Thailand’s Climate Change Policies

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OUTLINE

○ Background

○ DRAFT Climate Change Master Plan (2013-2050)

○ Thailand’s NAMAs

○ Challenges
Background

- Area: Total area is about 513,000 km²
- Population: 68.23 million
- Entire land boundary: 5,326 km.
- Location: latitude 5° 37’, 20° 27’ N.
  longitude 97° 22’ 105° 3
- Time zone: UTC+7
- Religion: Buddhism (95%)
- Capital: Bangkok
- Economy: Manufacturing, Agriculture, Tourism
DRAFT Climate Change Master Plan
(2013-2050)
DRAFT Climate Change Master Plan (2014-2050)

Process:

- Establishment of 2 WGs: Adaptation and Mitigation

- DRAFT Master Plan

- Regional Workshops

- Public seminar

- Revise by WGs

- Review by Technical Sub-committee

- Approval by National Committee on Climate Change Policy

NEXT
Step for approving CC Master Plan

- Draft Master Plan ↔ Public Seminar
- Approved by Technical Sub-Committee
- Approved by the National Climate Change Committee
- Approved by the Cabinet
DRAFT Climate Change Master Plan (2013-2050)

**Vision**

Thailand has achieved **climate resilience and low carbon growth** in accordance with sustainable development agenda

**Mission**

1. Build climate resilience for Thailand’s development by mainstreaming climate change adaptation into development planning of all sectors and levels
2. Reduce GHG emission and establish policy instruments to encourage sustainable and low-carbon development
3. Develop appropriate knowledge base, databases and technologies to support climate change adaptation and low-carbon development
4. Enhance capacity and awareness of development partners at all levels to enable effective engagement in executing climate change policy and plan

**Strategy**

**ADAPTATION**
1. Water resource management
2. Agriculture and food security
3. Tourism
4. Public health
5. Natural resource management
6. Settlements and human security

**MITIGATION**
1. Power generation
2. Transport
3. Buildings
4. Industry
5. Waste management
6. Agriculture
7. Forestry
8. Urban Management

**CROSS-CUTTING ISSUES**
1. Database, R&D and technological development
2. Policy instrument development
3. Awareness and capacity building
4. Enhancement of international cooperation
DRAFT Climate Change Master Plan (2013-2050)

Key feature

• Long-term plan (continuous response to long-term issue)
• Comprehensive framework (to guide specific actions)
• Roadmap of short, medium and long-term goals
• Flexibility (rolling plan subject to evaluation every 5 years)
• Emphasis given on establishment of policy instruments
DRAFT Climate Change Master Plan (2013-2050)

ROADMAP OF GOALS

**Short-term (2016)**
- Strategies to support low-carbon and environmental-friendly investment and relevant technology transfer
- Development of climate change strategies at organizational level for relevant organizations

**Medium-term (2020)**
- Technology at national level

**Long-term (2050) & continuous**
- Reduced number of open dumping area
- Increased ratio of farm land with GAP or organic standards
- Decreased ratio of agricultural burning
- Decreased ratio of GHG emission per GDP
- Increased ratio of organizations at central, regional and local levels with climate change related capacity development plans

- Increased ratio of farm land and farmers with irrigation system
- Increased ratio of farm land outside irrigation area with water resource development
- Increased ratio of farmers in hot spots with training on natural disaster management and vocational training
- Increased ratio of farmers with climate insurance
- Decreased ratio of climate-related agricultural loss per agricultural GDP
- Increased ratio of land in natural disaster hot spots with soil and water conservation plan
- Increased ratio of managed surface water and groundwater with surveillance systems
- Reduced number of death casualties from natural disasters
- Reduced number of children under five years of age per 1,000 children
- Increased ratio of low-carbon growth

- Increased ratio of health in hot spots surveillance systems
- Improved national climate index of action and/or relevant technology transfer
- Increased ratio of natural disaster spots with surveillance systems
- Reduced number of death casualties from natural disasters
- Reduced number of children under five years of age per 1,000 children
- Increased ratio of low-carbon growth

