



Research: Urban Climate Resilience

การประชุมวิชาการระดับชาติ

เมืองเปลี่ยน...เปลี่ยนเมือง...ใครแน่?

29-30 October 2014

At Grand Ballroom, Swissotel Nai Lert Park Hotel
Thailand Environment Institute



เมืองเปลี่ยน...เปลี่ยนเมือง...ใครแน่?

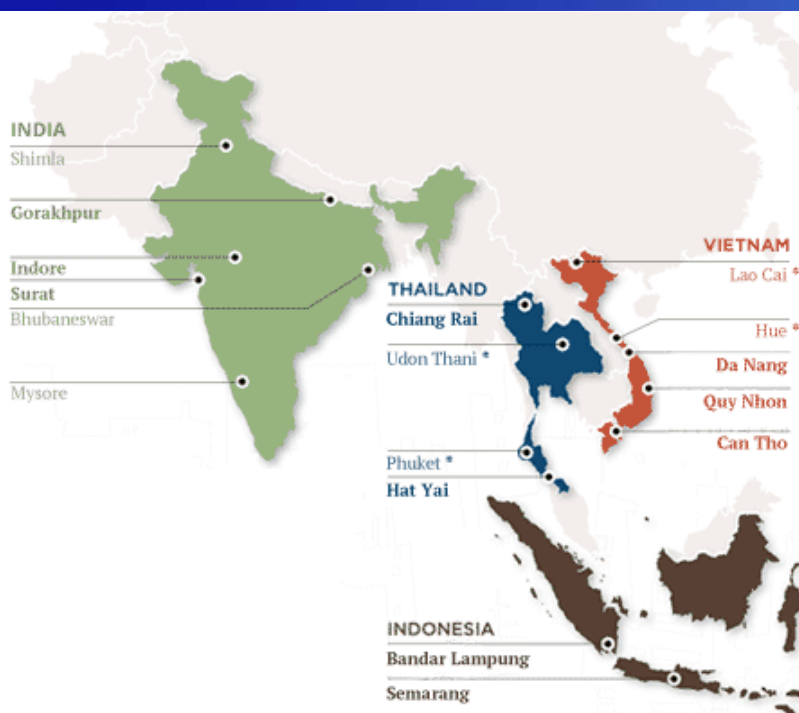


Background

Urban Climate Resilience

- TEI & ISET
- ACCCRN (Rockefeller Foundation)
- M-BRACE (USAID)
- Building climate resilience in urban contexts
- Multi-stakeholder engagement process
- Shared Learning Dialogue (SLD) process

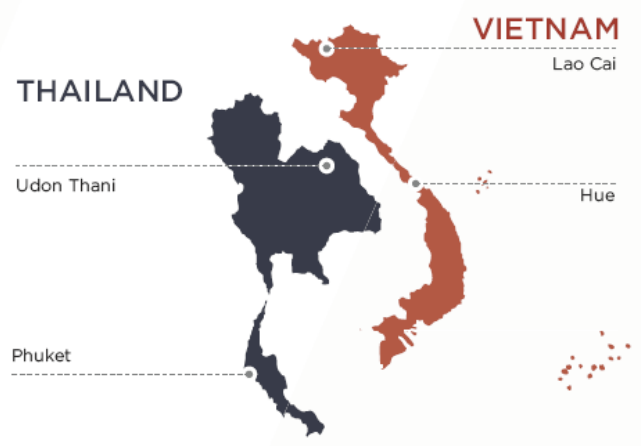
Asian Cities Climate Change Resilience Network (ACCCRN)



- 2009 – 2016
- Thailand, Indonesia, India, Vietnam
- Hat Yai + Chiang Rai
- Entry point – Climate change impact assessment
- Vulnerability assessment
- Resilience Strategy Planning

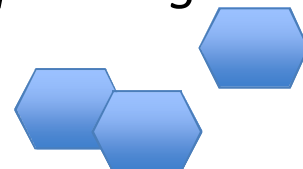
Mekong-Building Climate Change Resilient Cities (M-BRACE)

