

# **Second International TWIN-SEA Workshop on** ***“Climate and Societal Change in Coastal Areas in Indonesia and South East Asia”***

## **III –STATE OF THE ART OF WORKING GROUP II: Vulnerability and Pathways for Adaptation**

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## **Between Collapse and Transformation: Adaptation Pathways in Coastal Megacities**

**Prof. Dr. Mark Pelling, King’s College London**

- Resilience
- Adaptation pathways
- Adaptation Properties
- Regime Adaptation
- New York City example
- Conclusions



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# Why introduce a range of adaptive states? Isn't resilience sufficient?

## Contesting Resilience

### **Disaster Risk Reduction: risk-development relationship**

- Resilience of engineered structures
- Resilience in humanitarian response – bouncing back and 'normalcy'
- Resilience under the alternative school – bouncing back better
- DFID: connecting development and humanitarianism (response and reconstruction)

### **Health: coping with pressure and 'environmental' change**

- Psychological resilience
- The resilience of children

### **Climate Change Adaptation: understanding adjustment**

- Resilience – incremental change to achieve persistence and stability

With an assumption that stability will promote socially desired development opportunities and outcomes.

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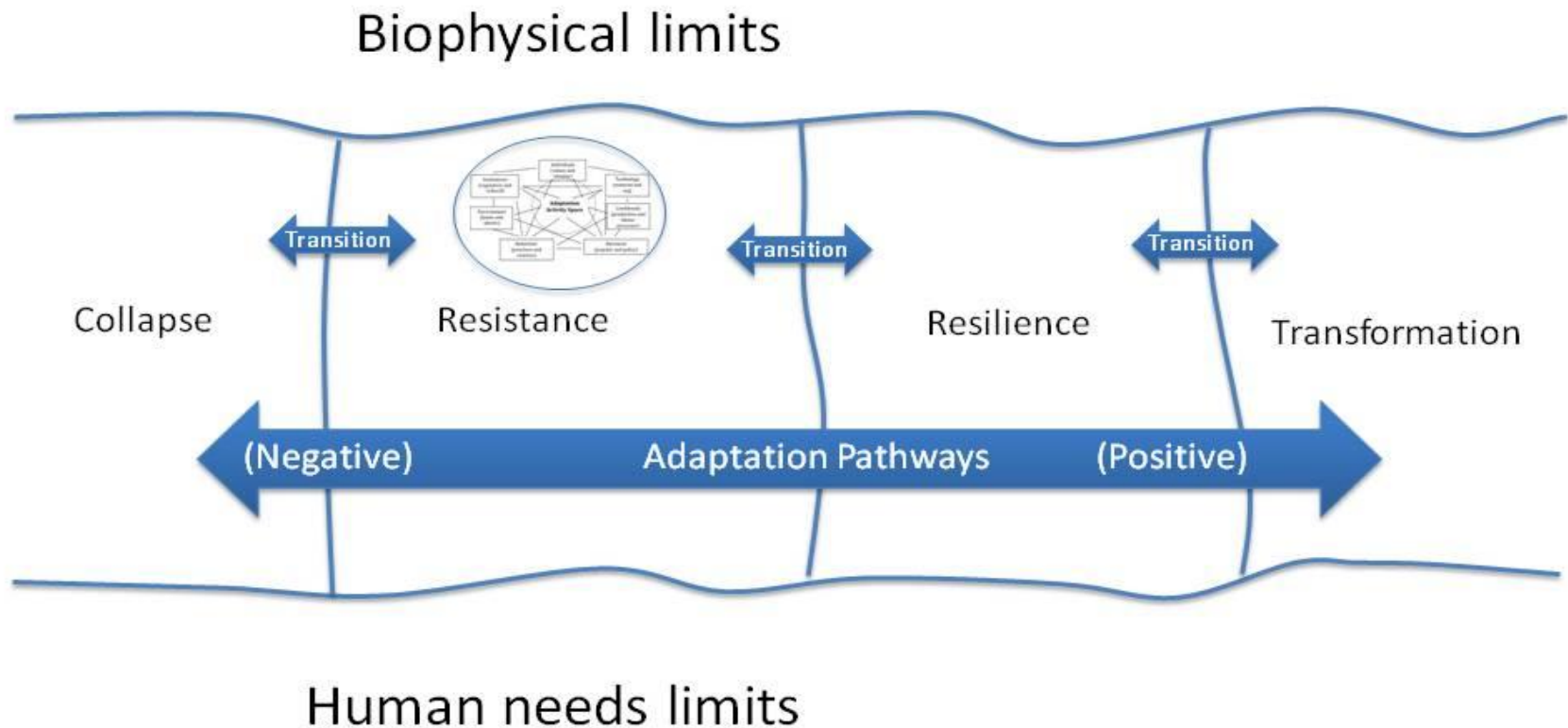
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# Adaptation pathways:

