

Situation & Needs for Enhancing Climate Risk Assessment in Thailand

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Ministry of Natural Resources and Environment



Climate Change Impacts on Thailand's Supply Chains

Key Impacts

- Damage to factories, roads, and transport systems from floods and storms
- Water shortages reduce factory production and increase costs
- Delays in raw material supply affect manufacturing and exports
- Tourism and service sectors disrupted by extreme weather events

Case Examples in Thailand

Firms Draw Scrutiny Over Thai Flood's Impact



3 Nov 2011

Canon and Hana Microelectronics factories were flooded in Ayutthaya, one of the worst-hit areas in Thailand. WILAWAN WATCHARASAKWET/THE WALL STREET JOURNAL

ref: <https://www.voanews.com/a/reu-thai-floods-force-closure-of-seventeen-factories-in-industrial-zone/1773750.html>

Thai Floods Force Closure of 17 Factories in Industrial Zone



9 oct 2013

FILE - Workers look on behind flood protection barriers built at their factory at Amata Nakorn industrial Estate in Chonburi province, east of Bangkok, Oct. 9, 2013. ref: <https://www.voanews.com/a/reu-thai-floods-force-closure-of-seventeen-factories-in-industrial-zone/1773750.html>

Thailand tropical storm: Tourists brace themselves for Storm Pabuk



4 Jan 2019

ref: <https://www.dailymail.co.uk/news/article-6556803/Tourists-hunker-Storm-Pabuk-hurtles-Thailand.html>

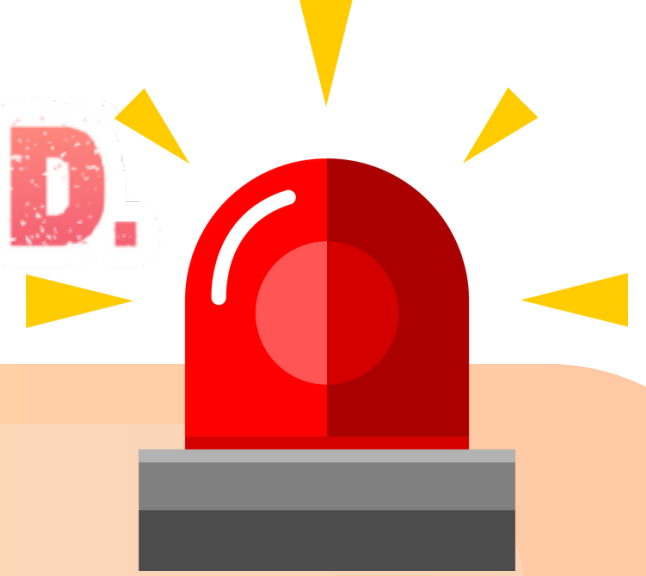
Thailand's eastern corridor factories prepared for drought season



30 Apr 2024

ref: <https://thethaiger.com/news/business/thailands-eastern-corridor-factories-prepared-for-drought-season?.com>

EARLY WARNING SYSTEM IN THAILAND.



