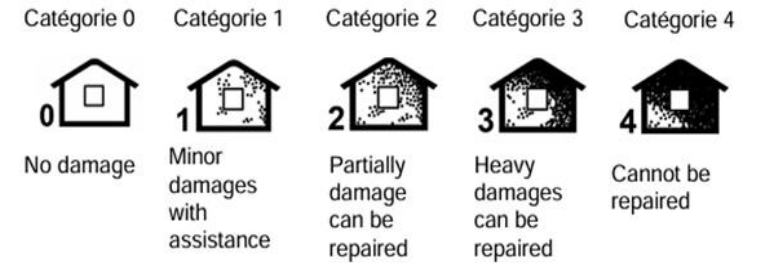
Fiji Post Disaster Assessments

Assessment Name	Initial Damage Assessment IDA	Detailed Damage Assessment DDA	Post Disaster Needs Assessment PDNA
Assessment Period	Within first week	Within first month	+ 3 months after impact
Purpose	Initial multi-sectoral rapid assessment community level profiling Building big picture/situational awareness Inform initial relief/welfare provision plans	Detailed Sectoral Assessment Individual Dwelling Damage and related Identifies Household Needs Inform Shelter Response Plans Hazard Assessment/ Building usability, Access restriction Damage and loss data for PDNA Engineers – Critical Points of Failure?	Comprehensive post- disaster assessment including estimate of recovery needs and calculation of overall sectoral economic loss at national and subnational levels
Methodology: Damage Classifications	Historical: - Partially damage/Destroyed - Relative damage % scale (i.e. 15-85%) Recent Assessment Scale (2024): 1) Minor repairs required but liveable 2) Major repairs required but liveable 3) Major repairs required. Occupants need to relocate until repairs are done 4) Fully destroyed. House needs to be rebuilt, not liable 5) No damage	Historical: - Partially damage/Destroyed - Relative % scale (15%, 50%, 85 etc) No recent DDA conducted. - Room for improvement, - Granularity of data very important for recovery programme targeting, and - Accuracy of PDNA reporting	As per: Fiji Housing Sector PDNA Guideline (2023) Requires granular data from DDA for greater accuracy of calculations
Stakeholders (no-exhaustive list)	<ul style="list-style-type: none"> Community National Disaster Risk Management Office (NDRMO) Shelter Cluster partners 	<ul style="list-style-type: none"> Community National Disaster Risk Management Office (NDRMO) Shelter Cluster partners Ministry of Public Works (Engineers) 	<ul style="list-style-type: none"> Shelter Cluster partners Ministry(s) responsible for Housing Reconstruction Ministry of Finance (Economists) Ministry of Public Works (Engineers)

Other Approaches?

- **Optimal number of Categories?**
Scale of 3, 4, 5, 6 or even 7 Categories?
(incl. No Damage and Not Assessable)
- **Relative/Proportionate** – Making an overall assessment of percentage (%) damaged?
- **Descriptive:** Developing descriptions of common types and extent of material damage per category and hazard?
- **Illustrative** approaches to common material damage
- **Sum of Individual Structural Components?** (Roof+ Walls + Foundations etc) = Overall composite score?
- **Guidance:** SOP, Separate descriptive and illustrative guidance?
- **Specialist vs Non-Specialist**
- **Differentiated Approaches:** Urban/Rural?

Damage Category	Damage Impact	Relative Damage	Material Damage
Destroyed	Completely collapsed	More than 70 percent	All collapsed into rubble
Severe	Substantially heavy loss	50-70 percent	Collapsed wall and lifted roof
Heavy	Heavy loss	30-50 percent	Lifted roof
Partial	Partial loss	Less than 30 percent	Slight damage



Conventionally Built and Multi-Family Homes: Assessing Damage

Flood Damage	
Affected	<ul style="list-style-type: none"> ▪ Waterline in the crawl space or an unfurnished basement. ▪ Damage to an attached structure (e.g., porch, carport, garage, outbuilding, etc.), gutters, screens, landscaping, and retaining walls or downed trees that do not affect access to the residence. ▪ Essential living spaces and mechanical components are not damaged or submerged.
Minor	<ul style="list-style-type: none"> ▪ Waterline is below electrical outlets in the lowest floor with essential living space. ▪ Damage or disaster-related contamination to a private well or septic system.
Major	<ul style="list-style-type: none"> ▪ Waterline is at or above the electrical outlets in the essential living space. ▪ Waterline on the first floor (regardless of depth) if the basement is completely submerged.
Destroyed	<ul style="list-style-type: none"> ▪ There is complete failure of two or more major structural components (e.g., collapse of foundation, walls, or roof). ▪ The waterline is at or higher than the ceiling of an above-ground essential living space. ▪ Only the foundation remains. ▪ The residence is in imminent danger (e.g., impending landslide, mudslide, or sinkhole).



