Asian Cities Climate Change Resilience Network

(ACCCRN)

Thailand



UN-HABITAT Cities in Climate Change Initiative
Changwon City
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สถาบันสิ่งแวดล้อมไทย
Thailand Environment Institute

ACCCRN cities

Muang district, Chiang Rai

Hat Yai district, Songkhla

City overview

Chiang Rai

- Population: 226,555
- Chiang Rai Municipal – pop density: 1,139 persons/sq km
- Agriculture – rice, maize, soybean, longan, lychees
- Tourism (winter months & Thai New Year's – April)
- GMS gateway, trade corridor to China
- Strong urban-rural linkage

Hat Yai

- Population: 370,919
- Hat Yai Municipal – pop density: 7,509 persons/sq km
- Highly urbanised
- Tourism – Malay tourists
- Trade, business, commerce centre
- Rubber plantations
- Thailand-Malaysia-Indonesia Growth Triangle



City partners

Focal point

Municipality → Executive group

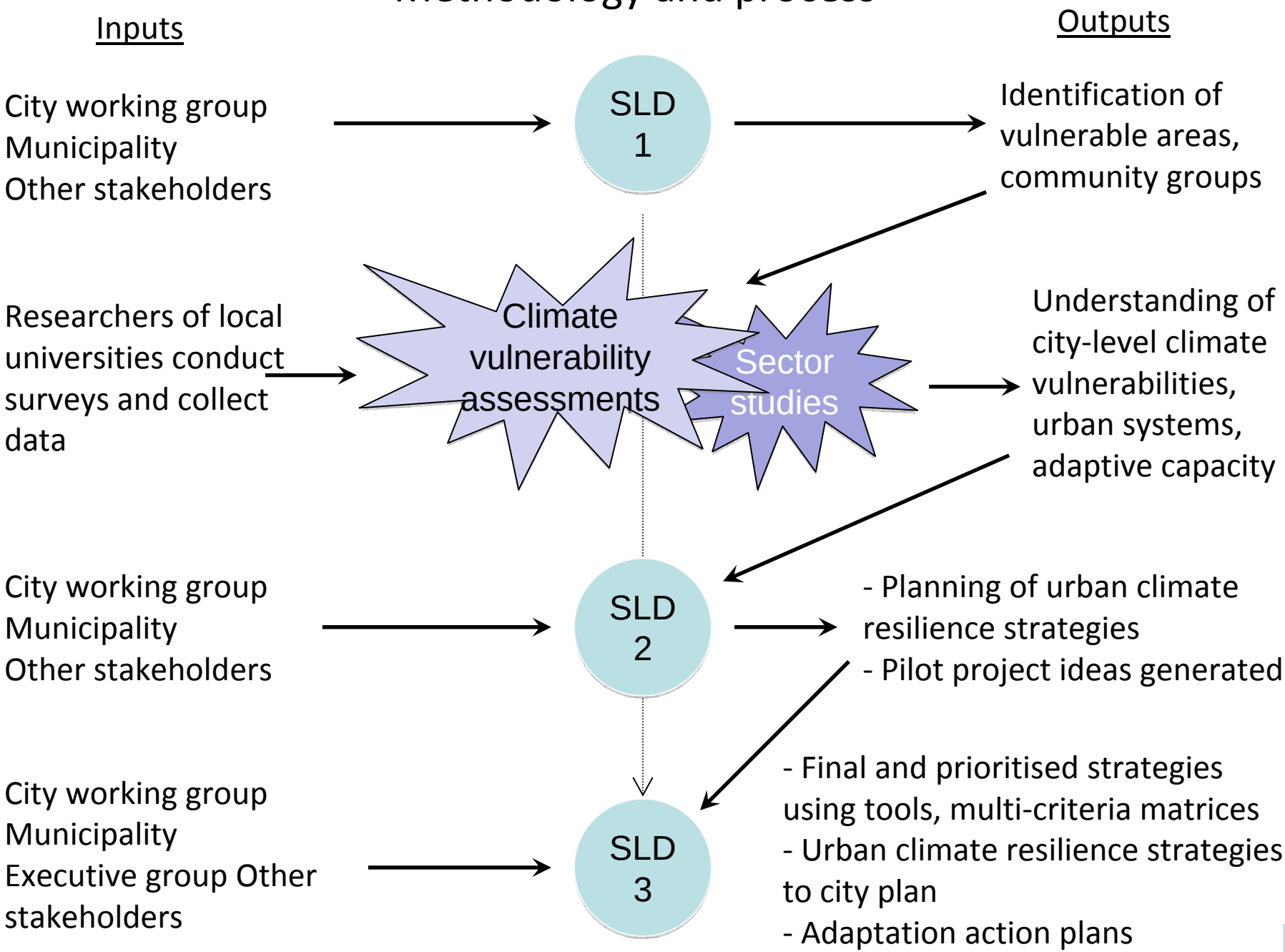
- Governor
- Mayors
- Provincial level gov. / agencies
- District level gov. / agencies

