



THE ROLE OF COMMUNITIES' PERCEPTIONS IN ADAPTATION

An agency approach to understand adaptive capacities related to changes in water availability in El Aguacate micro-watershed (Paz River, El Salvador)

Blanca Liliana Narvaez Marulanda¹, Fabrice Renaud², Zita Sebesvari¹
Contact: marulanda@ehs.unu.edu

¹United Nations University – Institute for Environment and Human Security (UNU-EHS), ²University of Glasgow

BACKGROUND

"If agents systematically **underestimate their own ability to adapt**, this qualifies as a more important **'bottleneck' for adaptation** than the objective physical, institutional or economic constraints"
(Grottmann & Patt, 2005)

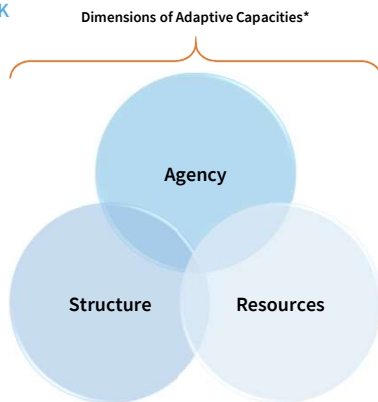
The way communities perceive their own abilities to adapt can represent either obstacles or advantages for adaptation to environmental changes. From this perspective, communities that are able to assess their progress and limitations dealing with adverse impacts of climate variability are more likely to undertake necessary adaptation measures. This research explores the role of communities' perceptions linked to adaptive capacities in a set of small coastal communities in El Salvador where different adaptation strategies, mainly those based on ecosystems (Ecosystem based Adaptation - **EbA**) have been implemented during the last 10 years.

RESEARCH QUESTION

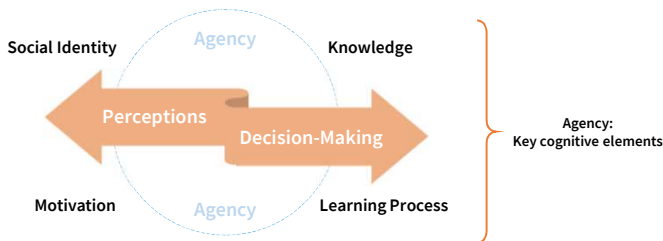
How relevant are the perception of communities of their own adaptive capacities under scenarios of extreme climate variability - such as droughts and floods - that adversely impact their water resources?

CONCEPTUAL FRAMEWORK

Adaptive capacity is defined as "the ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences" (IPCC, 2014; p. 118).



* Considering the definitions of Brown and Westaway, 2011



STUDY AREA

El Salvador – Dry Corridor of Central America
(FAO, 2016)



DATA ANALYSIS

- 21 semi-structured interviews: 16 with community members and 5 with facilitators
- Descriptive coding, analytical coding, and theme building



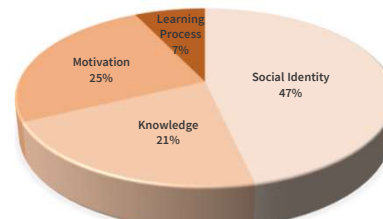
EXAMPLE:

"Right now, the **Micro-watershed Committee** is trying to clean a new channel to allow more fresh water to enter El Aguacate river. This year we have been able to drag a part of the channel but it has not been enough. The water still needs to reach the mangrove area and then the sea" Rancho San Marcos

Adaptive capacity:
"Community based organizations"

Total mentions in the interviews : 28

Social Identity: 13
Knowledge: 6
Motivation: 7
Learning Process: 2



RESULTS

Adaptive capacities related to water availability identified in El Aguacate micro-watershed	Cognitive elements influencing perceptions			
	Social identity	Knowledge	Motivation	Learning process
• Community based organizations	★★★★	★★	★★	★
• Environmental awareness	★	★★★★	★★★★	★★★★
• Willingness to change	★	★★	★★★★	★
• Self-belief, self-efficacy and feeling empowered	★★	★★★★	★★★★	★
• Improving communication skills	★★★★	★★★★	★★★★	★★
• Learning from past experiences	★	★★	★★	★★★★
• Passing the knowledge	★★	★★	★★★★	★★
• Increasing preparedness	★★	★★★★	★★	★★
• Gender inclusion	★★★★	★★★★	★★★★	★★
• Innovative thinking	★	★★★★	★★	★★★★
• Water roundtable discussions	★★★★	★★★★	★★★★	★★★★
• Sustainable water management	★★★★	★★★★	★★★★	★★★★

★★★ Very relevant ★★ Relevant ★ Somewhat relevant

CONCLUSIONS

- An in depth analysis of cognitive elements such as Social identity, Knowledge, Motivation and Learning Process could be useful during the conceptualization and following implementation of adaptive strategies at the local level.
- The knowledge and expertise gained through different adaptation initiatives (mainly EbA), can bring new opportunities to face other developing challenges among the communities.

REFERENCES

Brown, K. and Westaway, E., 2011. Agency, capacity, and resilience to environmental change: lessons from human development, well-being, and disasters. *Annual review of environment and resources*, 36, pp. 321-342.
Grottmann, T. and Patt, A., 2005. Adaptive capacity and human cognition: the process of individual adaptation to climate change. *Global Environmental Change*, 15 (3), pp. 199-213.
IPCC, 2014. Annex II: Glossary [Mach, K. J., S. Planton, and C. von Stechow (Eds.)]. In: *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, Pachauri, R. K. and Meyer, L. A. (Eds.)]. IPCC, Geneva, Switzerland, pp. 117-130.