

Asian Cities Climate Change Resilience Network

ACCCRN - Thailand



Asian Cities Climate Change Resilience Network (ACCCRN) Thailand

The Thailand Environment Institute Foundation (TEI) is a country coordinator for the Rockefeller supported Asian Cities Climate Change Resilience Network project (ACCCRN). TEI plays a key role in coordinating and engaging with multiple cross-sectoral stakeholders at the local level in Chiang Rai and Hat Yai and at the national level to strengthen knowledge and technical skill capacities in urban climate resilience. As a country partner, TEI works closely with Regional ACCCRN partners, including Institute for Social and Environmental Transition (ISET), APCO, Verulam, Mercy Corps, and International Institute for Environment and Development (IIED), to advance urban climate resilience approach.

Building on the experience and lessons learned of ACCCRN, new urban climate resilience projects are planned and developed.

The goal, specific objective and implementation of ACCCRN in Thailand are designed, planned and developed based on the Results Framework of Rockefeller Foundation for the overall ACCCRN initiative. *(For more information on ACCCRN, see www.acccrn.org)*

The goal of the ACCCRN programme in Thailand is to strengthen resilience of Thai cities to climate change impacts.

The Thai ACCCRN programme will develop practical climate resilience strategy planning process for second tier cities. Drawing on the engagement with multi-stakeholders and implementation in the selected cities, the programme will reflect on lessons learned and experience in resilience planning. ACCCRN Thailand will also focus on the dissemination and scaling up of resilience planning process.

The specific objective of ACCCRN Thailand is to build knowledge and technical capacity of cities to reduce vulnerability and strengthen resilience to climate change. ACCCRN Thailand focuses on engaging with cross-sectoral, multi-stakeholders at different levels in building and applying knowledge of urban climate resilience to contribute to influencing policy change.



The ACCCRN programme in Thailand (2009-2016) has *three core components* that are complementary to achieve the overall and specific objectives. The three core components are *i) City-level capacity development (2009-2016), ii) Research capacity development (2013-2014), and iii) Networking (2014-2016).*

The City-level capacity development focuses on strengthening knowledge and technical skill capacity of city stakeholders in urban climate resilience planning process. Cities are able to identify and assess climate change impacts and vulnerability of urban communities. Based on the findings of climate vulnerability assessment, cities plan and develop city resilience strategies. Intervention projects are designed to test measures



and practices in reducing vulnerability of urban communities and strengthening city resilience to climate change. Shared learning dialogues of cross-sectoral, multi-stakeholders are the fundamental principle in urban climate resilience planning. This approach contributes to influencing policy change at the local level. The climate resilience thinking and concepts are adopted and integrated into city development planning and decision-making processes.

The city capacity development component is mainly implemented in Chiang Rai and Hat Yai and is framed around reducing the vulnerability of urban poor, in line with the Results Framework of Rockefeller. TEI, together with ISET, works closely with Chiang Rai and Hat Yai to build evidence-based knowledge and understanding of the concepts and application of urban climate resilience. Drawing on lessons learned and experiences from Chiang Rai and Hat Yai, TEI engages with new cities for the dissemination of urban climate resilience. To contribute to influencing policy change and scaling up of urban climate resilience, TEI networks and engages with other actors at the national level, including the national climate focal body, Office of Natural Resource and Environment Policy Planning (ONEP), National Municipal Leagues of Thailand (NMT), and National Economic and Social Development Board (NESDB).



The Research capacity development under ACCCRN Thailand is supported by the International Institute for Environment and Development (IIED). TEI works closely with ISET-International Bangkok Office to frame research questions and to engage with academics and researchers from Thai universities. The objective of the research component is

to build knowledge-based evidence and scientific understanding of urban climate resilience in the Thai context. Drawing on lessons and experiences from implementing the ACCCRN and M-BRACE projects in Thailand, research questions in understanding urbanisation process in Thai cities, the linkages between vulnerability and urban poverty, and climate impacts on urban systems are set. A network of cross-disciplinary academics and researchers participate in this work.

The Networking component under ACCCRN Thailand is sub-granted by Mercy Corps, who is leading the regional ACCCRN Networking. Building on existing networks of actors and practitioners, TEI acts as a country focal point coordinating with city representatives to engage with wider networks, forming a Thai Urban Climate Resilience Network. Goal, specific objective and strategies of the Thai Network are planned and developed. A Sub-Working Group, comprising of city, cross-sectoral representatives, is established. Action plans are developed to link with and support the Regional ACCCRN Network.