## OVERHEAD VIEW

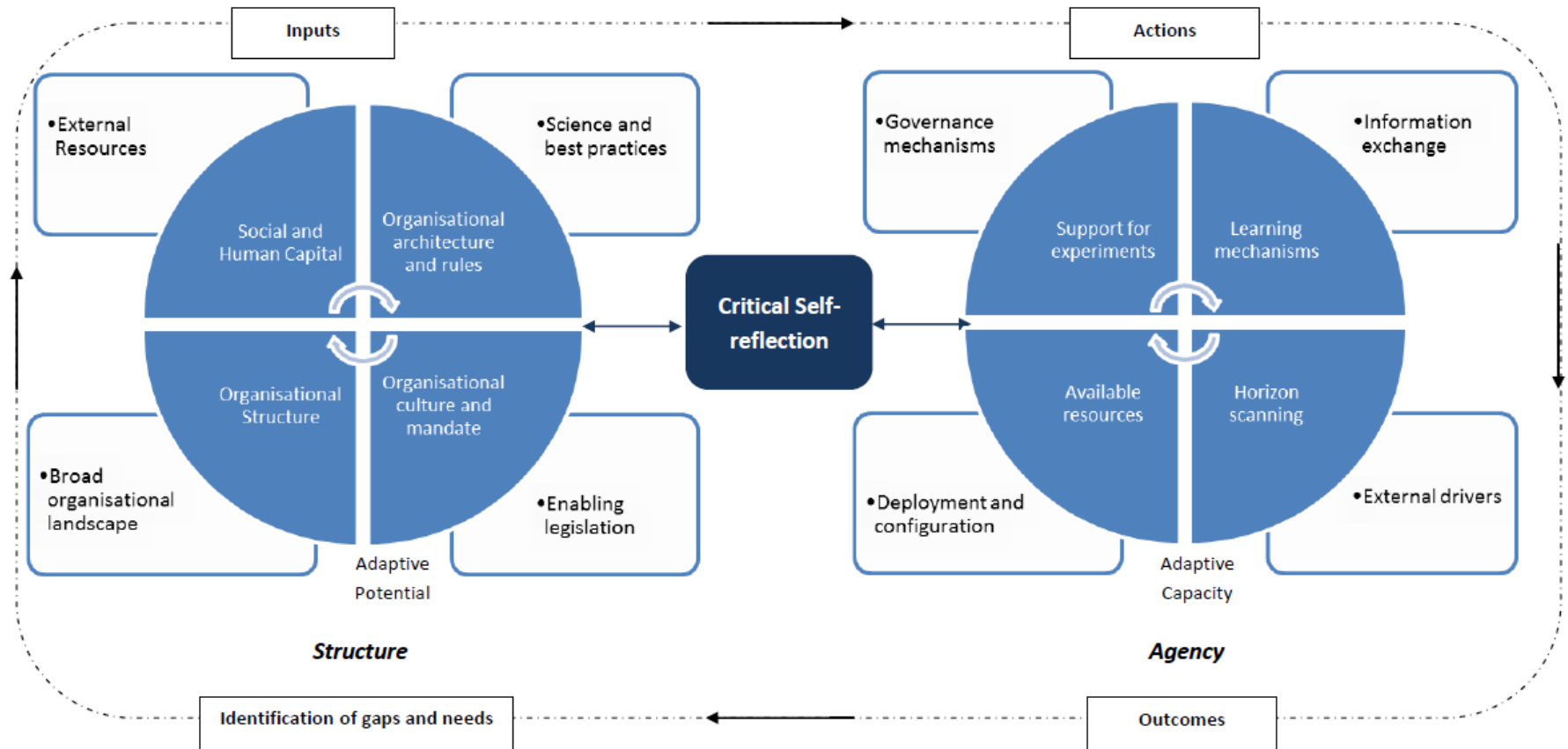


Note – Time in this diagram is not left to right. Adaptation pathways can move from a lower state to higher state (i.e. left to right) or from a higher state to lower state (i.e., right to left); Time is referenced from the current to moments or eras in a future time.

