

Integrating Adaptation Strategies into Post-Disaster Recovery: Lessons from Asia-Pacific Countries



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FACULTY OF ARTS

Te Wānanga Kura Tāngata

Collaborative Research Project **“Climate Change Adaptation in Post-Disaster Recovery Processes: Flood-Affected Communities in Cambodia and Fiji”**

Project Partners

University of Auckland, New Zealand
University of the South Pacific, Fiji
Royal University of Phnom Penh
Ministry of Rural Development, Cambodia
Ministry of Environment, Cambodia
University of Western Australia
University of Sydney, Australia

Funded by the Asia-Pacific Network
for Global Change Research



Ba River Catchment,
Viti Levu, Fiji



Prek Prasob, Kratie
Province, Cambodia

Overall project goal: Determine the various factors that can enhance or constrain resilience and adaptive capacities of **flood-**disaster-affected communities in a changing environment.



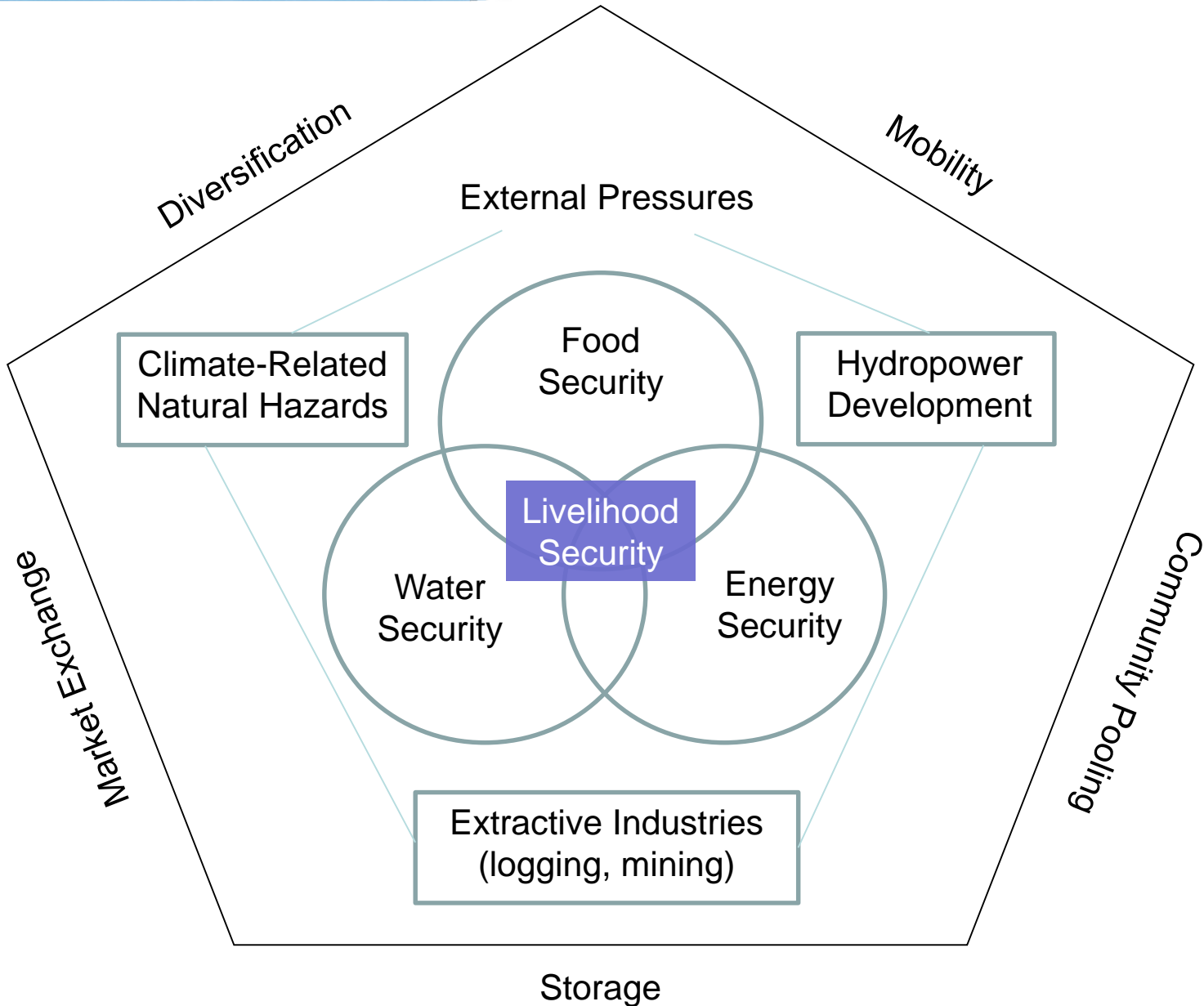
Courtesy of Votua villagers



Courtesy of Action Aid Cambodia



Conceptual Framework



Adaptation Strategies in Post-Disaster Contexts

Mobility	Storage	Communal pooling	Diversification	Market Exchange
Moving homes	Water, food, firewood	Resource & labour pooling	Agricultural diversification	Selling alternative produce
Moving fields	Household items	Infrastructure pooling	Asset and skill diversification	New product exchange
Labour mobility, multi-local livelihoods	Savings (money, livestock)	Information & knowledge pooling	Consumption choices, household diversification	Buying insurance

Source: Adapted from Agrawal and Perrin (2008); expanded with ideas from Lucy Bengue and Carl Middleton

Ba, Fiji

- Unstructured discussions with community members in Votua, Nawaqarua, and Navala
- 55 semi-structured interviews at household level (3 ½ years after 2012 flood)
- 50 individual journals with disaster narratives (5 months after Cyclone Winston 2016)



Kratie, Cambodia

- Unstructured discussions and semi-structured interviews with commune leaders and community members in Phrek Prasob district including Chroy Banthey, Saub, Phrek Prasob, and Koh Tasuy communes
