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Divergent Thinking In Disaster: Examples from Typhoon Haiyan Survivors

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NOTES FROM “DIVERGENT THINKING IN DISASTER: EXAMPLES FROM TYPHOON HAIYAN SURVIVORS”

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Abstract

These notes accompanied “Divergent Thinking In Disaster: Examples from Typhoon Haiyan Survivors”, a presentation we gave at Off the Lip 2015 (<https://otlip15.cognovo.eu>) at Plymouth University, UK. Off the Lip 2015 was organized by CogNovo, a multidisciplinary doctoral training programme based at Plymouth University. The presentation slides are included in this document.

At CogNovo, much of the behavioural and experimental research we do around creativity and cognition generally involves (for methodological reasons) relatively low stakes, in controlled settings, and within certain timescales. There are notable exceptions, including Kathryn Francis’ work on moral decision-making (Francis et al., 2016) and Michael Kristensen’s work on alarm fatigue (Kristensen, Edworthy, & Özcan, 2016).

However, the premises upon which humans make basic productive decisions are multiple. They emerge from direct environmental stimuli, social organizational forms and ideological mandates. Disasters provide but one—albeit possibly the most—dramatic and revealing moment in which this process of adaptation to an environment is both manifested and tested in easily observable ways (Oliver-Smith & Hoffman, 1999, pp. 6–7).

We shared some of the ethnographic research on the creative and cognitive work needed to survive the high-stakes, high-stress, and emotionally charged situation of a disaster, in which “divergent thinking” (Sanchez-Ruiz, Pérez-González, Romo, & Matthews, 2015) is more than a cognitive process: it becomes a survival skill. A disaster is a process or event combining a potentially destructive agent/force from the natural, modified or built environment and a population in a socially and economically produced condition of vulnerability, resulting in a perceived disruption of the customary relative satisfactions of individual and social needs for physical survival, social order, and meaning (Oliver-Smith & Hoffman, 1999, p. 4).

Narratives

The presentation centred on a series of narratives based on our experiences of conducting fieldwork in the province of Leyte in the Philippines on December 2013, six weeks after Typhoon Haiyan decimated the Visayas region of one of most typhoon-prone countries in the world (Lapidez et al., 2015).

Narrative 1. On the first day of our site visit, we went to a mass grave that used to be the front yard of a church. As we entered the area, we saw two boys, aged 16 and 11 years old lingering in the shade of a statue of the Risen Christ that looked over the shallow graves. The younger boy stood over a grave, caressing the earth with his hands. Buried in the grave, they said, was their mother. As our group sought to assist them, we asked them about their circumstances.

The boys, Mark and Rodel, had lost their parents in the storm surge. As the floodwater rose outside their devastated house, their father instructed them and their mother to hold onto each

other to avoid being separated by the deluge. Their father was the first to be torn away from their grasp. Mark, the elder son, had been holding on to their dog with one hand while clutching Rodel with the other. Rodel pried the dog away from Mark so they could hang on more tightly together. Eventually, the swirling water also claimed their mother. Rodel recalls the anguish of losing his parents to the flood:

“Our house was uprooted by the wind and we fell into the water. My father said we should all hold onto each other, but the water took him first. My brother held our dog in one arm. I made him let go of the dog so he could hold me with both arms. *And then I saw our mother drowning. I couldn’t understand why I was watching her drown from above. The water that sucked her away was black and churning, filled with drowning and dead people and animals and debris.* That was the last I saw of my mother. I lost consciousness. When my brother and I woke up, our bodies were hanging on a branch of a fallen acacia tree.”

Later during the visit neighbors told us that the boys had never managed to find their mother’s body. Rather we were told Mark and Rodel chose to bury an unclaimed female corpse instead in lieu of not being able to go through funeral rites at all.

Narrative 2. Elena and her husband Mike qualified for government housing adjacent to a stretch of beach in Leyte. When they first saw their assigned bungalow they were appalled by its quality. They felt the walls were too thin and the joint were too weak. ‘Even a ten year old with a hammer can hack through the house,’ Elena said. Unlike most of their neighbors, who moved into the housing units with little or no changes, Elena and Mike decided to have the original bungalow demolished and built a better-quality two-story house.