Loss & Damage Assessment Preparations: Practices & Lessons from Ethiopia

ETHIOPIA EMERGENCY SHELTER & NFI CLUSTER (IOM)



Mamuney Legesse
ES/NFI Sub-National
Coordinator



Loss and Damage Assessment Preparations: Practice and Lessons from Ethiopia

Prepared by: Mamuney Legesse
ES/NFI Subnational Cluster Coordinator
October 2025

Objectives of Damage Assessment



Identify Damage Severity

Rapidly assess the extent and severity of shelter damage to guide effective humanitarian response.

Prioritize Response and Resources

Use damage data to prioritize response efforts and efficiently allocate limited resources.

Support Advocacy and Funding

Provide evidence-based information to advocate for funding and support ES/NFI interventions.

Enable Inclusive Decision-Making

Incorporate humanitarian standards, HLP, and accessibility to ensure inclusive and equitable response decisions.

Guiding Response Modalities

Inform decisions on repair, cash assistance, or relocation based on assessment outcomes.

COORDINATED ASSESSMENT APPROACH



**CLUSTER-LED
OVERSIGHT**



**GOVERNMENT
COORDINATION**



**INTER-CLUSTER AND
SECTORAL COLLABORATION**



**ADAPTIVE AND
INCLUSIVE
DEPLOYMENT**

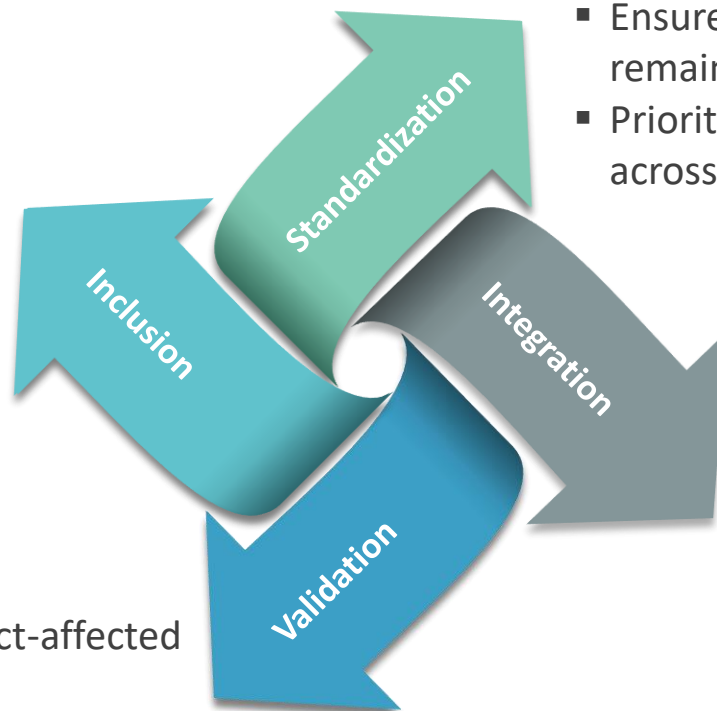
Tools and Methodology

Inclusion & Protection Mainstreaming

- Methodology integrates HLP, disability inclusion, and protection considerations.
- Ensures damage data informs equitable prioritization and safe shelter solutions
- Recognizes non-economic losses (security, dignity, and tenure) as key dimensions of damage.

Field Validation & Adaptation

- Piloted across multiple return and conflict-affected zones to ensure usability.
- Refined definitions of “fully damaged” and “partially damaged” to align with national ES/NFI guidance and Global Shelter Cluster standards.
- Promotes inter-agency comparability while respecting contextual diversity.



