



Photo Credit: REUTERS/ Andrew Biraj



# How does nature contribute to human mobility and immobility?

A conceptual framework and qualitative analysis

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# Research objectives

What are the **environment-related mechanisms** that contribute to **mobility and immobility** outcomes in different ways?

How can we **conceptualise** these?

- stronger emphasis on the role of socio-cultural factors
- complement knowledge on immobility

# Conceptual framework (1)

## Nature's contributions to people (NCP)



Photo Credit DWJ.Jeffrey

*“all the contributions, both positive and negative, of living nature (diversity of organisms, ecosystems, and their associated ecological and evolutionary processes) to people’s quality of life” (Diaz et al., 2018, p.270)*

- recently developed in the context of **IPBES**
- acknowledging **key role of culture** in defining all nature-society links
- reference to different knowledge and value systems
- **18** reporting categories, distinction between **material, regulating and non-material NCP**

# Conceptual framework (2)

## Migration ability, aspiration and need

- distinction between ‘wanting to migrate’ and ‘actually migrating’
- identification of particularly vulnerable population groups
- influenced by a range of factors at multiple scales
- role of culture in adaptation behaviour, including **place attachment**  
(*‘the emotional bonds which people develop with various places’*, Lewicka, 2011, p.219)



Photo Credit UNDP



Photo Credit Juliana Groth

# Conceptual framework (3)

## Operational definitions

Migration need

(*'must migrate'*) → **vulnerability\***

Migration ability

(*'can migrate'*) → **characteristics/resources**

Migration aspirations

(*'want to migrate'*) → **personal motivation\*\***

\* (composed of exposure, adaptive capacity, sensitivity)

\*\* (influenced by place attachment, risk perception, self-efficacy)

- focus on **individual level** embedded within household dynamics
- **holistic approach** by integrating 'objective' and 'subjective' dimensions
- human agency along a **continuum**

# Study regions:



Photo Credit: The Daily New Nation.



Photo Credit: Juliane Groth.

	Southwestern coastal Bangladesh	Northern Ethiopian highlands
<i>Hazards/stressors</i>	<p>Cyclones, floods</p> <p>Salinization of soils/groundwater</p> <p>Coastal and riverbank erosion</p>	<p>Rainfall variability</p> <p>Droughts</p> <p>Land degradation</p>
<i>Livelihoods</i>	<p>Agriculture, fishing/aquaculture, mangrove resources</p>	<p>Mixed subsistence farming</p>
<i>Contextual factors</i>	<ul style="list-style-type: none"> <li>– High population density, rural poverty, food insecurity</li> <li>– Land scarcity/landlessness</li> <li>– Conservative societal norms</li> <li>– Mobility as common livelihood strategy</li> </ul>	