City-level capacity development (2009–2016)

There are different key activities under the city-level capacity development component, including the city selection process, city engagement and resilience strategy planning, city intervention project implementation, city learning and national stakeholder engagement.



City selection process (2009)

In the first phase of ACCCRN, TEI worked alongside the Asian Disaster Preparedness Centre (ADPC) and Southeast Asia START Regional Centre (SEA-START) to identify and select two Thai cities. Five short-listed cities were made, representing diverse historical background and political economy across Thailand. Chiang Rai, Udonthani, Samut Sakhon, Phuket and Hat Yai were identified. City municipalities were engaged in consultation workshops to discuss key climate and urban challenges.

The city selection process followed a set of selection criteria, which were i) *key city stakeholders, particularly the city municipality, express interests and willingness to participate in the project, ii) impacts of climate change and weather-related disasters are of significance, and iii) local government and stakeholders demonstrate capacity and commitment to achieve the objective.*

Chiang Rai and Hat Yai were selected to participate in ACCCRN. Both cities, particularly senior officials of Hat Yai and Chiang Rai City Municipality, expressed high level of interests and commitment to the project. Both cities are important gateways to the neighbouring countries in Southeast Asia and are rapidly urbanising. Understanding the implications of urbanisation and linkages to climate change of these cities will be critical for urban and economic development of Thai cities across the country.

Chiang Rai City is located in the Chiang Rai province, the northernmost province bordering Myanmar and Laos. It is an important gateway to China, serving as a logistic and tourist hub. Economic development of the Chiang Rai city, and of Chiang Saen and Chiang Khong bordertowns accelerates urbanisation process and increases demand in natural resources, particularly water. Water supply shortage and floods are critical challenges for Chiang Rai.

Hat Yai City, located in the Songkhla province, is an important economic, trade, commerce and tourist hub in the southern region, bordering with Malaysia. As the third largest metropolitan in the country, Hat Yai is highly urbanised and has a strong link to Malaysia and Singapore. The urban centre of Hat Yai, located in low-lying, floodplain area of U-Tapao River basin, has experienced a number of flood crises in the last two decades.

City engagement and resilience strategy planning process (2010–2011)

TEI, the Thai country coordinator of ACCCRN, engaged with Chiang Rai and Hat Yai multi-stakeholders in climate resilience strategy planning process through shared learning dialogues. The city stakeholders developed knowledge and technical skill capacities in identifying climate impacts, assessing climate vulnerability, planning city resilience strategies, and developing and implementing intervention projects.



Multi-stakeholder engagement process

TEI assisted and coordinated the city municipalities of Chiang Rai and Hat Yai in setting up a cross-sectoral, multi-stakeholder City Working Group. Each City Working Group comprises of municipality officials, relevant government departments and agencies, local NGOs, the business and private sector, and academics. In this phase of the project, the city working group in each city was responsible for participating in SLDs, identifying climate impacts, assessing climate vulnerability, resilience strategy planning, developing intervention projects, and networking with relevant actors and practitioners.

Shared learning dialogues

The shared learning dialogue approach, developed by ISET, was adopted in the engagement and capacity building processes. It focuses on bringing together cross-sectoral, multi-stakeholders to share and discuss key issues, based on both scientific information and local knowledge. During this phase of ACCCRN, a series of SLDs was designed and organised to cover key topics leading to the resilience strategy planning and implementation. The SLDs included the city working group members and other relevant actors.

Climate workshop

The objective of the climate workshop held in each city was to improve the understanding of local stakeholders in climate change and its impacts to the city and communities. The SLD focused on sharing and discussing impacts of past weather-related events and potential climate impacts on different sectors.

Vulnerability assessment and sector studies

SLD workshops were held to discuss the vulnerability concept and assessment in urban context. Vulnerability to disasters and climate change of different community groups and sectors was also discussed. Findings from the SLD were used to plan the climate vulnerability assessment and sector studies in each city.

Resilience strategy planning and pilot project development

Based on findings of vulnerability assessment and sector studies, the city working group planned, developed and documented a city resilience strategy through the shared learning dialogue process. The city working group also planned and developed a pilot project to test the city resilience strategy.