Standardized and Scalable Approach

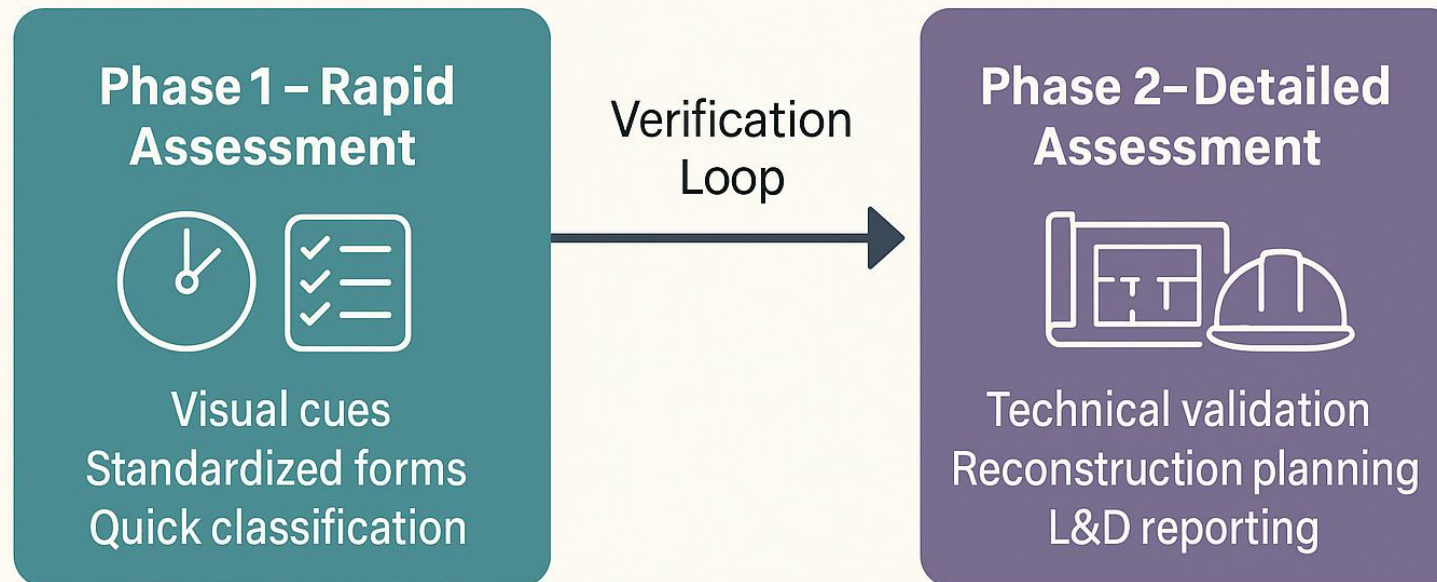
- Developed a unified framework integrating household-level and community-level assessment tools.
- Ensures comparability across contexts while remaining adaptable to local realities.
- Prioritizes data quality, speed, and consistency across partner agencies

Integrated Assessment Tools

- Household Shelter & Loss Form captures direct household impacts (shelter typology, damage severity, asset loss, livelihood impact).
- Rapid Return Assessment Template – gathers community-level and contextual information (damage prevalence, accessibility, market conditions, HLP issues).
- Visual Damage Classification Guide – enables consistent categorization by non-engineering field teams..

Balancing Rapid vs Detailed Assessments

From Rapid Scans to Verified Assessments



Fit-for-purpose approach – fast enough for lifesaving response,
robust enough for recovery planning.

Balancing Rapid vs Detailed Assessments

Balancing Rapid vs Detailed Assessments
Generate actionable data quickly, without sacrificing quality

Rapid assessment: Collect essential info for planning

Damage type, severity, key household needs

Detailed assessment: house-to-house assessment once resources are secured

Structural vs Non-Structural:

Visual cues, standardized damage categories, community reports

Outcome: Fast data collection under time/access constraints with sufficient quality for response planning