When the storm surges of Yolanda inundated their coastal neighborhood, Elena and Mike’s house were one of the few left standing. The couple said the water had submerged the bungalows around them, and neighbors floundered around their house desperate to get to higher ground. They mentioned the family were in the mezzanine frantically thinking of ways to save their neighbours below, while simultaneously running around the second floor to avoid the gusts of wind that shattered the glass of their windows towards the inside of the house. We asked Elena: While the typhoon was in progress what was the most important decision you had to make? “Which curtain could turned into a rope to save the neighbours,” she said. Eventually they managed to pull curtains that covered their two-storey windows, which were long enough to haul their neighbors onto their mezzanine.

Narrative 3. Josefa, her husband Senen, and her eight children and grandchildren had been inside their house monitoring the progress of the typhoon when she thought of opening the door. She wanted to check on the flood level to see whether the family should already start evacuating to higher ground. As soon as she opened the door the flood entered the house, and she and her family instantly found themselves in rapidly rising water. Josefa noted that their only chance of survival was to climb through a narrow opening in the ceiling so they could get onto the roof. However, with no stairs or ladder getting to the opening was a challenge. She said they spotted the TV stand and noted that it could be used as an improvised stepladder to get themselves to the top. Josefa’s family members inside the house all managed to escape to safety.

Narrative 4. On the day of the Typhoon, a couple stood on the roof of their house to escape the storm surge that had en-

gulfed their barangay. The surge had claimed the wife's aunt just a few minutes beforehand. Even though she had no visibility the couple knew in their minds that a three-story structure - an unfinished building - was only a few meters away. They were in the midst of a dilemma: Stay on the roof and drown for sure in the event of another storm surge, or make their way through the existing flood towards the higher structure but also risk drowning on the way there. In the end, they took their chances and grabbed an electric wire that they knew would lead them to the building. Without the storm surge, the wires would be as high as a two-storey house. However the water level on that day was so high they floated as they tried to grab wires. The wife recounts, "It was all white, my husband and I couldn't see anything, just the person in front of you. The wind sounded like a woman screaming. We couldn't hear much either. We just followed the Meralco wire until we reached a high-level house so we wouldn't float away."

Narrative 5. Our research also covered decision-making processes among homeowners who refused to evacuate even on the day of the Typhoon. The process entails constant reassessment of several dimensions of experience: wind status and particularly water level in relation to body parts as well as parts of the house and structural integrity. Homeowners first assess the condition of their walls and roofs, followed by monitoring the rise of water levels. Rapidly rising water levels prompt them to decide whether they need to move to higher floors. Those who do not have second floors evacuate only when the water is at chest level. Those who do have second floors refuse to evacuate if the male homeowner built the house himself and is confident of his skills as a construction worker. This is because he might perceive the act of evacuation as an admission that he failed in protecting his family. This basis for non-evacuation might also be compounded by other beliefs, including the belief that God alone chooses how and when people die, therefore preparation will not likely change the outcome.

Rethinking creativity

Earlier in the conference, Sue Denham mentioned some of the themes that have emerged in our quest to construct a holistic framework for Cognitive Innovation. Many of these play a central role in thinking and action during a disaster, including the idea of decisive and Eureka moments (which Jacqui Knight and Frank Loesche are studying) and, in particular, divergent thinking. How do we square this against the stark realities of the narratives we encountered?

Reading creativity forwards rather than backwards. "Rather than reading creativity 'backwards' from a finished object to an initial intention in the mind of an agent, this entails reading it forwards, in an ongoing generative moment that is at one itinerant, improvisatory, and rhythmic." (Ingold, 2010b) "To improvise is to follow the ways of the world as they unfold, rather than to connect up, in reverse, a series of points already traversed" (Ingold, 2010a, p. 10).