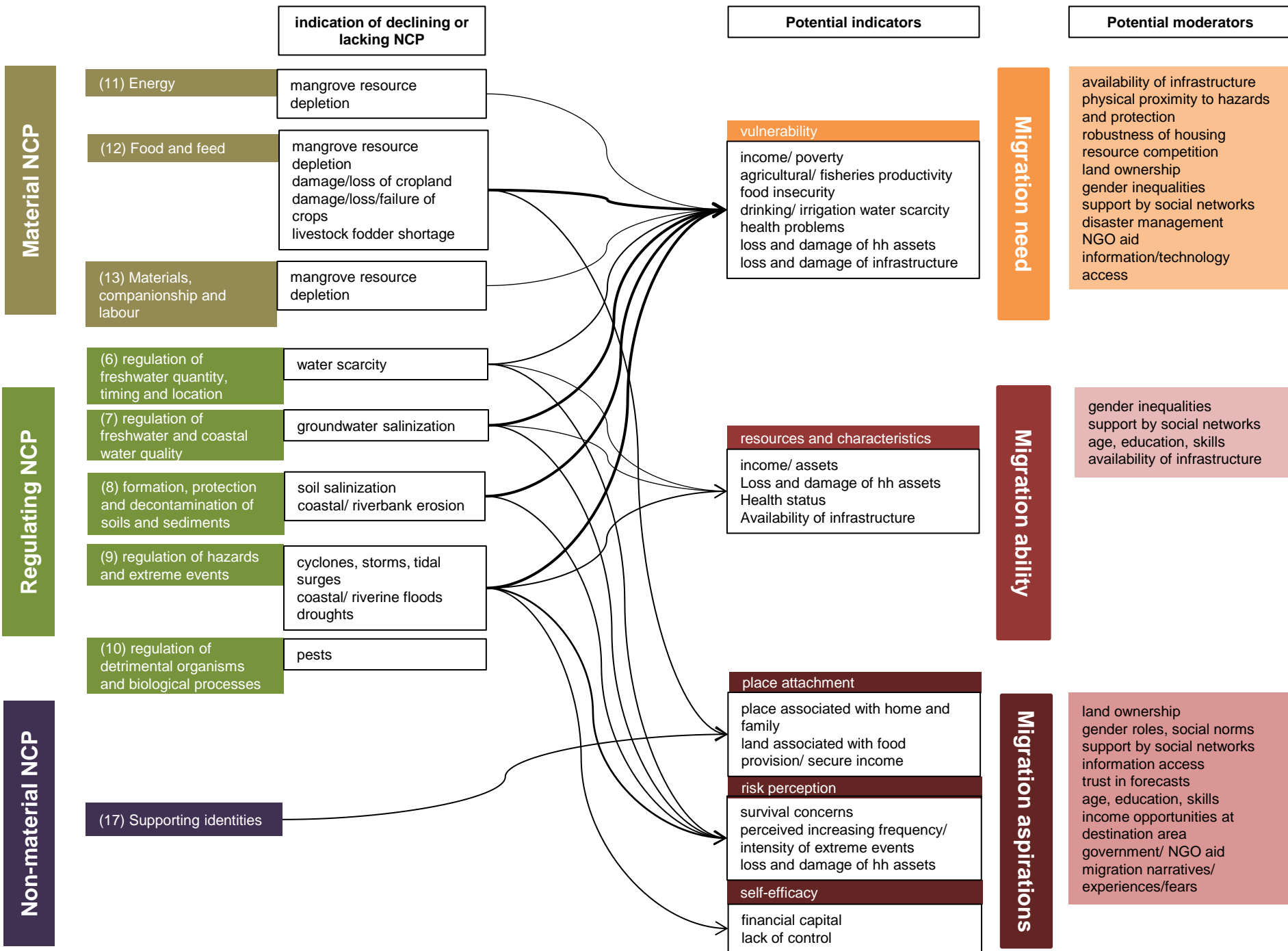
# Approach and data



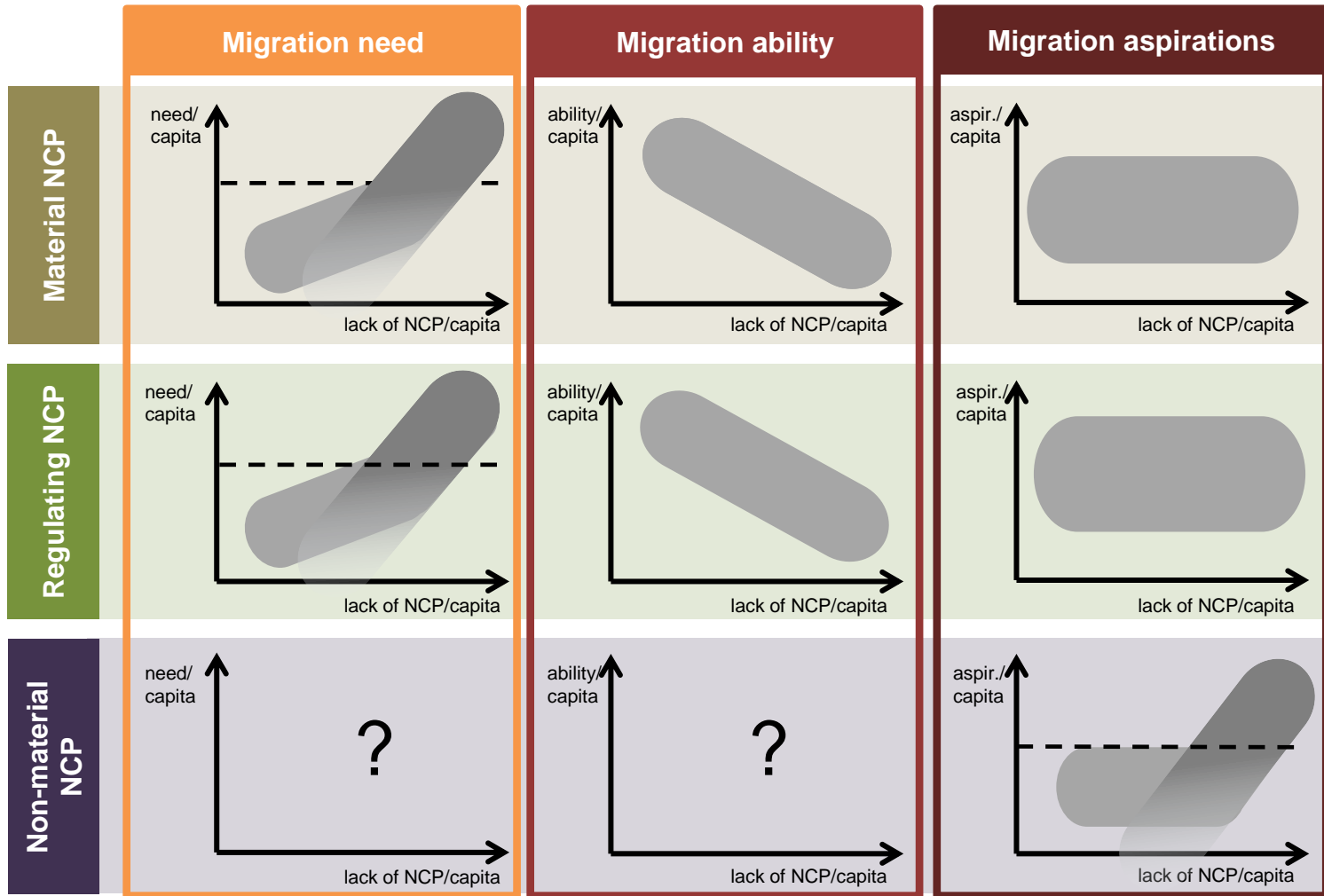
**Qualitative in-depth analysis** of **19** empirical studies from two regions  
→ conceptual framework elements as **‘analytical lens’** for data extraction,  
structuring and first interpretation

Important:

- not claiming mono-causal or direct linkages
- declining/lacking NCP may resulting from e.g. climatic changes or human mismanagement







# Wrap-up and outlook

- most findings on linkages concern **agricultural productivity/ income, food and water provision, health**
- evidence for linkage between **‘supporting identities’ and aspirations**, but little information on non-material NCP in general
- crucial role of **mediating factors**, issue of access and distribution
- suggested framework provides **structured and nuanced perspective**

Thank you for your attention 😊!

# Glossary

## **nature's contributions to people (NCP)**

“all the contributions, both positive and negative, of living nature (diversity of organisms, ecosystems, and their associated ecological and evolutionary processes) to people's quality of life” (Diaz et al., 2018, p.270)

## **material NCP**

“substances, objects, or other material elements from nature that directly sustain people's physical existence and material assets” (Diaz et al., 2018, p. 271)

## **non-material NCP**

“nature's effects on subjective and psychological aspects underpinning people's quality of life, both individually and collectively” (ibid.)