Decision trees help classification





Damage Classification



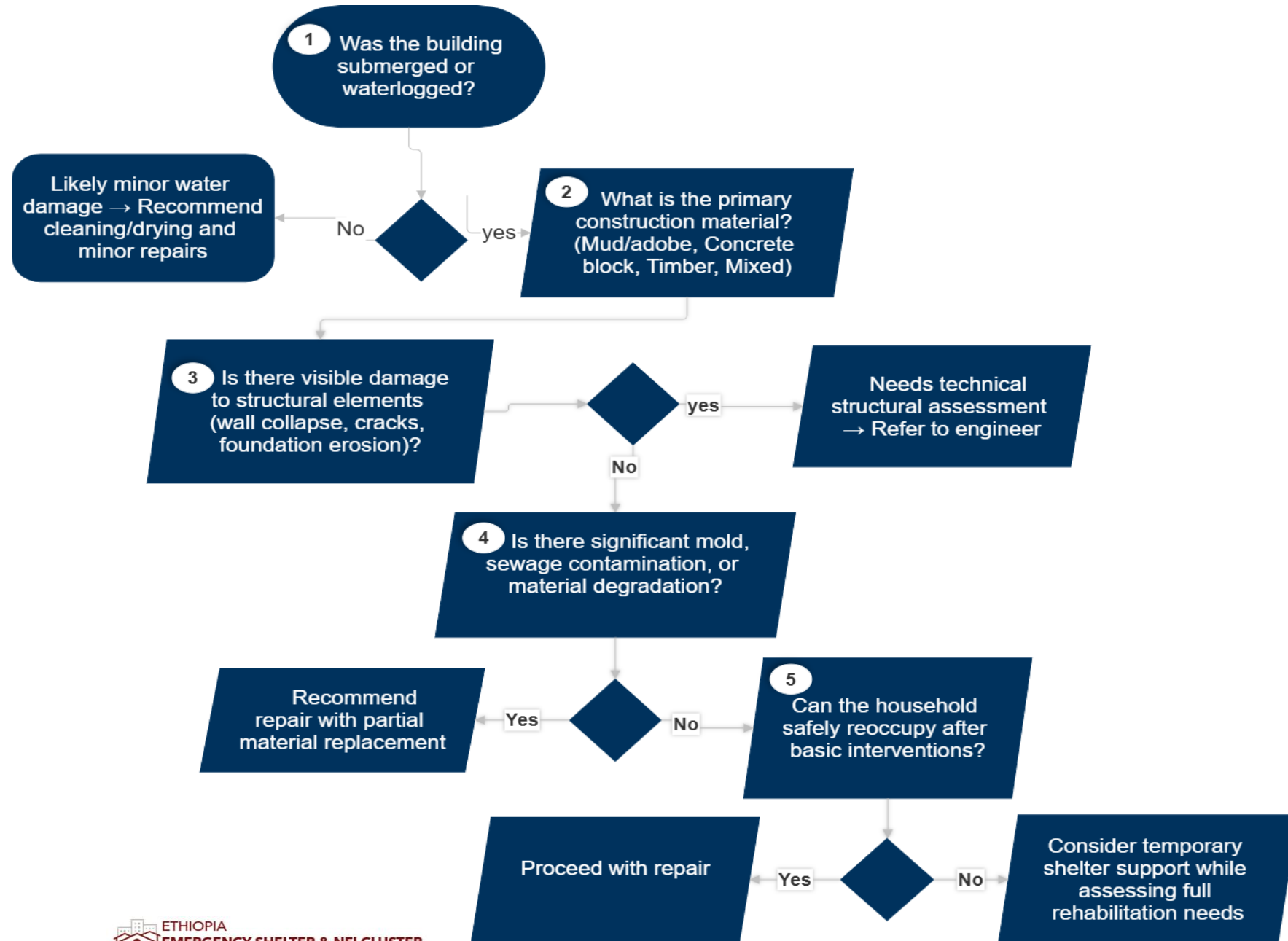
Damage Classification Framework

- **Minor Damage**
Superficial visible damage (small cracks, broken windows) with no observable structural concerns. Suitable for continued occupation.
- **Severe Damage**
Significant visible damage affecting structural elements (large wall cracks, partial collapse). Further technical assessment is recommended before re-use.
- **Destroyed**
Building is fully unusable due to collapse, burning, or major structural failure based on observable indicators.

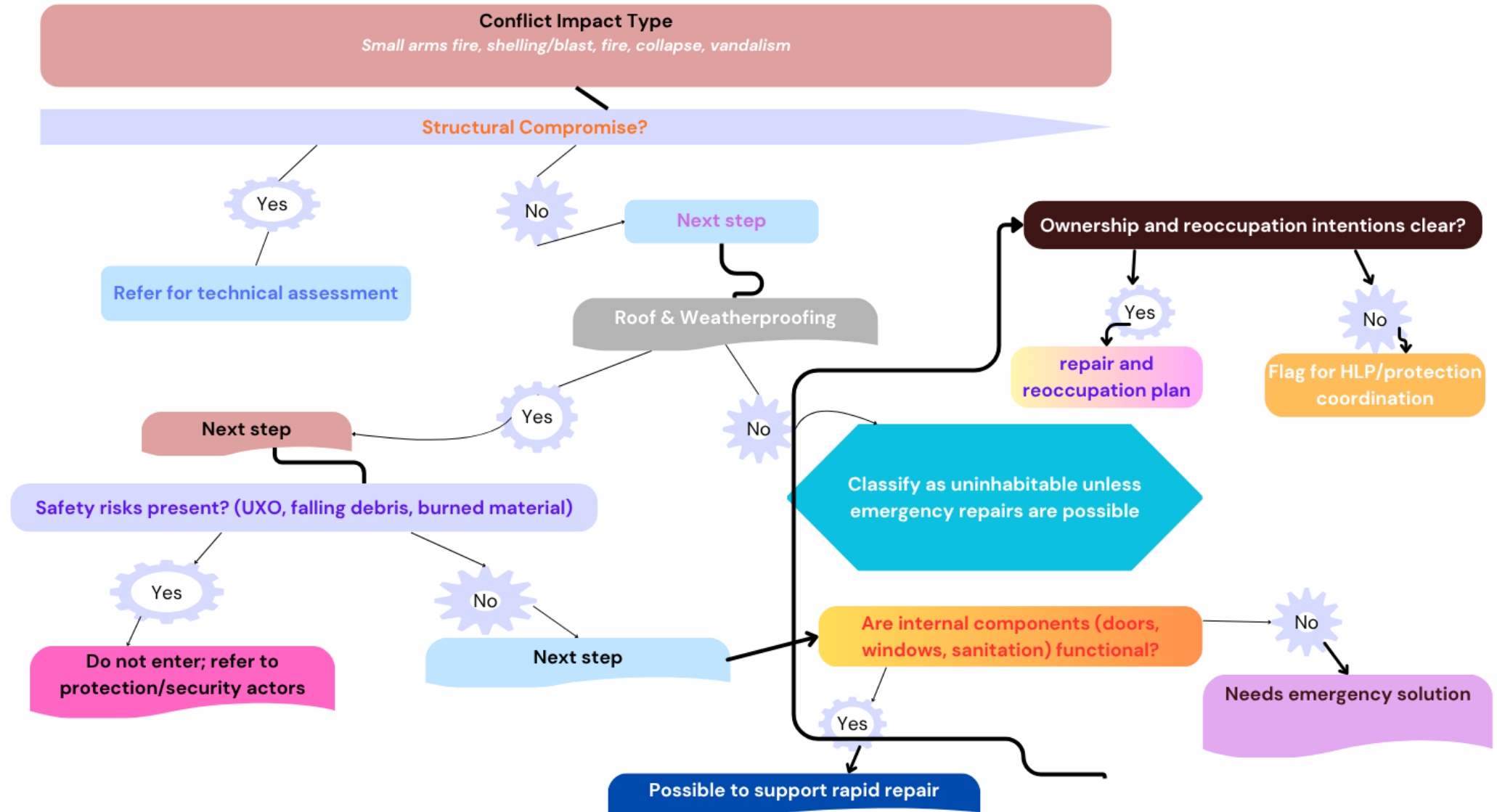
⚡ Damage classification focuses on **actionable assessment** for response planning, not technical safety certification.