City stakeholders

City working group

- Local gov. officials
- Private / business sector
- Local NGOs
- Community leader
- Local academic

Methodology and process



Vulnerability assessments and sector studies

VA

- Identification of who/what are the most vulnerable community groups, areas and sectors
- Identification of range of factors that make them vulnerable, including both direct and indirect factors
- Survey, questionnaires, in-depth interview
- Focus group discussion

Sector studies

- Strategic sectors or systems that are critical to changing climate
- Understanding of capacity, current situations and existing vulnerability of a sector or system, links to other systems
- Identification of needs and priorities, responses to existing hazards

Chiang Rai – Agriculture, Tourism, Health

Hat Yai – Flooding

Climate threats

Chiang Rai

- Increasing average low temperature during the winter months
- Increasing average high temperature during the summer
- Rainy season starts later
- Longer period without rain

Hat Yai

- Increasing precipitation
- Less number of wet days
- Increasing average high temperature

Exposure and sensitivity

Chiang Rai

• Droughts
- water supply shortage
- low agricultural productivity
• Smoke pollution from open burning of agricultural wastes and forest fires
- Increasing respiratory diseases
• Flash floods, landslide
- Physical damages, habitat loss
• Heavy hail storms
- Physical damages

Hat Yai

• Frequent floods
- major economic loss – tourism, business, trade
• Tropical storms
- physical damages
- economic loss



Key vulnerabilities – identified by city working groups

Chiang Rai

• Water supply shortage (Jan – Apr) in urban and agriculture
• Urban poor in landslide prone areas
• Shorter winter months with less cold days, higher average low temperature
- impact on agriculture
- impact on tourism

Hat Yai

• Flood is the primary major concern
- Health and socio-economic impacts from floods
• Water supply shortage during summer months

Urban climate resilience strategies

Chiang Rai

1. Capacity building among local communities and local governments
2. Water resource and supply management for urban and agriculture
3. Improvement of infrastructure and services for better livelihoods

Hat Yai

1. Water and flood management
2. Improvement of infrastructure, services and urban plan
3. Natural resource and ecosystem management and promotion of sustainable tourism



Adaptation plans and actions

Chiang Rai

1. Agricultural adaptation to improve productivity
2. Promotion of ecotourism
3. Sustainable urban development and strengthening capacity

- Agricultural planning with climate info
- Research & development
- Create new water sources

- Development of new tourism pattern
- Conservation and management of ecosystems and natural tourist places

- Climate awareness and education
- Urban greening
- Insurance & early warning system

Adaptation plans and actions

Hat Yai

1. Adaptation to flood and mitigation of flood impacts
2. Improvement of life quality
3. Sustainable natural resource and ecosystem management and ecotourism promotion

- Networking and participation of stakeholders along the watershed
- Early warning system & evacuation plan & insurance

- Improve sanitation, health system & access
- Vulnerable agricultural areas

- Urban greening, urban agriculture
- Development of ecotourism
- Improve water quality, conservation of water basin



Urban climate resilience – Insurance mechanism

Chiang Rai
Urban poor – hail storms, landslides
Farmers – low productivity, product loss

Hat Yai – flood events
Urban centre – Southern Trade and Commerce hub – economic losses, physical damages
Tourism – economic loss, physical damages of infrastructure

Stakeholders

Private / Business sector
- Chamber of Commerce
- Tourism Association
- Insurance companies

Governments
- Municipality
- Local governments
- Provincial Agriculture

Approach
1. Climate awareness raising and understanding of resilience / adaptation efforts among stakeholders
2. Baseline and data collection
3. Identification of incentives and motivations – economic terms, recovery rates, increasing coping capacity
4. Identification of responsible institutions
5. Recommendation and development of insurance policies

Challenges & lessons learned

1. Inadequate climate awareness and understanding of concept / issues

- Municipality as focal point – inadequate understanding leads to entry point that may not be related to climate change
- Communication between different stakeholders can be limited
- City working groups – varying levels of understanding
- Vulnerability assessments – inadequate understanding of concepts (vulnerability, resilience, adaptation) among local researchers

2. Shared learning dialogues

Multi-stakeholder approach is new for local governments, but works well



Challenges & lessons learned

3. City working group formation

A combination of varying local government reps and stakeholders may lead to different dialogues and outcomes

e.g. Hat Yai – municipality partners are from the Bureau of Public Works and Town Planning = flood and infrastructure focus, Chiang Rai – Office of Public Health = welfare focus

4. Scope / jurisdiction / coordination

Municipality as focal point – administrative boundary may restrict coordination with other municipalities or at provincial / regional levels. Adaptation activities in other areas may be limited.