Cell Broadcast system

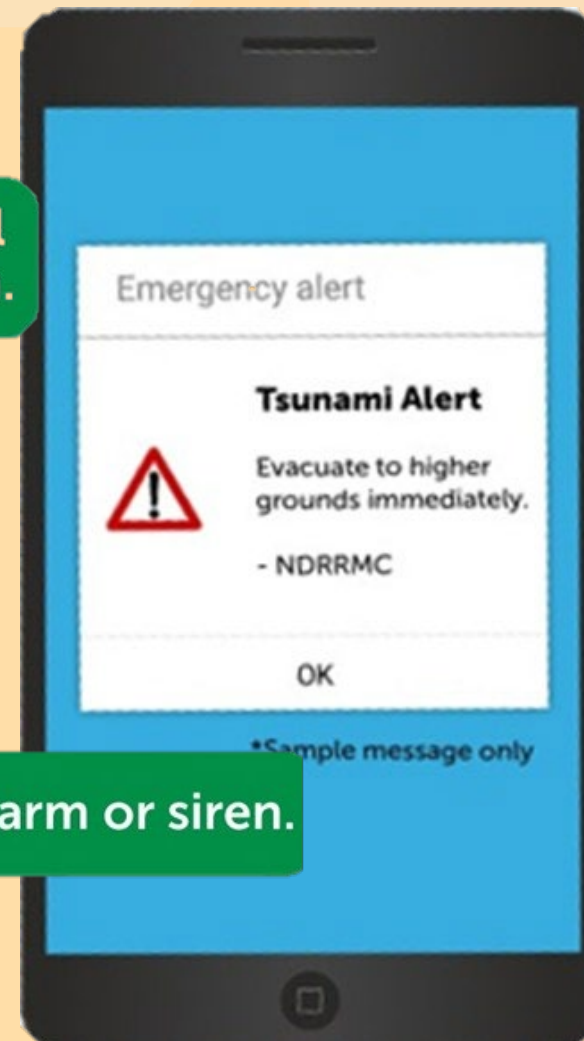


Thailand is driving the adoption of the Cell Broadcast system as an additional channel for distributing messages and warnings to citizens through sending mobile messages without requiring the download of any applications.



Receive a message which will appear directly on the screen.

Emit a loud alarm or siren.



Key advantages

1. The system can broadcast alerts to all mobile phones at once through cell towers, eliminating the need for specific phone numbers. This ensures a convenient, rapid, and targeted process, particularly for a specific area. (It can be delivered quickly to millions in seconds).
2. Cell broadcast reaches 100% of at-risk population. Emergency alert will reach anyone with a cell phone regardless of subscriber or location of subscription.
3. Cell broadcast will work in disasters and will not cause network congestion or overload. Emergency alerts are transmitted on a dedicated channel that is independent of normal usage.
4. It does not violate citizen privacy





THAILAND'S EMERGENCY ALERT TEST VIA CELL BROADCAST



This is a test message from the Department of Disaster Prevention and Mitigation (DDPM). No action required.

Android: 11.0 or higher
iOS: 18 or higher



Small-scale Test
2 May 2025 (13:00)

- Chiang Rai Provincial Hall
- Ubon Ratchathani Provincial Hall
- Suphanburi Provincial Hall
- Songkhla Provincial Hall
- Government Complex
Chaengwattana, Bangkok



THAILAND TO USE

5-LANGUAGE MOBILE PHONE EMERGENCY WARNING SYSTEM

Flash Flood Watch
A Flash Flood Watch has been issued for your location. Please prepare to leave if told to evacuate by local authorities.



Department of Climate Change and Environment

Vision: “Thailand achieves sustainable growth through a low-carbon economy and strengthened resilience to climate change, with public participation”

Duties

- 01 Policy & Planning**
Develop climate change strategies and action plans.
- 02 Monitoring & Reporting**
Monitor climate actions and prepare national climate reports.
- 03 International Commitments**
Fulfill international climate obligations and negotiations.
- 04 Collaboration & Partnerships**
Collaborate with public, private, and international sectors.
- 05 Data & Information Management**
Collect, analyze, and share climate-related data.
- 06 GHG Accounting**
Develop and support national and local greenhouse gas inventories.
- 07 Public Engagement**
Promote awareness, capacity building, and stakeholder participation.
- 08 Research & Technology**
Conduct research, advance clean technologies, and serve as an environmental knowledge hub.
- 09 Carry out other tasks as assigned**
Execute responsibilities as mandated by law or assigned by the government.

Responsibilities

Climate Policy and Measures

01

Monitoring and Evaluation of Climate Change Implementation

02

Knowledge and Data Services

03

Communicate, Raise Awareness & Empower Communities

04

Public Awareness and Networking

05

Public Awareness and Networking

06

NAP PROCESS

Development, Analysis, and Risks Assessment

1. Climate Products and Services
 - o Climate Projection
 - o Risk Map
 - o Climate Risk Index
 - o LD assessment

THAILAND'S NATIONAL ADAPTATION PLAN (NAP)