- Participatory hazard mapping in 5 villages
- 13 focus groups using Q-sort methodology



Findings – Cambodia

-3	-2	-1	0	1	2	3
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13 Villagers do not support each other very much during floods and droughts.	8 Some villagers have insurance coverage against disaster events.	11 The government does not need to take any action in our community to manage floods.	2 We do not need to change our sowing and harvesting times to cope with flooding.	1 In the case of flooding we move our farm animals and other valuables to higher ground.	15 The government needs to help us when we suffer from a drought.	16 Following disasters, many villagers seek work outside the village to cope with the losses.
3 During floods, there are more fish to catch which compensates for the crop damage.	4 We have changed our cropping systems to be better adapted to flood events.	6 Many villagers had to move away permanently because of frequent disasters.	14 We will need to grow different kinds of crops to cope with drought events.	7 During the flood, we grow crops in other locations where no flooding occurs.		
	5 Many families have relatives in other locations that can support them during floods and droughts.	13 Our own knowledge and experience is sufficient to cope with floods.	9 Before the flood arrives we store enough food and water in our houses.			
		10 Sharing information with other households is very important during the flood.				

Example: Q-sort with women's group in Thma Reab village

Adaptation Strategies to Floods and Droughts

Strategy

Short-term
mobility

Storage

Mobility/
Diversification

Q-Sort Statements

"In the case of flooding, we move our farm animals and other valuables to higher ground."

"Before the flood arrives, we store enough food and water in our houses."

"Following disasters, many villagers seek work outside the village to cope with the losses."

"The government needs to help us when we suffer from a drought."

Number of focus groups



"Drought is our major concern, as we cannot cope with it by ourselves."
(FGD in Deidos Krom village)