Being alive is being an artist. "The role of an artist is not to reproduce a preconceived idea, novel or not, but to join with and follow the forces and flows of materials that bring the form of the work into being." (Klee, in Ingold, 2010b, p. 97) "The artist - also an artisan - is an itinerant, and his work is consubstantial with the trajectory of his or her own life." (Ingold, 2010a, p. 10)

Design "is a practice of material and immaterial making, but its mode of being-in-the-world is generative, speculative, and

transformational" in which the designer "uses the present - and uses it often imperfectly - as provisional leaping off point for reimagining futures" (Hunt, 2011, p. 35). But what happens when the future is only seconds away? What the narratives we recounted suggest is that in those moments, the physical world reveals itself to be a series of physical "affordances" (Gibson, 1979): for climbing, grasping, following, pulling. Embodied knowledge was particularly critical to designing/improvising life-saving solutions in situations when there were only seconds to spare.

Conclusion

In closing, we noted that there are many other aspects about our work in Typhoon Haiyan that we could have talked about that might be relevant to this audience, but for which we didn't have time. For instance, another one of the goals of CogNovo is to explore how through a shared interest in cognitive innovation, academia and industry can interpenetrate. Creative collaboration in this instance could productively be seen as what Caroline Gatt and Tim Ingold have called correspondence or improvisation, and suggest that "design is not so much about innovation as about improvisation" (Gatt & Ingold, 2013). As we move towards a future characterized by increasing political, economic, geographic uncertainty and mobility, and as interest in and activity surrounding interdisciplinary collaborations for research creation continues to mount, we see a need to reimagine cognitive innovation as *cognitive improvisation* in order to be able to co-create, design, and survive in the wild.

Acknowledgements

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Slides in succeeding pages

Divergent Thinking In Disaster examples from Typhoon Haiyan survivors



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Off the Lip Conference | 9 September 2015 | Plymouth University



Curiosity
Design Research



Typhoon Yolanda (Haiyan) 8-11-2013



Photo credit : mb.com.ph



“Our house was uprooted by the wind and we fell into the water. My father said we should all hold onto each other, but the water took him first. My brother held our dog in one arm. I made him let go of the dog so he could hold me with both arms.

And then I saw our mother drowning.

I couldn't understand why I was watching her drown from above. The water that sucked her away was black and churning, filled with drowning and dead people and animals and debris.

That was the the last I saw of my mother. I lost consciousness. When my brother and I woke up, our bodies were hanging on a branch of a fallen acacia tree.”