## **regulating NCP**

“functional and structural aspects of organisms and ecosystems that modify environmental conditions experienced by people and/or regulate the generation of material and nonmaterial contributions” (ibid.)

## **mobility**

may refer to individuals, entire households or communities, as well as different distances and time spans.

## **immobility**

more narrowly refers to an entire household remaining at a place.

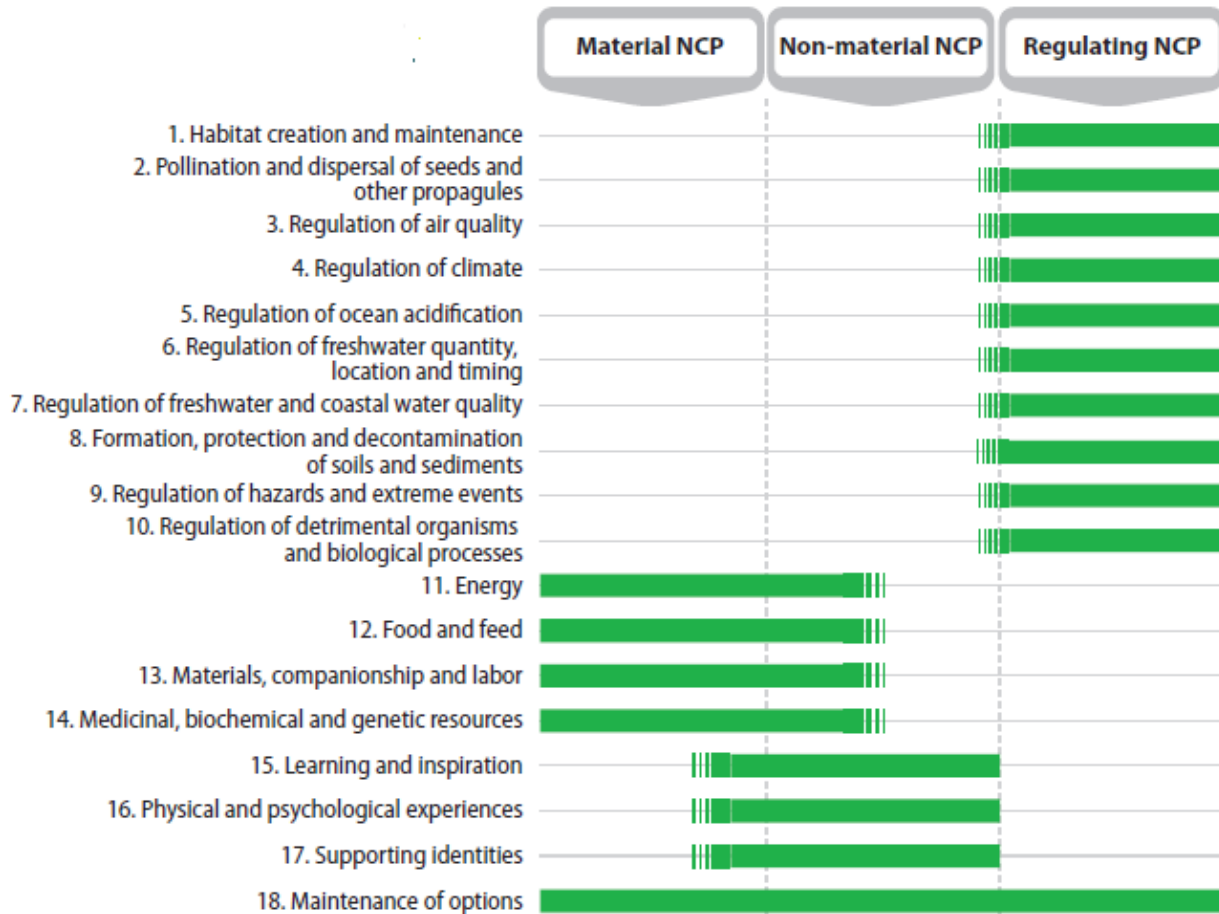
## **culture**

“the symbols that express meaning, including beliefs, rituals, art and stories that create collective outlooks and behaviours, and from which strategies to respond to problems are devised and implemented” (Adger et al., 2013, p.112)