Intervention project development planning

Through a series of shared learning dialogues, the city working group planned and developed a list of intervention projects based on the city resilience strategy. Some selected intervention projects are submitted to Rockefeller for funding under the ACCCRN intervention project criteria. The working group in each city seeks funding from different sources to fund other intervention projects.

Vulnerability assessment and sector studies

The climate vulnerability assessment and sector studies in each city were carried out by the Working Group, led by local university teams. Key climate impacts and sectors affected by climate were identified by the Working Group through the SLD process. Climate data and information of Chiang Rai and Hat Yai was from SEA-START. The objective of vulnerability assessment and sector studies was to identify vulnerable community groups, sectors and areas within the city.

Chiang Rai

Agriculture, tourism and health sectors were identified as strategic areas for the urban and economic development of Chiang Rai. With climate change, these sectors can be impacted contributing to the vulnerability of Chiang Rai community. Drastic changes in rainfall and temperature will have great impacts on the agriculture sector. Urban poor communities living in public housing located in risk prone area were also identified as the vulnerable group. With little access to health and welfare services, health and disaster risks pose as key challenges contributing to increasing vulnerability.



Hat Yai

Flooding is a critical social and economic issue in Hat Yai. The city experiences seasonal and flash floods. In addition to regular floods, large-scale flood disasters tend to occur every 10-12 years. The vulnerability assessment indicated that urban poor communities living in flood-prone areas were most vulnerable. Weak institutional capacity of local authorities also contributed to the vulnerability. Ineffective early warning systems and lack of information were key factors contributing to increasing vulnerability of the communities.



Resilience strategy planning and development

The City Working Group in both cities planned and developed urban climate resilience strategies, based on findings of the climate vulnerability assessment. Through the SLD process, city multi-stakeholders discussed strategic plans, strategy implementation and sources of funding. TEI provided technical assistance and support in coordinating with multi-stakeholders and documenting the strategies.

Chiang Rai

The resilience strategy of Chiang Rai focuses on sectoral measures to reduce vulnerability to climate change. Agriculture and tourism are two most important economic activities and with adversary effects of climate change can greatly reduce productivity. The resilience strategy describes strengthening knowledge and technical skill capacity of actors in understanding and tackling potential impacts of climate change.



Hat Yai

The resilience strategy of Hat Yai focuses on flood risk reduction and management through strengthening capacity of city stakeholders. The strategy describes short- and long-term plans in reducing city vulnerability to floods. The Hat Yai strategy addresses capacity development of local communities and authorities, networking with key actors, urban planning challenges, citywide early warning system development, updating flood model, and improving flood protection infrastructure.



Pilot projects

Following the development of city resilience strategies, both cities planned and carried out a pilot project as a test to larger intervention plans.

In Chiang Rai, a pilot project was to address water and urban land use issues. The project was to rehabilitate an urban water body to serve as an additional water source and public green space to local residents. The focus of the project also included participation of local communities and youth groups in ecological and freshwater biodiversity conservation.

In Hat Yai, a pilot project was to address flood risk reduction challenges at the community level. The City Working Group identified and engaged with most vulnerable villages to flooding. Capacity building activities, including flood emergency response (*before, during and after flood disaster*), were carried out. The project also focused on improving the existing early warning system and establishing effective access to information approach. A website providing weather information and real-time flooding monitoring www.hatyaicityclimate.org was set up for the general public.



Intervention project implementation (2012–2015)

Intervention projects supported under ACCCRN were planned and developed by the city working group based on the city resilience strategy. The intervention projects were also framed following the selection criteria of Rockefeller for the ACCCRN programme. TEI serves as a coordinator to the cities, providing technical assistance and overseeing overall project management. The city working groups were leading in the implementation at the local level.

Chiang Rai

To strengthen the resilience of Chiang Rai, intervention projects were planned and developed to address key issues around urban development, water resources, land use planning, tourism, and urban poor communities. Two intervention projects were funded by Rockefeller - the Inner Kok River ecological restoration and the climate resilience integrated urban and economic development planning.