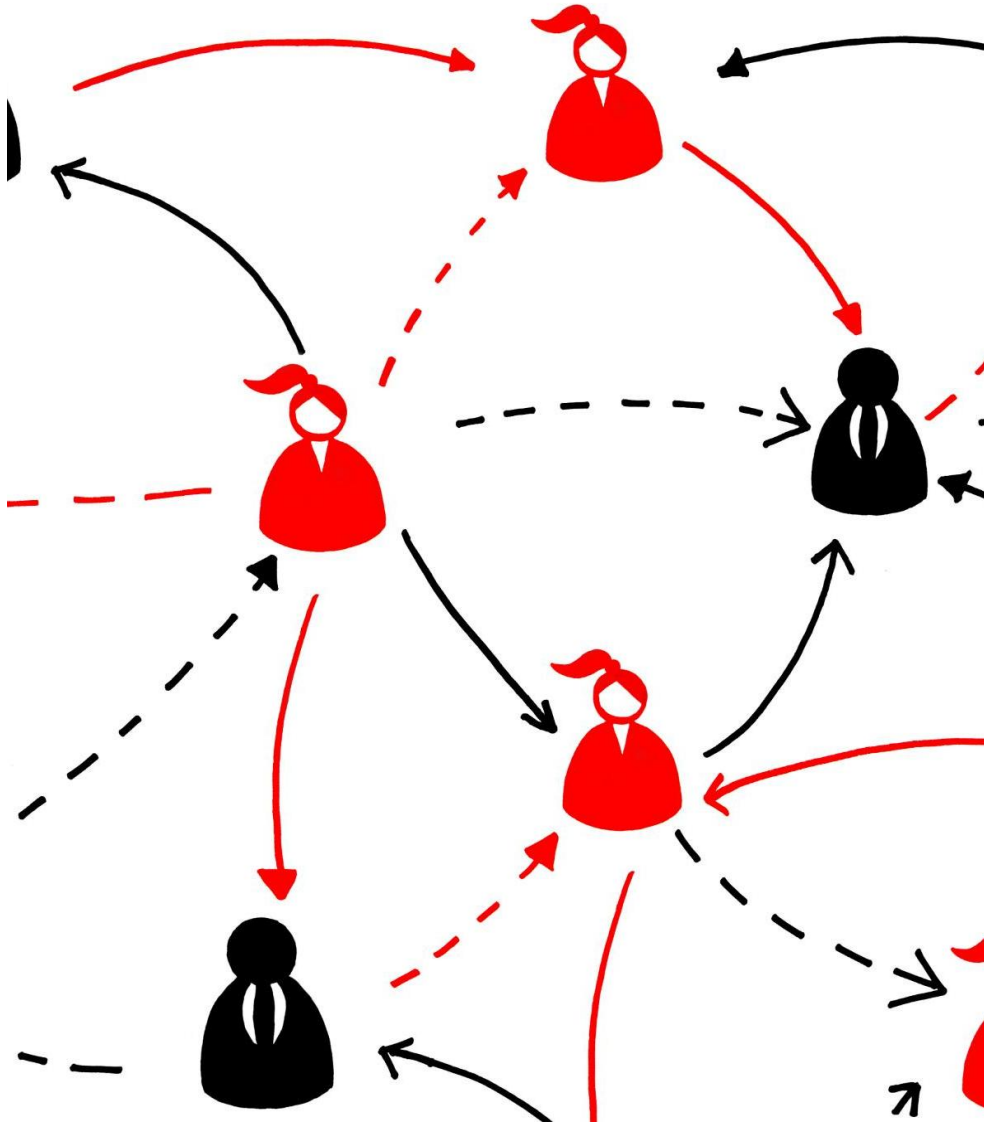
Decision Tree: Flooding/Storms



Decision Tree: Conflict



Best Practices and Recommendations



Effective Assessment Practices

Use trained enumerators and focus on essential information while engaging communities early to avoid raising expectations.

Coordination and Community Buy-In

Coordinate with local authorities and leaders to avoid duplication and secure community support for assessments.