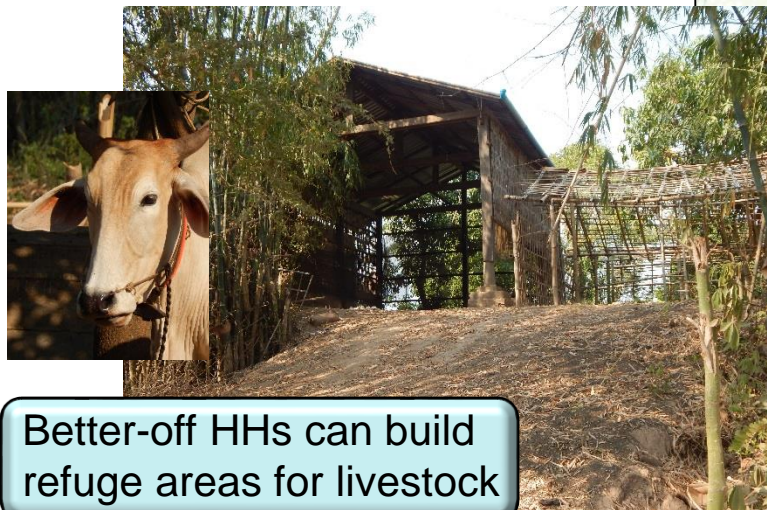
Socio-Economic Differentiation through Disaster Adaptation



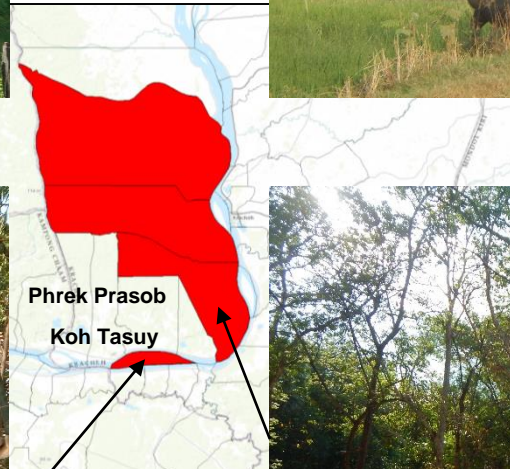
Better-off households can build higher homes



Better-off HHs can buy land elsewhere



Better-off HHs can build refuge areas for livestock

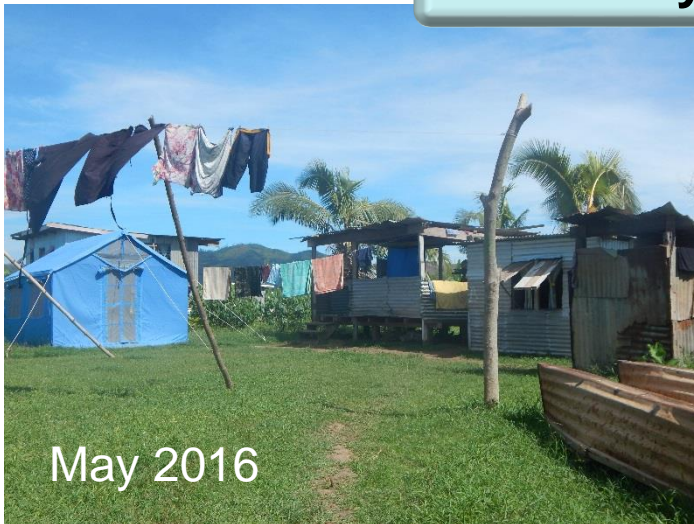


Communal refuge area in Phrek Prasob commune

Votua (Coastal Community) – After the Flood 2012



Recovery and Adaptation



Adaptation to Flood Situations (from individual interviews, Nov 2015)

- Build two-storey houses
- Store food, water and fuel
- Plant more tree crops around the houses (breadfruit, papaya, banana, coconut as post-flood food)



