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TRACK 12-B: VULNERABILITIES, RISKS AND MITIGATION PLANNING

Session 4: Climate Change

***Vulnerability and Adaptive Capacity in Peri-urban Areas:  
Investigating Autonomous Adaptation in Dar es Salaam***



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# Content

## The Context

- **Rapid urbanization** and unplanned settlements
- Vulnerability to **environmental changes** (both related to GEC and local urban development and/or human activities)

## Background Questions and Assumptions

- Conceptualizing vulnerability and adaptive capacity in sub-Saharan cities

## Aim and Scope

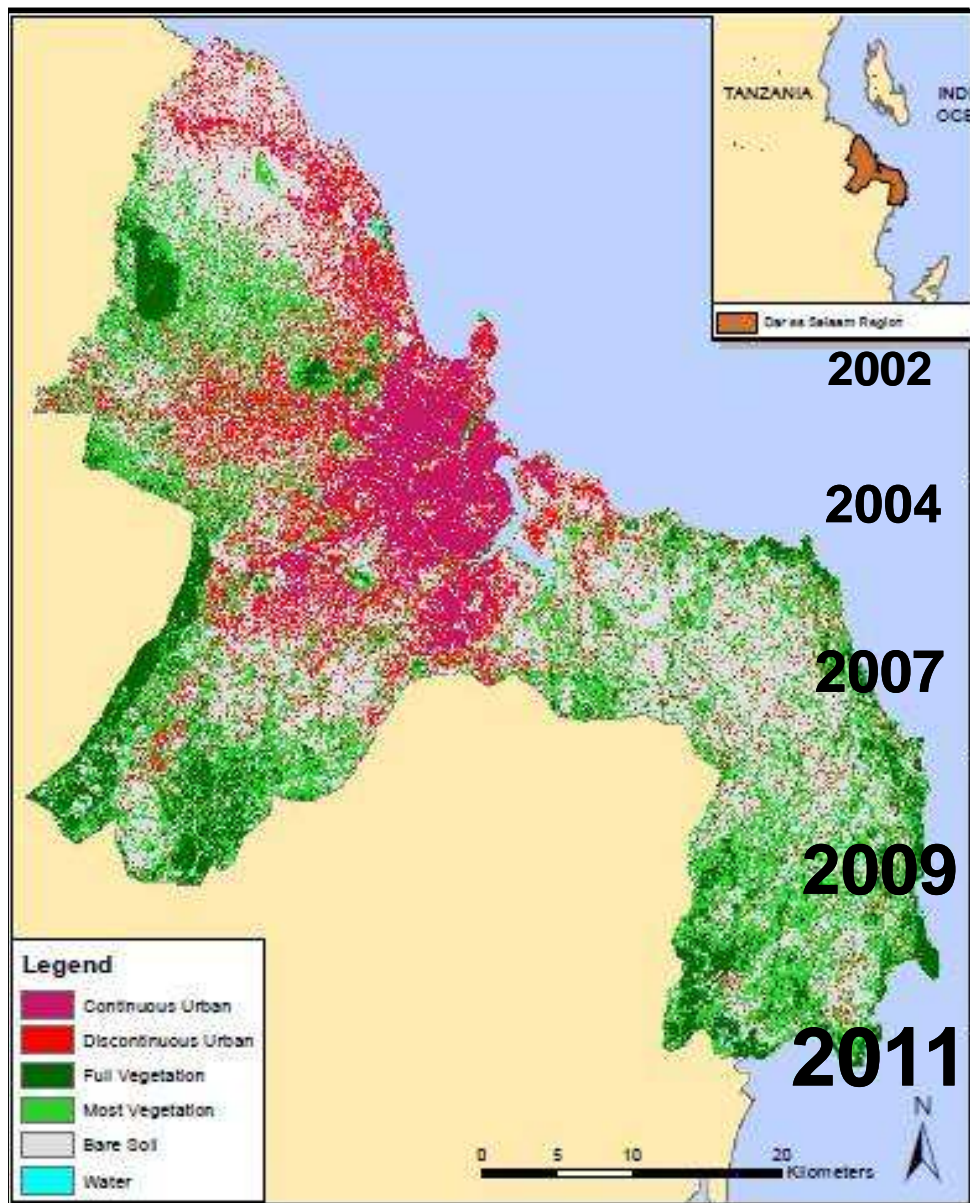
- Investigating Adaptive Capacity and planning: **exploring** the implications of peri-urban livelihoods and adaptation strategies for social vulnerability reduction and feasible adaptation options. Supporting autonomous adaptation to **improve local adaptive capacity** and **mainstreaming adaptation** into local spatial planning and environmental management.