Rodel, survivor, 11 years old

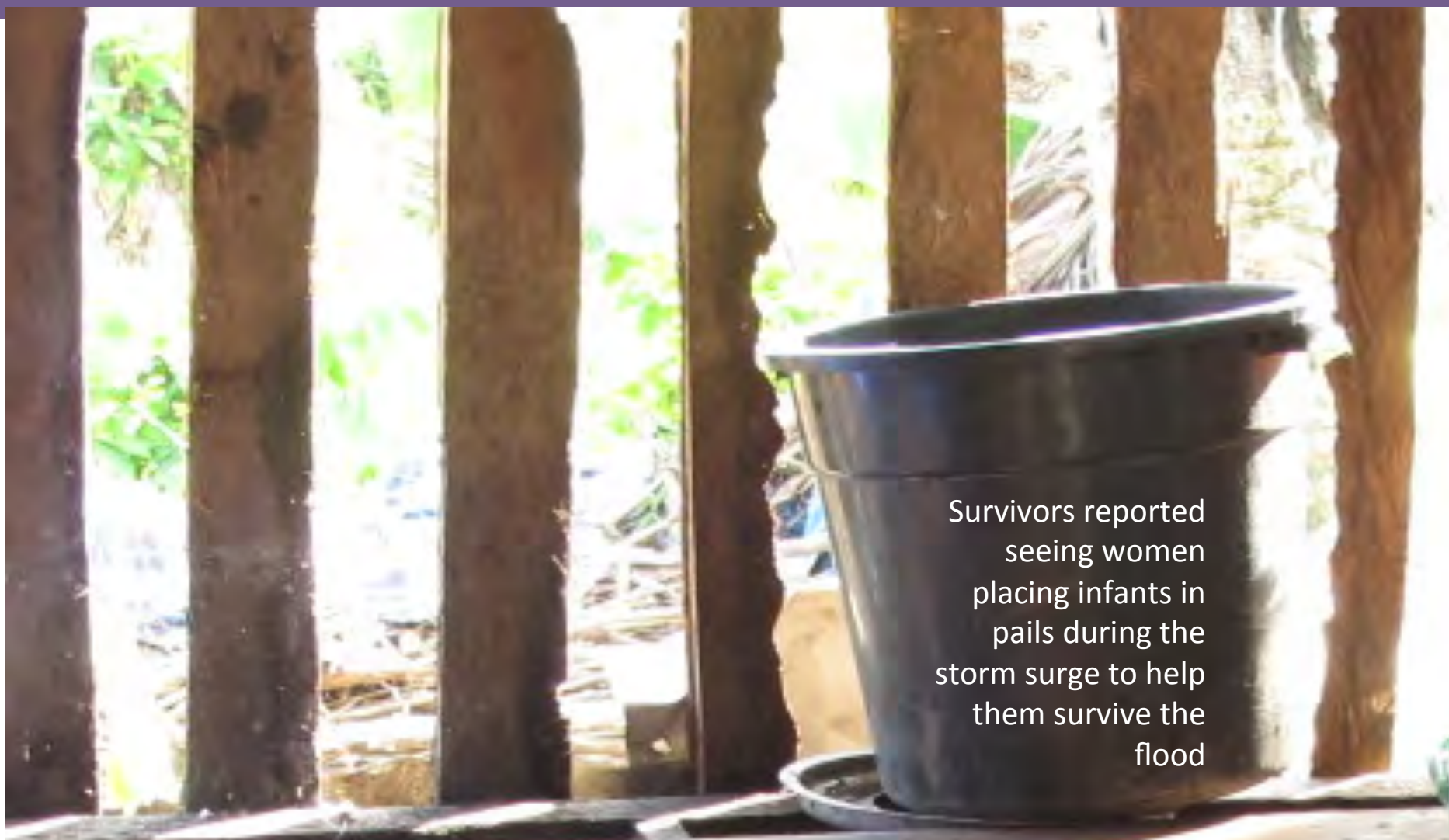
Clotheslines, curtains, electric wires and anything else than could be used as ROPE



Researcher: Ano yung (What was) the biggest decision you had to make during the storm surge?

Survivor: Kung anong kortina ang pwedeng gawing rope para maligtas yung mga kapitbahay [Which curtain could be used as rope to save the neighbors] (Female, 54)

Drums and basins and anything else that could be used as BOATS



Survivors reported seeing women placing infants in pails during the storm surge to help them survive the flood

Refrigerators, water containers, and anything else that could be used as BUOYS



Kitchen sinks, TV Stands, furniture, and things that could be used as PLATFORMS to help people escape to higher ground