Inclusive Targeting and Priorities

Prioritize vulnerable populations inclusively and align assessments with humanitarian principles like disability inclusion and accessibility.

Standardization and Capacity Building

Standardize tools and indicators, invest in local capacity, share findings transparently, and document lessons learned.

Classify damage for action, not safety labels



Myanmar earthquake - Repairing What Remains: Smarter Shelter Solutions After

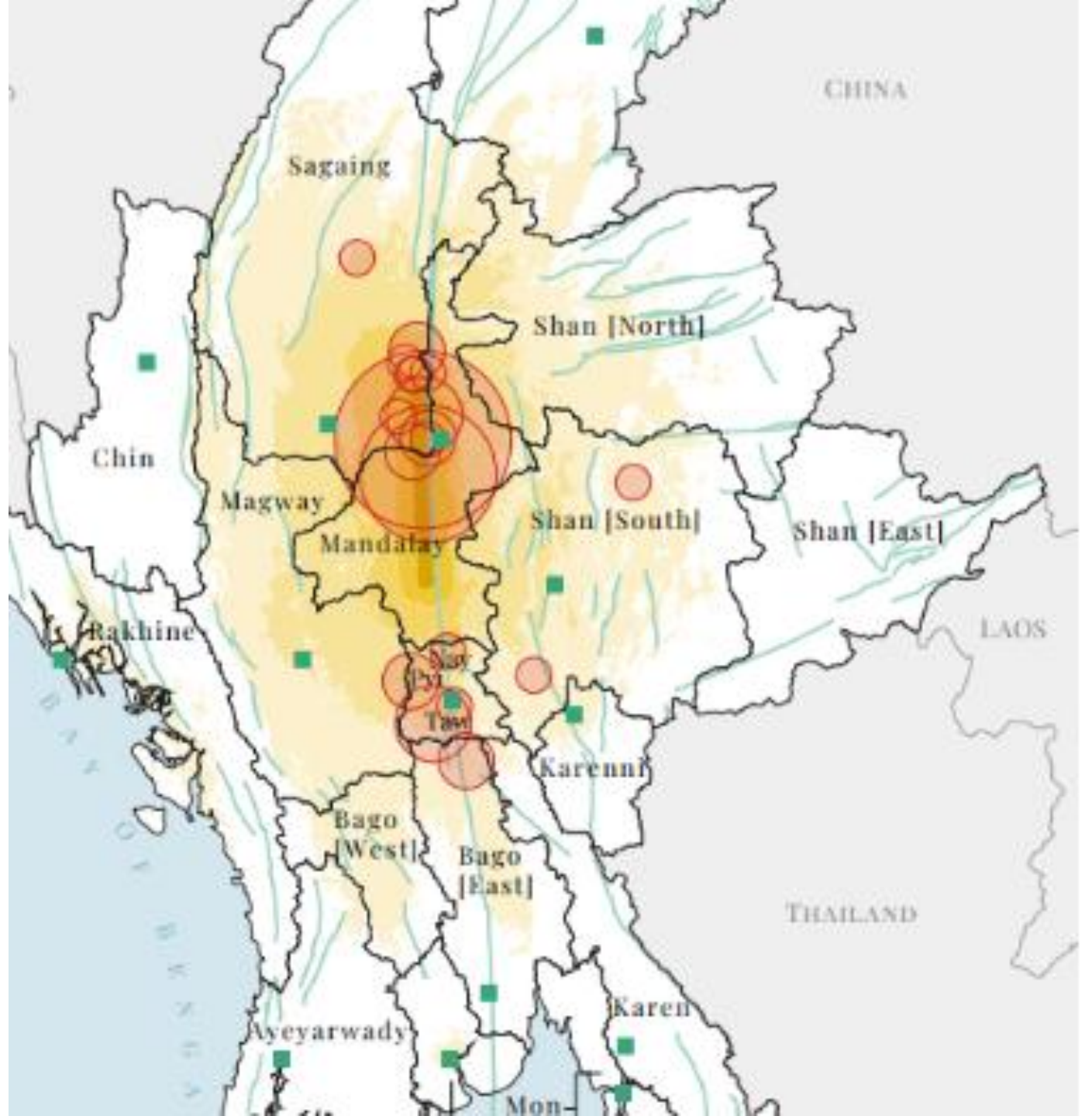
NRC – NORWEGIAN REFUGEE COUNCIL



Gareth Lewis
Shelter/WASH
Specialist

Myanmar earthquake

- Early 2025
- 7.7 magnitude
- Central area





	Syria	Myanmar
Select neighbourhoods	NRC	NRC
Assess buildings (+ HLP DD	NRC	Miyamoto
Repair drawings (standard details) and generate BOQs	Miyamoto	Miyamoto
Cash distribution	NRC	MEET
Supervision visits	NRC	MEET

