The role of KNOWLEDGE to enable SAFER SELF-RECOVERY

Self-recovery + knowledge $\rightarrow$ adoption = hazard-resistant housing!

85%
DO YOU HAVE….

• access to self-recovery **communities**?

• suggestions for the **methodology**?

• interest to be a **co-author**?

• **students** that want to join the research team?
RESEARCH TEAM

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Developing a RESEARCH METHODOLOGY

1. Needs and priority assessment in self-recovery
2. Test effectivity of intervention to support adoption

Increase adoption
The shelter repair or reconstruction process that members of a disaster-affected population, taking full responsibility, independently from humanitarian or governmental shelter assistance.
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Include processes where the affected population is the active decision-maker in how their homes are rebuilt or repaired and are in charge of the process, either building the shelter themselves or procuring local labour to do so. Materials may be provided by third parties.

Excludes:
Projects and processes where external parties select beneficiaries and/or in which beneficiaries provide manual labour to rebuild homes under instruction of other persons leading the project.

85% (Parrack et al. 2014)
Understand KNOWLEDGE NEEDS AND GROUNDS in self-recovery

- Knowledge needs
  - Priorities, limitations in recovery
- Knowledge availability
  - Understanding and awareness of constructive risks
- Knowledge change habits
  - Trusted knowledge networks
HYPOTHESIS – post-disaster recovery is an opportunity for adoption

Adopted from Transitional shelter guidelines (2012)
HYPOTHESIS – knowledge exchange will increase the adoption

Supported by: (Fazey et al. 2014; Cadag & Gaillard 2012).

Simplified Disaster-Knowledge-Matrix (Weichselgartner, Kienberger, Norton, 2015)
Hazard resistant construction knowledge, although available and sometimes actively shared, it is often not applied during self-recovery. There is a lack of insight into where and why adoption of this knowledge is not taking place.
What are the measureable **fail and success factors and actors** of influence on the adoption of **hazard-resistant construction principles**, by construction professionals and non-professionals, **to enable more hazard-resistant housing**, and how can knowledge exchange **interventions** enlarge the adoption?
Enable ADOPTION through EFFECTIVE KNOWLEDGE EXCHANGE
RESEARCH OUTCOMES

Self-recovery process
1. Develop and provide a **methodology for a knowledge assessment** to map knowledge based needs in self-recovery, in two steps of field research.
2. Give insight into the **knowledge needs** during self-recovery by analysing results from a baseline assessment in the Philippines and in Nepal and distract **fail and success factors** of influence on adoption.

Intervention
3. Develop and provide a **methodology to test the effectivity** of knowledge based interventions in the field.
4. Give insight into the **effectiveness** of a selected knowledge based **intervention** based on results from field research in Nepal.
CONCEPTUAL FRAMEWORK
• Disaster Knowledge Matrix to analyse knowledge flows and information flow (Spiekerman et al. 2015)
Focus group session from the women in one community in the Philippines

**Selection of communities**

- 6 communities

**Household surveys**

- 220 surveys
- 95% reliability

**Carpenter surveys**

- Almost 100% of the carpenters in the communities

**Key-stakeholder interviews**

- Carpenter school
- Mayor
- MSWD
- NHA
- MDRRM
- NCIP

**Focus groups**

- Men vs. women
- Timeline
- Dream houses
- Priorities

**Observations**

**TEST METHODOLOGY - needs assessment Philippines**
No opportunities to improve own situation

No access to clean drinking water, sanitation or food

Time consuming process and non-hurricane-resistant house

No access to experts, knowledge, money or materials.
Intervention

Survey:
- Needs
- Priorities
- Prior knowledge
- Prior experience
- Prior education
- Motivation
- Trust
- Risk perception
- Access to services

Observations:
- Cognitive barriers

Survey:
- Understanding of concepts
- Compatibility of knowledge
- Trial ability of knowledge
- Perceived positive consequence
- Affordability of concepts
- Agreement with established ideas
- Experimental freedom
- Match with capacities

Observations + Interviews
- Use in practice
- Understanding of concepts
- Adaptation of concepts
- Knowledge sharing

Observations + Interviews
- Use in practice by community members
- Understanding of concepts by community members
- Observable changes
In Nicaragua with Bambu Social and Stichting Samenscholen

In the Netherlands and Senegal with the Luxembourg Red Cross and WRG

In Malaysia with UPM Malaysia
DO YOU HAVE….

- access to self-recovery **communities**?
- suggestions for the **methodology**?
  - focus groups
  - survey questions
  - structural assessment
  - intervention design
- interest to be a **co-author**?
  - Promising interventions for adoption
- **students** that want to join the research team?