Concrete posts, beams, and steel rods that could be used as ANCHORS



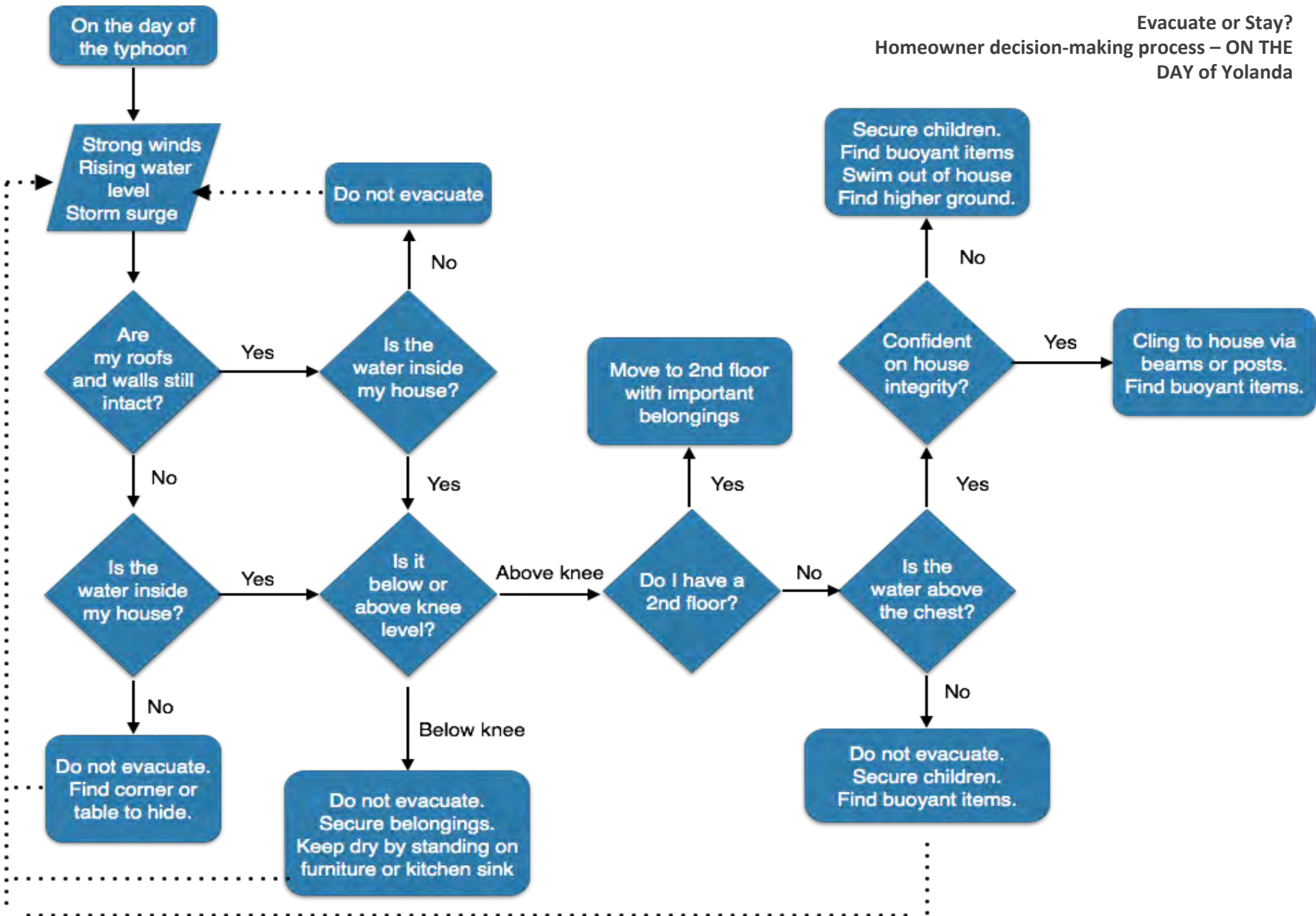
The beams of this house in Baras saved 13 males during the storm surge in Baras who chose not to evacuate to protect their homes



“It was all white, my husband and I couldn’t see anything, just the person in front of you. The wind sounded like a woman screaming. We couldn’t hear much either. **We just followed the Meralco wire until we reached a high-level house so we wouldn’t float away. »**

Female survivor, 25, Baras

Evacuate or Stay?
Homeowner decision-making process – ON THE
DAY of Yolanda



Applying the Findings

PAGPANGITA UG LUGAR (SITE PLANNING)

PAGPALIG-ON (BRACING)

PAGTINDOG HIN MAS MADIG-ON NA BALAY KONTRA KALAMIDAD (BUILDING A STURDIER HOUSE AGAINST CALAMITIES)

PAG-ATOP (ROOFING)

GABLE ROOF

HIP ROOF FIREWALL or PARAPET

PAGSUMPAY (CONNECTIONS)

PAGPUNDASYON (FOUNDATION)

BINTANA (WINDOWS)

Padayon sa Pag-laum

Addressing the Absenteeism of Typhoon Victims (House) and Repair, Relief and Rehabilitation from a Gender and Rights Based Approach

Co-funded by the Department of Social Services and Gender Affairs, Department of Social Services and Gender Affairs, Department of Social Services and Gender Affairs

Co-funded by the Department of Social Services and Gender Affairs, Department of Social Services and Gender Affairs, Department of Social Services and Gender Affairs



Building Better Homes Training for Women Homeowners



**Community Co-Designed and Managed
Evacuation Center**

Thank You.