## Results from the Field Work

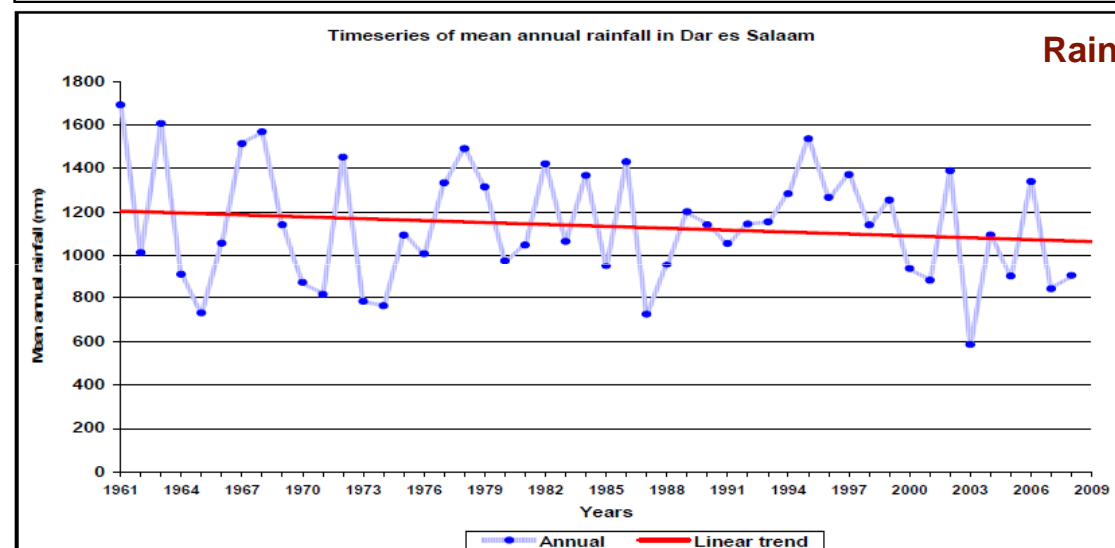
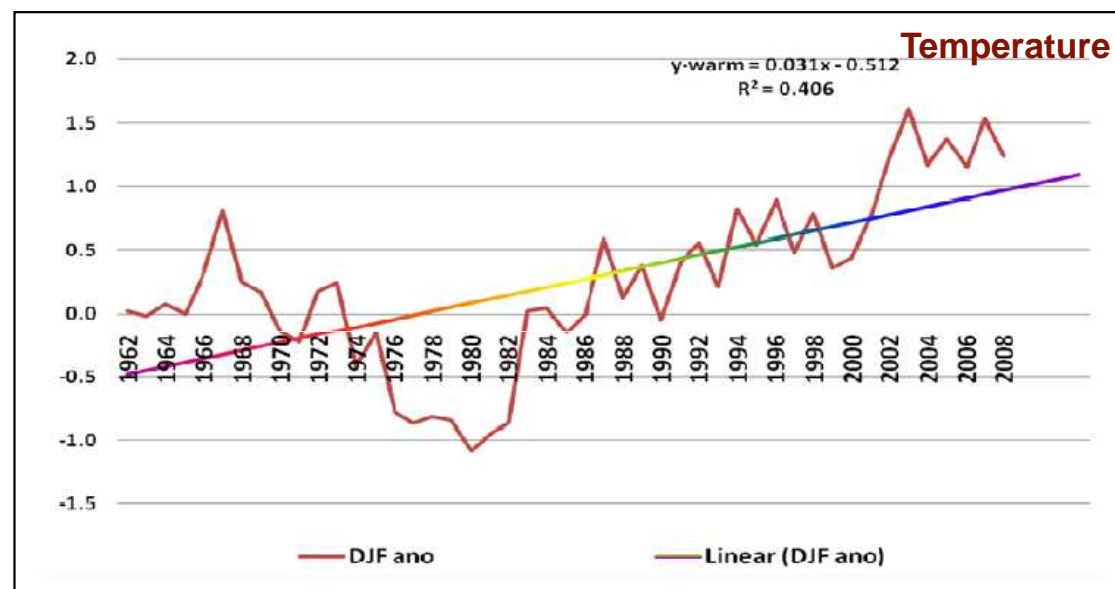
- Evidence on peri-urban livelihood and autonomous adaptation: searching inputs for adaptation options assessment