- 2010 – 2014
- Thailand and Vietnam
- Udonthani and Phuket
- Entry point – urbanisation process
- Key issues – land use and water
- Climate vulnerability assessment based on Climate Resilience Framework developed by ISET
- Resilience integrated into development plans



Urban Climate Resilience

- **Urban / City?**
- **Climate impacts in cities?**
- **Resilience? Vulnerability?**
- *Concepts? Definitions?*
- *Application? At local level? Policy planning?*
- *Practical practices?*
- *Methodology?*



(Traditional) Approach

Climate data / scenarios



Vulnerable areas / communities



Adaptation measures

(Traditional) Approach

Climate data / scenarios



Vulnerable areas / communities



Adaptation measures

Climate exposure
Sensitivity
Adaptive capacity

(Traditional) Approach

Climate data / scenarios

Warmer summer / winter
Increasing rain
Decreasing rain

Vulnerable areas / communities

Climate exposure
Sensitivity
Adaptive capacity

Adaptation measures

Planting trees
Change crops
Flood protection

(Traditional) Approach

Climate data / scenarios

Challenges

- Difficult to understand
- Access to climate data
- Unevenly distributed, justice? Rights?
- What about surprises?
- Sectoral adaptation
- Complex systems?
- Maladaptation

Vulnerable areas / communities

Adaptation measures

The Resilience concept

Climate change context

IPCC (2007) – ‘The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity of self-organisation, and the capacity to adapt to stress and change’

RESILIENCE

Overarching research question

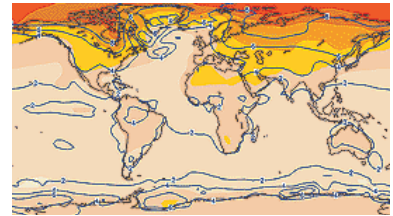
What is
urban climate resilience
in the Thai context?

3 Research themes

1) People-centred/
vulnerability / poverty

2) Urban / urbanisation

3) Climate change



People centred/ vulnerability/ poverty

- Poor people are more vulnerable?
 - Hat Yai 2010 flood – business sector
- Who are poor in cities?
- How to assess?
- Vulnerable to what?
- Vulnerable now or future?



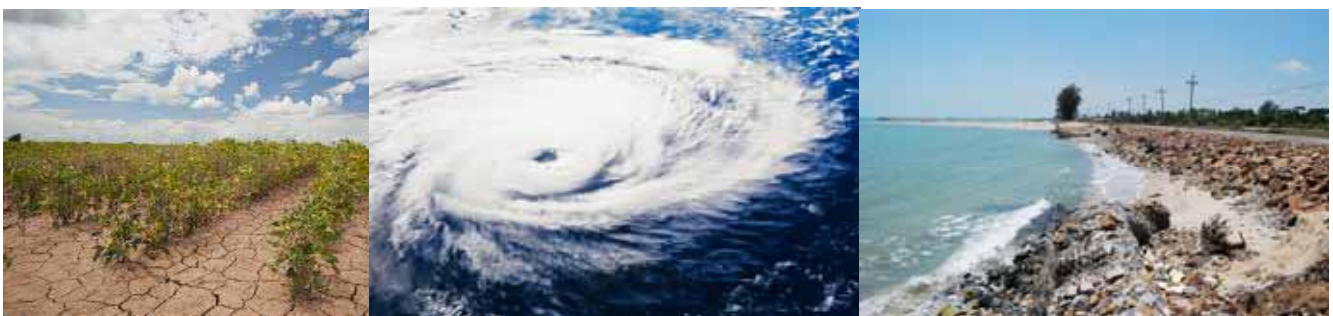
Urban / City

- What is a city?
- – Tessaban Nakorn?
- – Comprehensive land use plan?
- – Population size / density?
- • Thai cities have changed, but
- what has changed and how?
- • What are the implications?



Climate change

- Temperature / rainfall change
- What happens in cities?
- Water supply? Energy demand?
- Urban design? Drainage? Water storage?



Overarching research question

What is urban climate resilience in the Thai context?

Key research questions

- How to assess climate vulnerability in the Thai urban context?
- Are poor people more vulnerable?
- How does urbanisation contribute to vulnerability?
- What are the effects of climate change on urban systems?