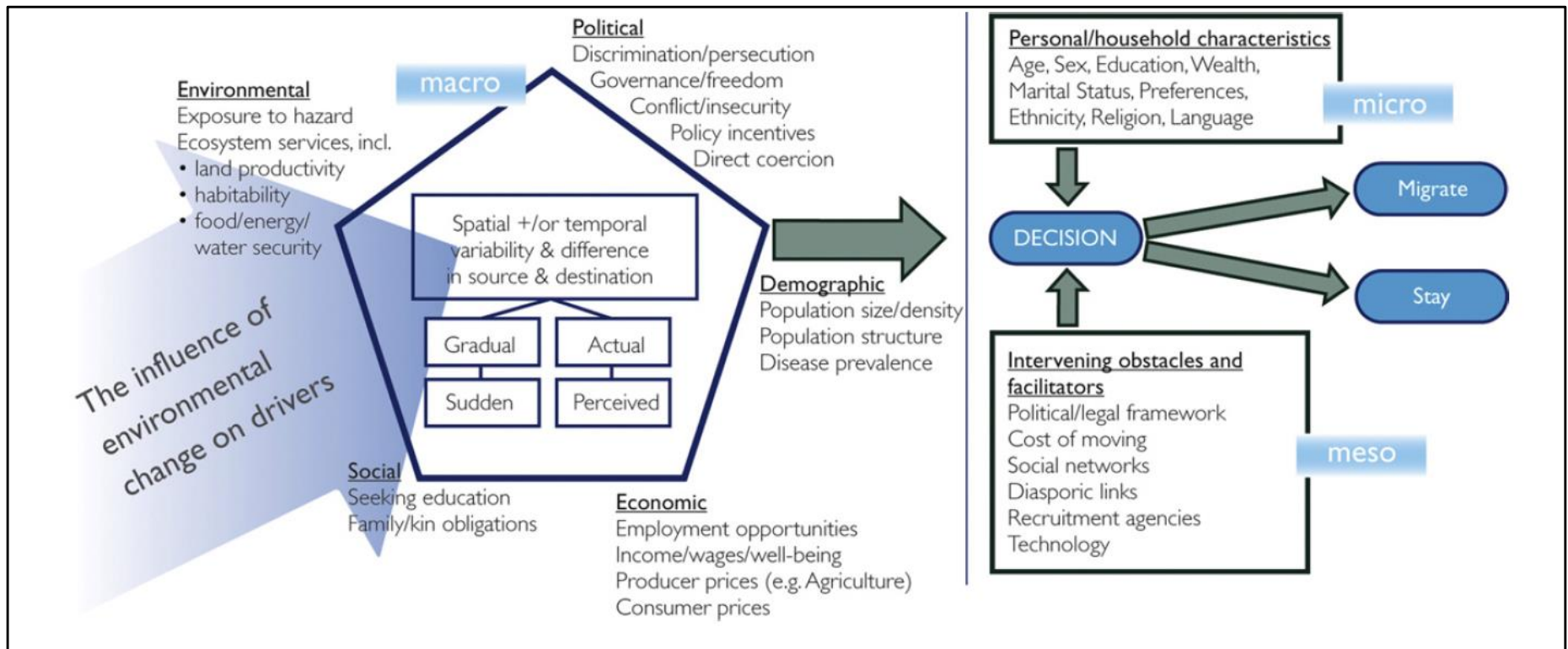
## **place attachment**

“the emotional bonds which people develop with various places” (Lewicka, 2011, p.219)





Source: Diaz et al. (2018)



## Foresight: Migration and Global Environmental Change (2011)