## Hot Spots for Planning

- Searching feasible paths for adaptation mainstreaming in “informal” and rural-urban “hybrid” environment: linking theoretical framework and evidences from the field



## Urbanization and CC in Dar



Tanzanian Metereological Agency (TMA), 2010

# Background Questions

## Focusing on Peri-urban Areas

- **“Neither Rural nor Urban”**  
(Allen, 2006), 2/3 of Dar, 70-80% unplanned (Kombe, 2005, Kironde 2003)
- **Vulnerable and resourceful**  
(specific factors of adaptive capacity)
- How local institutions can intervene without compromising livelihoods strategies and adaptive capacity?

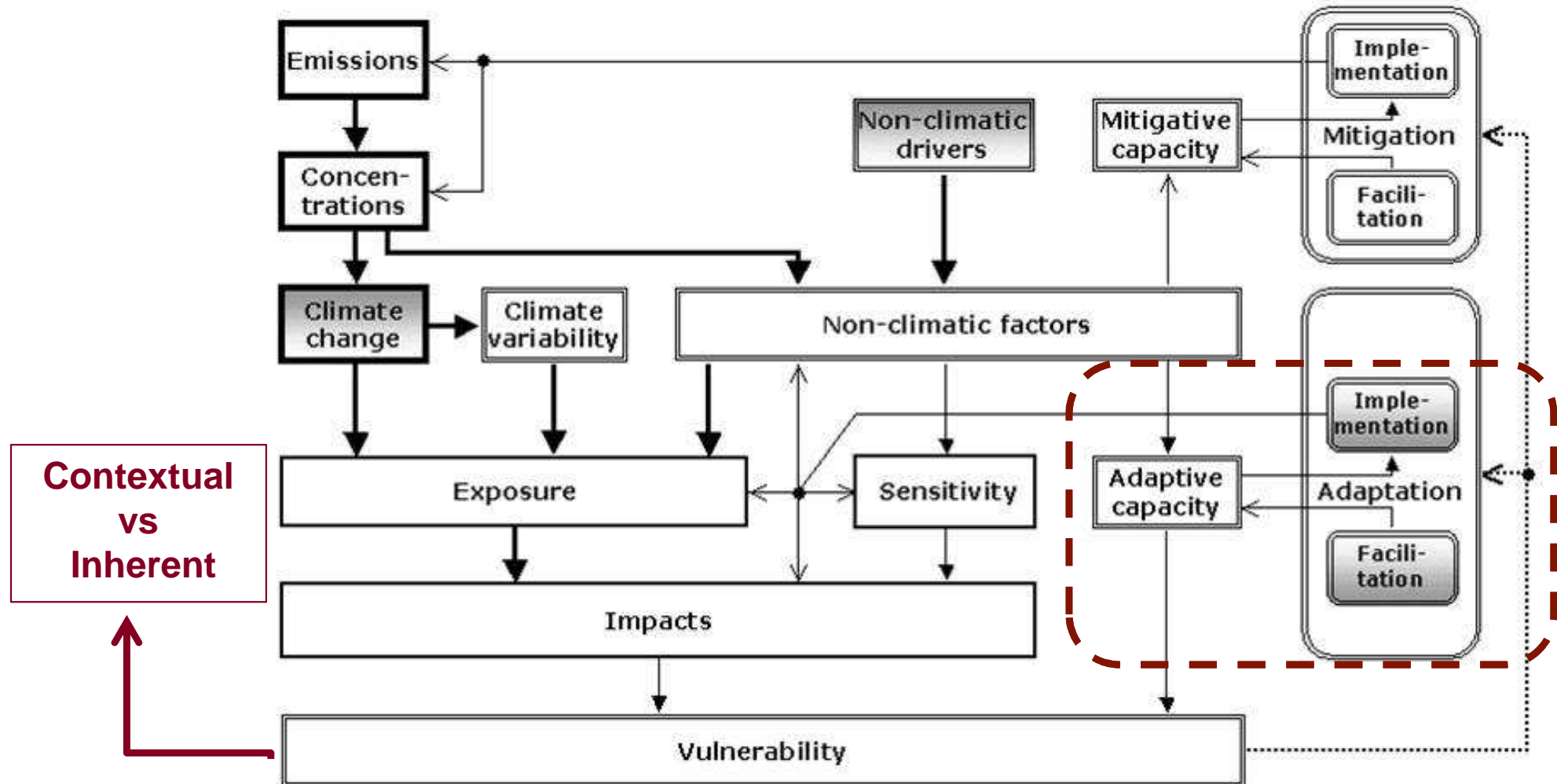
## Focusing on Adaptive Capacity

- **Supporting Autonomous Adaptation**
- Assessing social vulnerability (Adger 1999) and dealing with uncertainty (Adger & Vincent, 2005)
- What are the connections between peri-urban features and autonomous adaptation strategies on which local institutions can intervene to support autonomous adaptation?

# Background Assumptions

- **Contextual Vulnerability** vs inherent vulnerability (O'Brien et al. 2007, Maguire e Cartwright, 2008):
- Departing from **Autonomous Adaptation** strategies and practices: looking at the “ordinary city” (Robinson, 2006), at what is present and not at what is missing [dealing with “asymmetrical ignorance” (Roy 2009; Robinson, 2003; Murray e Mayers, 2006)]
- Planning for **Adaptive Capacity** (Gallopín, 2006; Adger & Vincent, 2005) **enhancement**: supporting and orienting **autonomous adaptation** [While avoiding self -exploitation (Watts et al. 2004) and maladaptation]

# Focusing on Adaptive Capacity: Where we are




(Füssel and Klein 2006)

# Aim and Scope

Exploring the implications of peri-urban livelihoods and autonomous adaptation for social vulnerability reduction and feasible adaptation options identification:

## **Knowledge on households' livelihood and adaptation strategies**

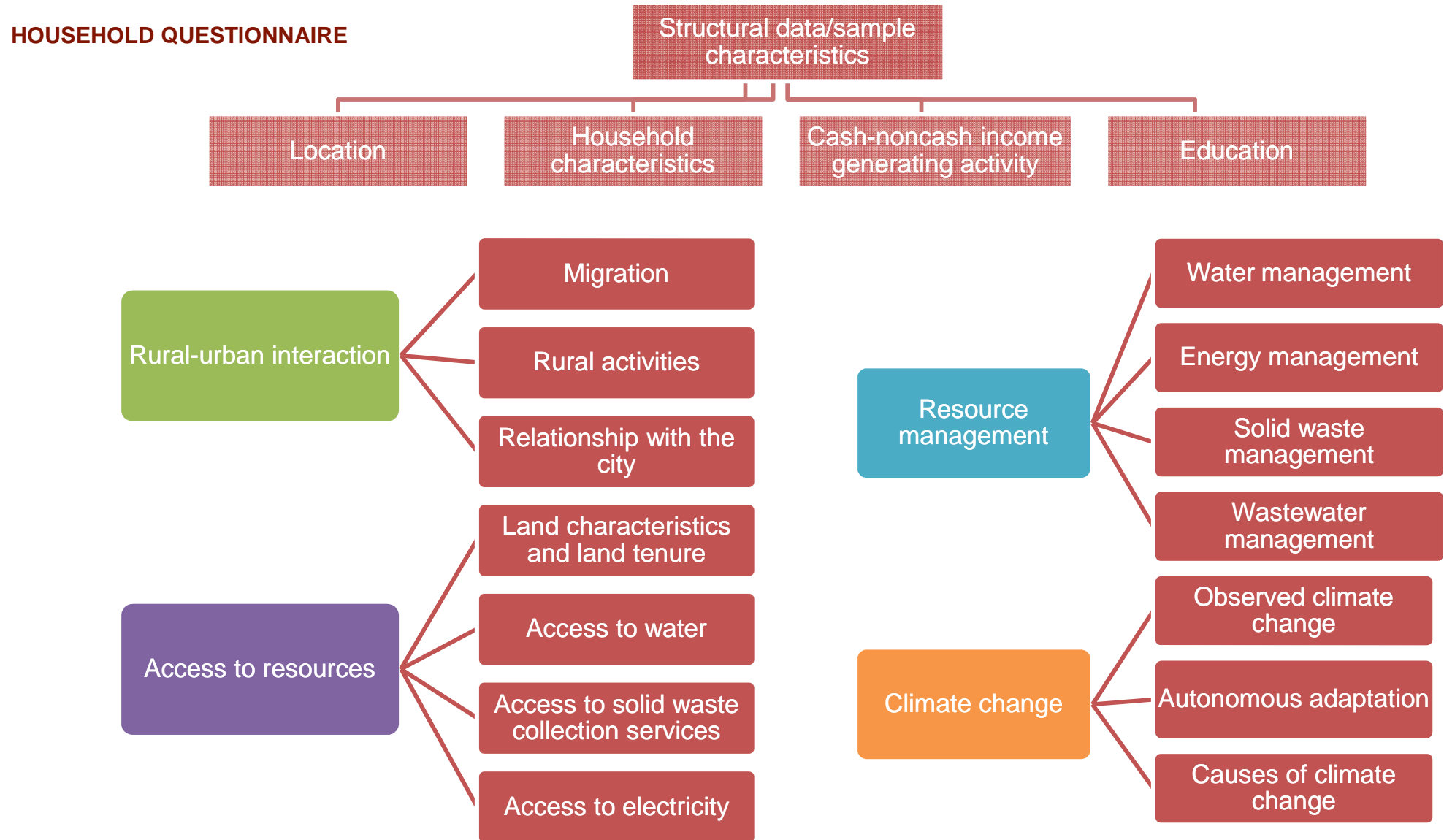
- What natural resources they have access to
  - How they use the natural resources at their disposal
  - What changes in environments they have observed
  - What strategies they have adopted to cope with changes
- 
- Framework for analyzing interactions between peri-urban household characteristics and autonomous adaptation strategies

## **In order to**

Supporting autonomous adaptation, **improving local adaptive capacity and mainstreaming adaptation into local spatial planning and environmental management.**



# Investigating Livelihood and Adaptation Strategies





# Understanding Peri-urban Livelihoods and Dynamics

Accessing Resources and Managing the Environment: Water, Land, Waste, Energy, etc.

Street  
Vendors (20L)



Pipeline



Shallow Pit



Water Tank  
Track



Neighbor  
Source



Community  
source

Well

Rain Water  
Harvesting

# Understanding Autonomous Adaptation

## Adaptation strategies and practices

### Current Adaptation Strategies

- Changes in livelihood strategies
- Changes in modalities of accessing resources
- Changes in environment (e.g. river embankment, house/land)
- Move to another area
- Change type of livelihood strategies

*Diversifying sources of livelihood*



Agriculture



Agriculture

+



Street shop

+



Collecting and selling recycled material

# Understanding Autonomous Adaptation

## Adaptation strategies and practices

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*Change in crops or livestock*



Rice



Cassava



Cows



Chicken



# Understanding Autonomous Adaptation

## Adaptation strategies and practices

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Shallow pit



# Understanding Autonomous Adaptation

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# Understanding Autonomous Adaptation

## Results from the field work | Adaptation strategies and practices

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- **Move to another area**
- Change type of livelihood strategies (e.g. switch to different income generating activity)