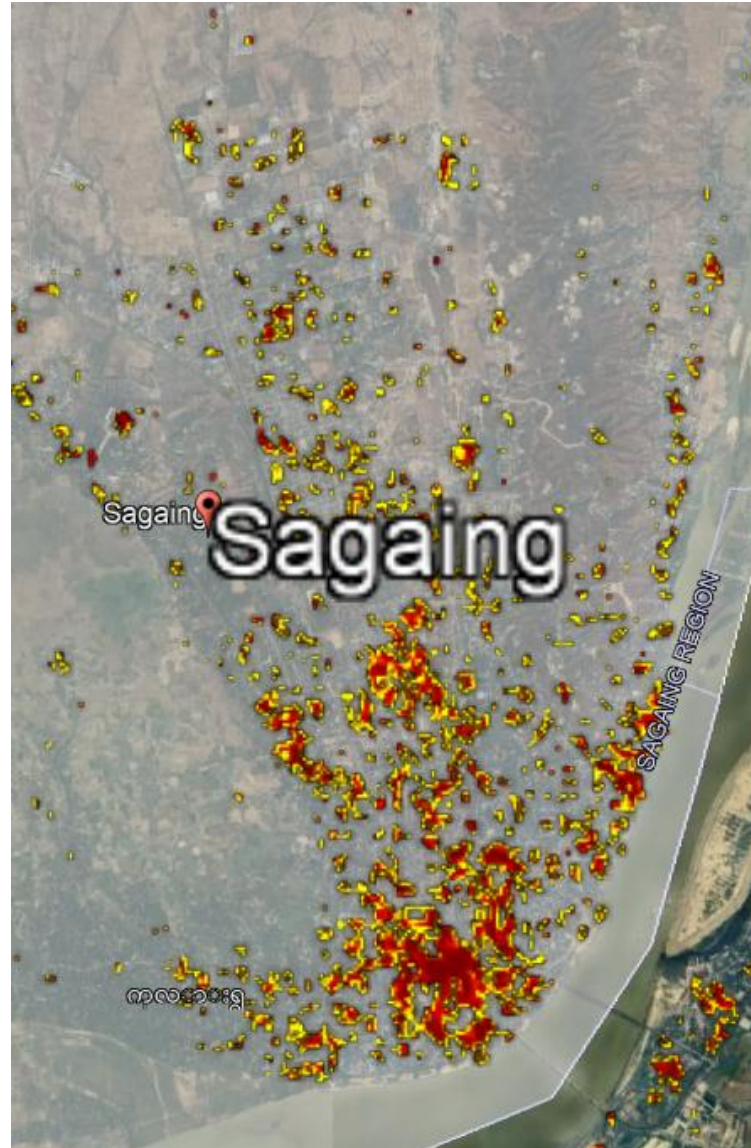
Assessments

Satellite

- Visual/Ground acceleration/Vertical ground displacement

Ground-truth/Reality

- MEC 15min rapid assessments in-person
- UN-asign?



Damage types

- 90% Masonry/brick nogging buildings
- Partial or full wall replacement with RC beams at mid-height and mesh-reinforced plaster
- Some Confined masonry or timber
- Max \$50 paint, no minor crack repair
- Average cost MMK2.2m = \$550, max = MMK5.6m = \$1400 (MPCA = \$100)



[EasyRetro board link for
Q&A and comments](#)



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**Technical Community of Practice
Damage Assessment T.Sub-CoP**

PLENARY DISCUSSION Q&A TO PANELLIST

Questions & Answers,
suggestions, comments

NEXT STEPS & REMINDER

NEXT STEPS

- **Next webinar in December 2025 or January 2026**
 - Collect member's interest to present and selection related to the sub-topics priorities

- **Resources**
 - Collect tools and resources from DA T.S-CoP the members
 - Publish the curated resources on the Technical Toolkit

If interested to present or share Damage Assessment tools, please send an email to pascal.panosetti@ifrc.org

Survey Experts Pools and links

1. If interested, please complete the survey :

 [Survey for Technical Expert Pool for Palestine & Ukraine and other countries](https://forms.office.com/e/1hYhpdqvvs)
<https://forms.office.com/e/1hYhpdqvvs>

 **Deadline: Friday, 24 October 2025**

 **Estimated Time: Max. 10 minutes**

2. D.A. T.S-CoP important links :

- [Technical Community of Practice](#)
 - [Damage Assessment - T.Sub-CoP.](#)
- [Technical Toolkit](#)
 - [Damage Assessment Resources.](#)
- [ToR Damage Assessment Technical Sub-CoP - V1](#)

Technical CoP registration

BEST OPTION :
by creating a GSC
account

- Subscribe to the Technical CoP to receive **automatic** notifications, when new **Documents, Discussions, Events** and **News** are published.



[Technical CoP webpage](#)

without and account
not recommended !!

You can also follow also of the [Technical Toolkit](#) > Click 'Follow' on the left-hand side of the page

In group Global Shelter Cluster

Technical Community of Practice

Subscribe to **notifications** about this community of practice by creating an account or logging in (recommended).