# The adaptive properties of planning regimes:

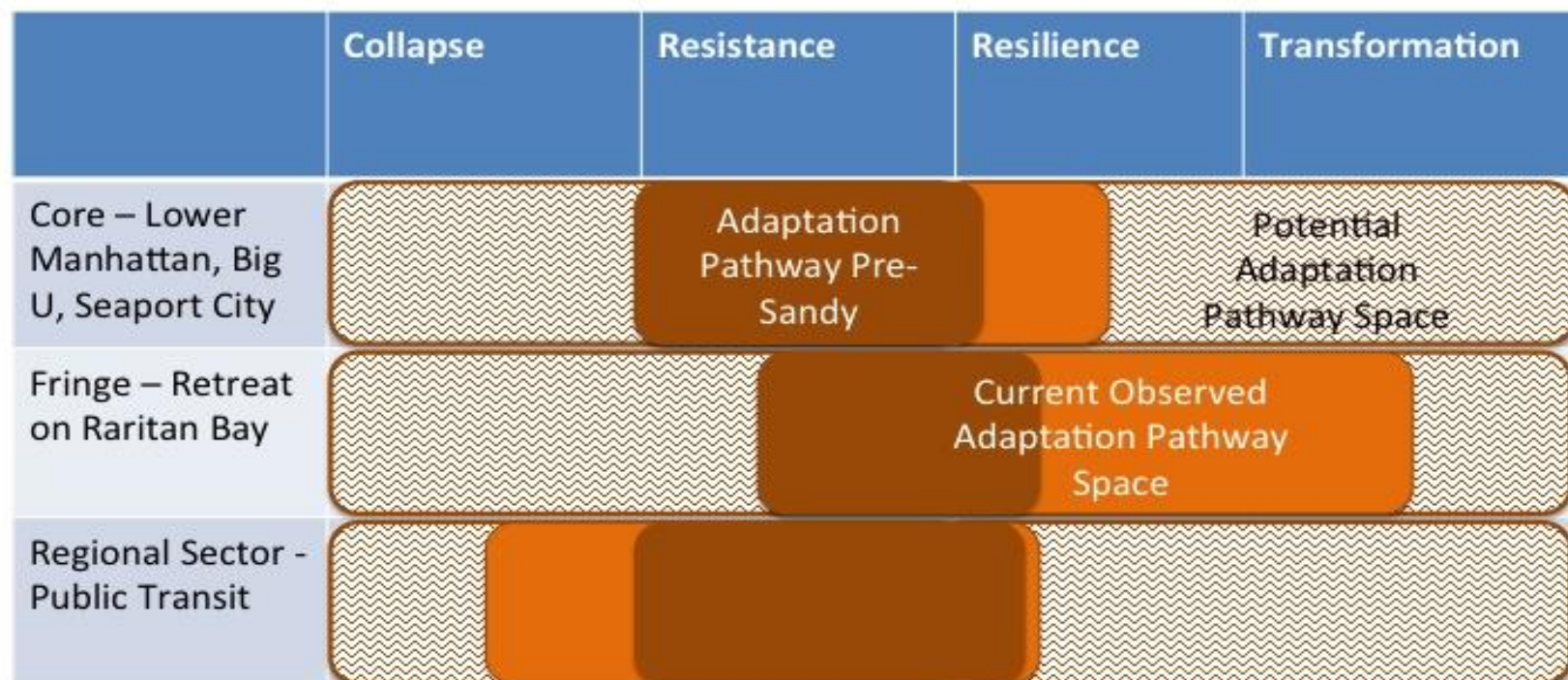
Actor viewpoint	Object of interest	Collapse	Resistant	Resilient	Transformative
City Planner	Formal urban planning regime	Impossible to plan, no central strategy (eg informal land-use or systemic corruption)	Conservative, resistant to innovation (eg authoritarian, strong market liberal)	Aims fixed, flexible in methods, tolerates some negotiation on aims (eg co-option, patronage)	New vision (eg shift from market to strategic planning; welfare to individual responsibility)
Infrastructure Planner	Formal potable water provision	Formal water provision inadequate with many inequitable, informal alternatives (eg water vendors unregulated)	Single goal coupled with high capacity to enforce preferred delivery mode (eg water vendors demonised and arrested)	Single goal coupled with flexible delivery – negotiation in management practice (eg water vendors regularised and accommodated)	New vision and implementation (decentralised community water management system, local harvesting, wells, payment etc)
DRM Planner	Formal risk management regime	Inability to plan, excessive disaster loss experienced (eg unacceptable loss – chronic or acute)	Plans for stability in underlying economic and political core, social relations (eg increasing flood defences)	Core economic, political and social relations traded-off (eg local coast retreat)	New vision (eg from hazard to vulnerability or proximate to root cause paradigm - risk management as part of wider social safety net)
Household at risk	Household reproduction/economy	Exploitive relations, stress migration (eg sex economy, homelessness, IDPs)	Core of health and productive assets protected (eg by insurance, savings, assets, external environment)	Core of health and productive assets traded-off, (eg fewer meals, change livelihood, withdraw from education)	New household form to enable preferred health and productive relations (eg shift from individual to collective role, economic/ education migration)

# A model of organisational/regime adaptation with internal and external components:



# New York City Case Examples and Adaptation Pathways

## Observed and Potential\* Analysis Space



\*Observed empirical adaptation pathways can be derived from the case study data; understanding of potential adaptation pathways will be derived from the modeling, scenario work, and face-to-face discussions with local stakeholders



# Conclusions



- Resilience is normative – it projects a value set.
- Adaptation is subjective and experienced
  - Collapse, resistance, resilience and transformation co-exist
- Inclusion is the key to progressive, transformative adaptation