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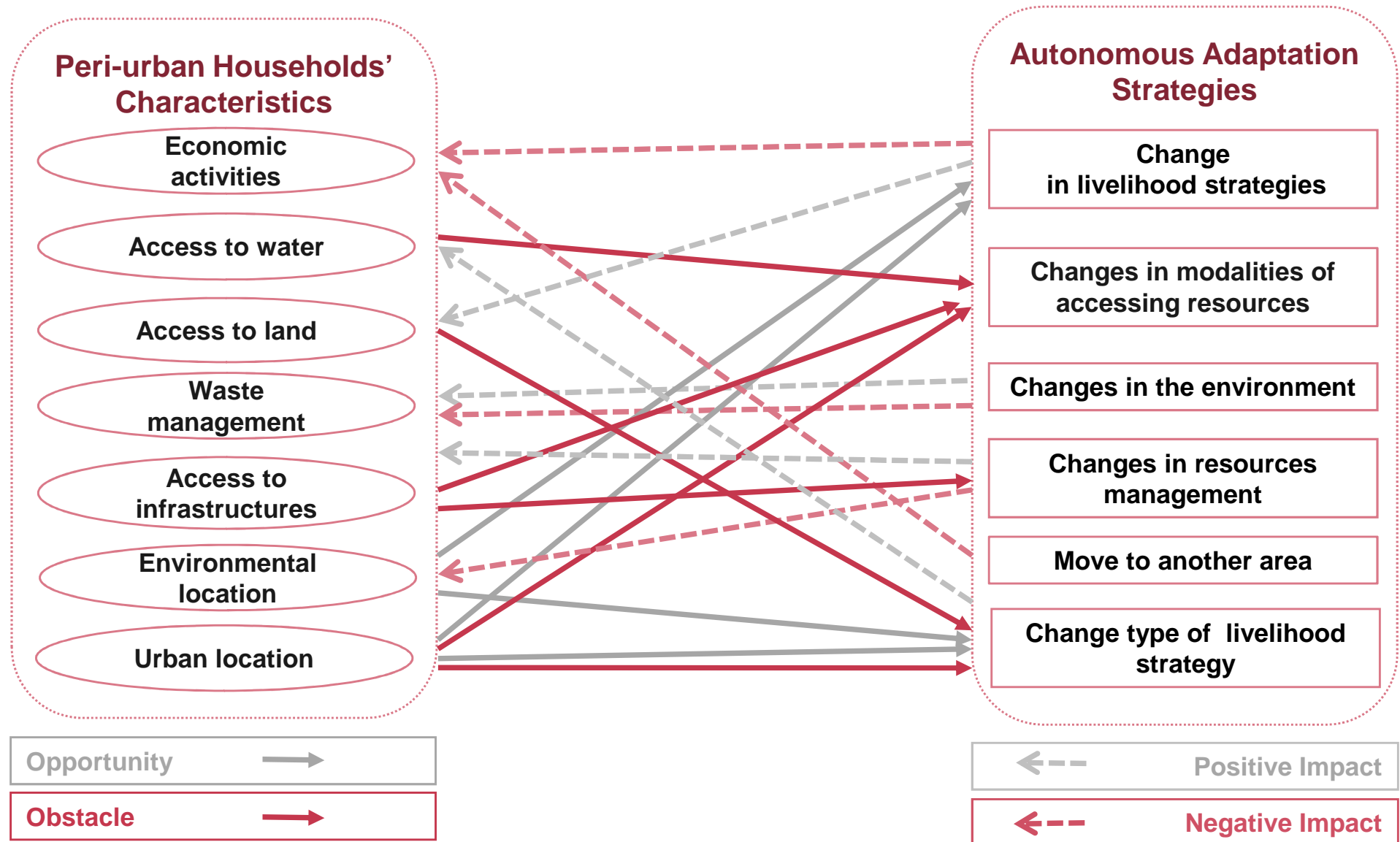


Fishing



Small shop business

# Identifying AC Constraints and Opportunities



## Conclusion and next steps

### Hot spots for adaptive capacity assessment

- Relationship with natural resources - direct/high interaction/dependence; economic, socio-relational, and cultural dimension
- Socio-economic and cultural heterogeneity - different vulnerabilities and capacities as opportunity (risk in homogeneous upgrading)
- Environmental management and adaptive capacity - diversification and hybridization as basic resource
- “People as infrastructure” (Simone, 2004) - Adaptation through “platforms of action” (e.g. [Water](#))
- The “ideal of (urban) life” - New York vs Bongoland
- Dynamism in the use of and access to resources - temporary land uses, informal legitimacy vs formal legalization (Roy, 2005)
- Rural-urban interdependence and bidirectional migration - complex migratory projects and rural-urban trajectories embedded with adaptation strategies

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