Tree crops
in Cautata

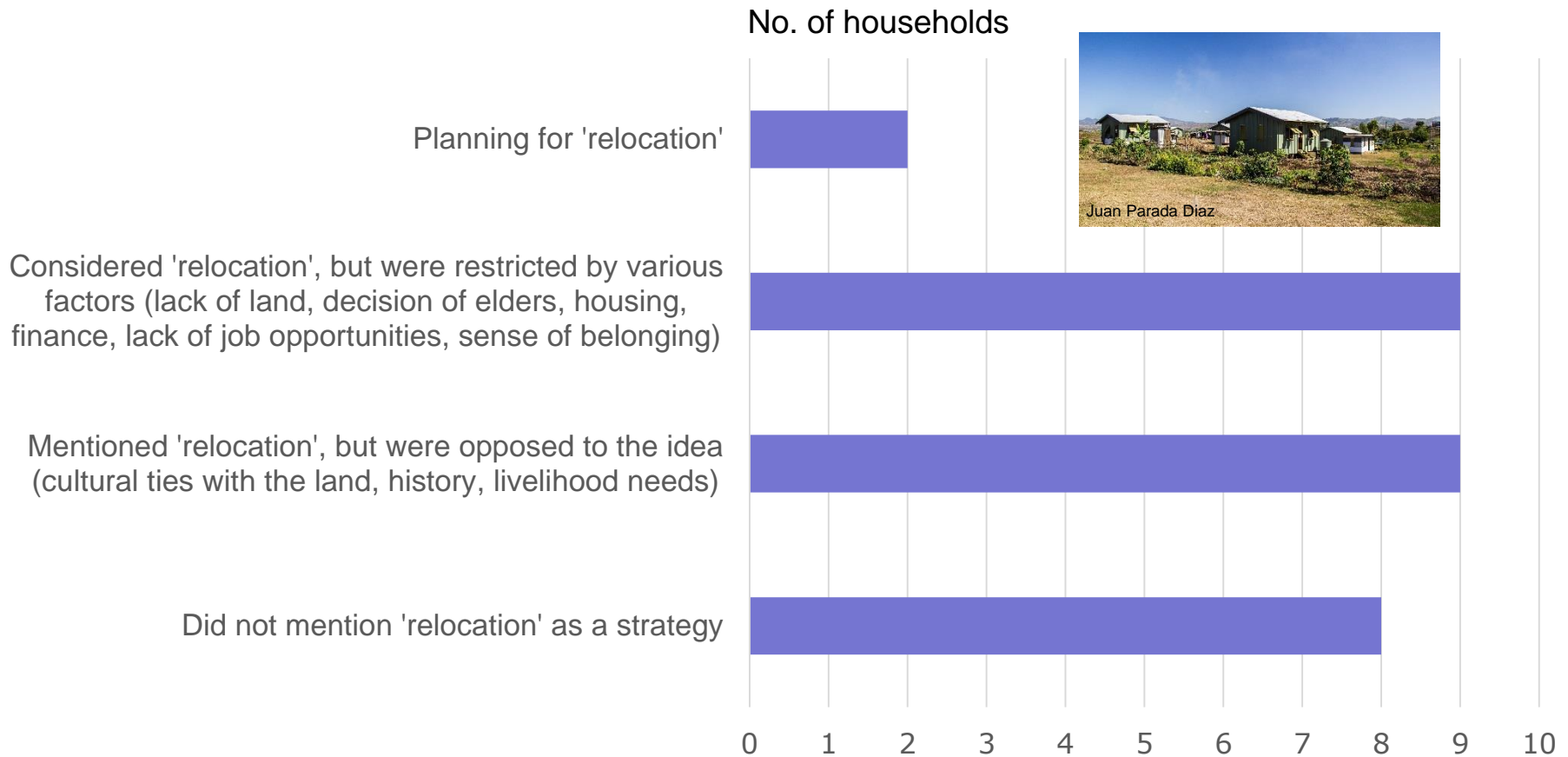
Preparations for the Next Cyclone (from individual journals, July 2016)

- Store food, water and fuel
- Tie the house and roof with ropes
- Cut back all surrounding trees



Tree destroyed by
Cyclone Winston

Relocation as Adaptive Strategy and Matter of Choice?



Data from semi-structured interviews in 28 households in Votua (Nov 2015)

Classifying disaster response and climate adaptation strategies as ‘appropriate’, ‘successful’ or ‘maladaptive’ can be problematic

- ❑ due to the complexity of multi-risk environments and related trade-offs between adaptation strategies;
- ❑ because of diverse and value-based assessments of ‘risk’ (e.g. cultural security and sense of place vs physical security and risk of space);
- ❑ as adaptation of some actors may exacerbate the risks for others (‘risk redistribution’).

Adaptation (or maladaptation or lack of adaptation) does not always mean that the action (or inaction) is taken voluntarily

Need to understand resilience and adaptation relative to a very localised cultural context

Thank you!



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