- *Inner Kok River ecological restoration - community-based approach (2012-2013)*
- *Climate resilience integrated urban and economic development planning (2012-2015)*

Hat Yai

Intervention projects in Hat Yai were planned and developed to address flood risks and impacts of the city and communities. Three projects, funded by Rockefeller, covered capacity building of local communities and authorities in flood risk management, setting up a coordination and learning centre, updating hydrological and flood model, developing urban scenarios, and engaging with the business and private sector in contributing to city-wide flood protection.



- *Community-based urban management to improve life quality (2012-2014)*
- *Climate resilience integrated urban flood management planning (2012-2015)*
- *Business sector engagement and partnership in flood management planning (2013-2015)*

City learning process (2012–2016)

To promote resilience building, learning is a critical process. TEI acts as a coordinator in bringing together cross-sectoral, multi-stakeholders together and a facilitator in learning and reflecting on lessons learned.

City-to-City Workshops

- Cities coming together in Bangkok to discuss specific themes – including 1) Vulnerability assessment and resilience planning, 2) Urban flooding, 3) Networking and Sustainability

- ACCCRN Chiang Rai and Hat Yai, M-BRACE Udonthani and Phuket, and new cities including Thungsong, BMA, Phanat Nikhom (Chonburi), Khon Kaen

- City participants – municipality officials (including mayors), government agencies and departments, NGOs, academics and researchers, business and private sector

- Other participants include National Municipal League of Thailand, academics and experts from universities in Bangkok, ONEP



City Learning Exchange

- City partners and stakeholders visited Chiang Rai and Hat Yai to learn and reflect on resilience building activities, particularly intervention projects

- Visit to Chiang Rai – Resilience Learning Centre, Inner Kok restoration, Urban agriculture, Eco-tourism

- Visit to Hat Yai – Resilience Learning Centre, flood monitoring, community-based land use planning, community-based flood risk management



Community Learning Exchange

- Villagers from Udonthani visited Kutao community (Hat Yai)
- Peri-urban areas in Udonthani and Hat Yai are impacted by urban sprawl and development activities
- Similar water supply shortage, water quality and flood issues
- Similar socio-economic vulnerability to urbanization and climate change

New City Engagement

- New cities identified and selected for engagement in urban climate resilience planning approach
- Building capacity of NMT
- Generating demand and interests in urban climate resilience planning among actors and practitioners

Regular city SLDs

- ACCCRN intervention project implementing teams together with City Working Groups reflect and share lessons learned
- Through this, some elements of the city resilience strategies are being incorporated into Chiang Rai / Hat Yai municipality budgeting plans

National stakeholders engagement

To contribute to influencing policy change and scaling up of urban climate resilience, TEI engages with relevant national stakeholders, including the national climate adaptation focal point ONEP, NMT, and NESDB, through regular consultation workshops. The national stakeholders are regularly informed on lessons and invited to participate in city-level activities. Policy recommendations informed by city-level stakeholders and based on lessons from cities are drafted for key national agencies and departments.



Research capacity development (IIED sub-grant – 2013-2014)

Through M-BRACE, a network of Thai academics and researchers was initially engaged to dialogue and discuss on the new concepts of urban climate resilience. Drawing on expertise and experience of the existing network, new research studies were carried out in Thailand under the ACCCRN-IIED funding. TEI, together with ISET-Bangkok, framed research themes and worked closely with the



researchers. Nine studies were conducted under the urbanisation, people-centred vulnerability and climate change themes. Academics and researchers were under different disciplines, such as social sciences, architecture, urban planning, and environmental management, and from different universities across Thailand, including Chiang Mai, Khon Kaen, Hat Yai, Udonthani, Phuket, and Bangkok.

Networking (Mercy Corps sub-grant – 2014-2016)

TEI serves as a national focal point for the ACCCRN Network, coordinating and engaging with Thailand-based community of practice. Drawing on experience working in the ACCCRN and M-BRACE cities and building on existing networks, TEI plans and develops national networking strategies to support the Regional Networking, led by Mercy Corps. A sub-working group, represented by cross-sectoral actors from Chiang Rai, Hat Yai, Phuket and Udonthani, will be formed to collectively lead in the implementation of the national networking strategies. The Thai Network will focus on critical issues in urbanisation, land use change, water and flood management, and governance. The strategies aim to support the dissemination of urban climate resilience lessons through engaging with practitioners, NGOs, and media.



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