Sign up or log in

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Panosetti Pascal

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Damage Assessment Sub-CoP

Technical CoP page (webinars/comm.)

Technical Community of Practice

[Technical CoP webpage](#)

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DAMAGE ASSESSMENT - T.SUB-COP

PARENT PAGE

- [Webinars Technical CoP](#)

All recorded meetings and webinars concerning **Damage Assessment** will be published on this page including the HNPW 2025 session : Striking the right balance: Rapid vs. Detailed Damage Assessments for Effective Shelter Programming.

Note: viewing the recording on YouTube allows you to select the chapters of the session.

All resources concerning this theme can be found on the [Technical Toolkit](#) page on the left menu.

Damage Assessment Technical Sub-CoP committee :

Pascal Panosetti - IFRC/GSC - pascal.panosetti@ifrc.org - chair

Regina Wenk - SDC/SHA, Shelter Expert Group - regina.wenk@aarau.ch - co-chair

Arnold Njogu - UNDP - arnold.njogu@undp.org - co-chair

Mamuney Legesse Nigusse - IOM Ethiopia - mnigusse@iom.int - co-chair

Showing 1–2 of 2 documents.



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MEETINGS +

Webinars Technical CoP

- **Damage Assessment - T.Sub-CoP**
- Emergency and Temporary Shelter Technical Specifications - T.Sub-CoP
- NFIs / EHIs technical specifications - T.Sub-CoP
- Durable Permanent Shelter & Housing - T.Sub-CoP
- Construction Good Practices / Build Back Better (BBB) - T.Sub-CoP
- Greener Shelter - T.Sub-CoP
- Fire Safety - T.Sub-CoP
- Hosting Assistance - T.Sub-CoP

TECHNICAL TOOLKIT +

- Technical Toolkit



HNPW 2025_SESSION REPORT_ STRIKING THE RIGHT BALANCE_ RAPID VS. DETAILED DAMAGE ASSESSMENTS_GSC

25 Mar 2025 · English · Shelter Cluster



HNPW 2025 SESSION PRESENTATION : STRIKING THE RIGHT BALANCE: RAPID VS. DETAILED DAMAGE ASSESSMENTS FOR

25 Mar 2025 · English · Shelter Cluster

Technical Toolkit (resources)



In region Resources and in group Resources

Technical Toolkit [Technical Toolkit webpage](#)

Follow this toolkit

Dashboard

Documents (3)

TECHNICAL THEMES +

- **Damage Assessment Resources**
- Emergency and Temporary Shelter Technical Specification Resources
- Durable Permanent Shelter & Housing (Sustainable Solutions) Resources
- Construction Good Practices / Build Back Better (BBB) Resources
- NFI/EHI Technical Specification Resources
- Greener Shelter Resources
- Fire Safety Resources
- Settlement Planning Resources

ADDITIONAL RESOURCES +

- IEC Compendium
- Technical Resources curated
- Flood technical resources

DAMAGE ASSESSMENT RESOURCES

Documents related to damage assessment


Showing 1–10 of 10 documents.

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EVALUATION DÉTAILLÉE DES DOMMAGES HAÏTI 2020 - MANUEL DE TERRAIN
Resources
1 Aug 2025 · French · Shelter Cluster and Miyamoto International

Technical Support and Design
Assessment, Monitoring, and Evaluati... Technical Guidance



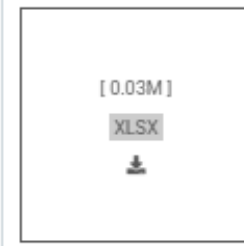
HOUSEHOLD AND BUILDING DAMAGE ASSESSMENT (HBDA) OVERVIEW - 2025
27 Jun 2025 · English · Shelter Cluster UNDP

Technical Support and Design
Assessment, Monitoring, and Evaluati... Technical Guidance




QUESTIONNAIRE HOUSING BUILDING DAMAGE ASSESSMENT (HBDA) - UNDP - VANUATU EARTHQUAKE 2024
1 Jun 2024 · English · Shelter Cluster UNDP

Technical Support and Design
Assessment, Monitoring, and Evaluati... Curated



RDNA STATE QUESTIONS_UKRAINE CABINET OF MINISTERS - 2024
Bangladesh Flash Flood 2022
1 May 2024 · English · Shelter Cluster

Technical Support and Design
Assessment, Monitoring, and Evaluati... Shelter Programming



REMOTE SENSING STRUCTURAL DAMAGE ASSESSMENT TO DETERMINE PROBABLE SHELTER NEEDS IN THE GAZA STRIP - 2024
Palestine
7 Mar 2024 · English · Shelter Cluster and Miyamoto International

Information Management Technical Support and Design



★ SHELTER DAMAGE AND NEEDS ASSESSMENT - FLASH FLOOD 2022
Bangladesh Flash Flood 2022
15 Sep 2022 · English · Shelter Cluster

Technical Support and Design

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DAMAGE ASSESSMENT

THANK YOU



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