Development of Adaptation Plans

1. NAP
2. NAP Action Plan
3. Policy Coherence

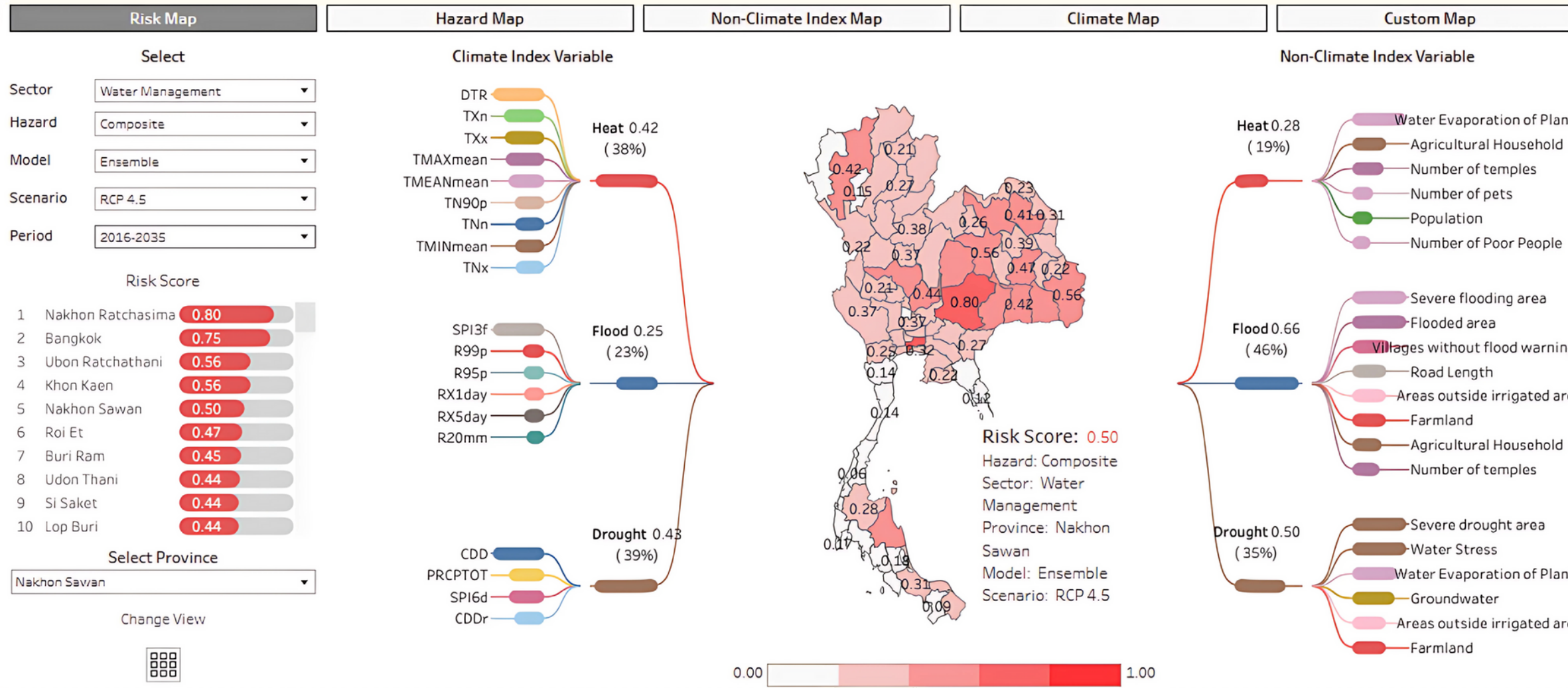
Monitoring, Evaluation, and Review System

1. Adaptation M&E
2. Best/Good practices
3. Adaptation Communication/ BTR/NC/GST

Adaptation Implementation

1. Capacity building
2. Adaptation Finance
3. Technology (domestic and international supports)

Climate Change Risk Maps Database System



Source: Climate change and Environmental Center

The database system can provide maps and information such as Future Climate Projection, Climate Hazard, Non - Climate index, Climate Risk in sectors



Gap & Need

Gap:

- 01 Spatial resolution 25 x 25 km
- 02 Outdated and incomplete socio -economic data at district/sub -district levels

Need:

- 01 Spatial resolution \leq 10 km
- 02 Systematic approach for data collection and database improvement

MOU BETWEEN THE DEPARTMENT OF CLIMATE CHANGE AND ENVIRONMENT AND THE WEATHERNEWS INC (Upcoming Event).



• Areas of Cooperation



Enhancement of area - specific climate hazards in Thailand by sharing high - resolution micro - scale weather data from WNI along with information on flooding, drought and heat and sea surface temperature and sea level rise.



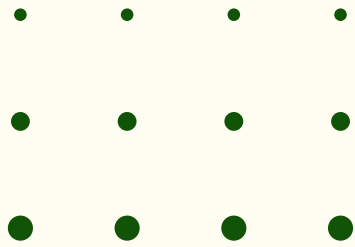
Enhancement of capacity development at DCCE by sharing knowledge and experiences of WNI AI Technology through organizing workshop and site visits, and participating in joint research and development in climate hazards



Sharing DCCE's historical weather -, climate - and environment -related data by DCCE

- Goal: high resolution spatial climate risk map at local level for supply chains' long - term plan





Thank You

Thank you for your attention! Please feel free to ask if there is anything you would like to discuss.