- Increased ratio of local level climate change adaptation and/or strategic development
- Increased ratio of managed surface water and groundwater with surveillance systems
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- Increased ratio of low-carbon growth

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**Vulnerability mapping**
- 10% biodiversity protected area and 5,000 rai (about 800 hectares) additional mangrove annually
- 50% of coastal cities with coastal restoration plan
- Development of national climate resilience index
- Establishment of NAMAs and MRV development for smart grid

- Development of forecasting and early warning systems for agricultural and natural disaster hot spots
- Development of climate insurance systems for agriculture
- Establishment of national adaptation fund
- 40% growth in forest cover
- Maximum conservation area for biodiversity and natural disaster hotspots

- Increased ratio of farm land and farmers with irrigation system
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DRAFT Climate Change Master Plan (2014-2050)

Priorities:

ADAPTATION
- Agriculture
- Public Health
- WRM
- Nat Res Mgmt
- Tourism

CROSS CUTTING
- Policy Instruments
- Data, R&D, Technology
- Transport
- Intl Cooperation

MITIGATION
- Power Generation
- Buildings
- Urban Mgmt
- Agri-culture
- Waste Mgmt
- Industry
- Forestry

ADAPTATION

CROSS CUTTING

MITIGATION
Short-term goals (2016)

Adaptation
• Develop comprehensive climate change risk maps, in which key socio-economic and environmental aspects.
• Increase higher proportion of biodiversity conservation areas not less than 19% by increasing mangrove forest at a minimum of 5,000 Rai per year.
• Increase restoration plans of the provinces along the coastlines by 50% of their affected coastal areas.
• Develop climate change adaptive capacity indices for overall economy-wide.

Mitigation
• Develop domestic NAMA and MRV system.
• Integrate economic and legislation mechanisms to encourage low carbon development.
• Improve climate change database system such as GHG inventory system, mitigation registry system, voluntary emission trading schemes.
• Develop national climate change strategies and action plans for both adaptation and mitigation.
Medium-term goals (2020)

Adaptation

• Set up effective forecasting and early warning system for agricultural sector and natural disaster management for nationwide vulnerable areas.
• Establish crop insurance scheme for agricultural productivity that affected by climate change.
• Establish national mechanism for national adaptation fund for recovery from climate change impact, compensation.
• Increase proportion of biodiversity protected areas.

Mitigation

• Increase forest area for 40% of land area.
• Reduce GHG emission about 7-20% by 2020 (Thailand NAMA’s toward 2020)
• Increase proportion of renewable energy to be 25% of total energy consumption.
• Increase green area for municipal area to be 10 m²/capita.
• Apply smart grid technology for energy efficiency.
Long-term goals (2050)

**Adaptation**
- Increase proportion of irrigated area for farmers.
- Develop water resources management for non-irrigated areas.
- Build capacity for natural disaster preparedness in risk areas.
- Increase the number of farmers participating in crop insurance scheme.
- Decrease the proportion of agriculture production damage from CC.

**Mitigation**
- Increase proportion of public transportation.
- Increase energy intensity at least 25% compared to BAU.
- Reduce emission from land transportation.
- Reduce proportion of open burning from agricultural residue.
- Increase proportion of GAP and organic farming.
- Increase low carbon development plans for both national and local government.
Thailand’s NAMAs toward 2020
The BAU Energy Consumption of Thailand from 2005-2020

Final Energy Consumption (ktoe)
## Potential of Domestically and Internationally Supported NAMAs by 2020

<table>
<thead>
<tr>
<th>NAMAs</th>
<th>CO₂ Countermeasures</th>
<th>CO₂ reduction in 2020 (kt-CO₂)</th>
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<tbody>
<tr>
<td><strong>Domestically Supported NAMAs</strong></td>
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<tr>
<td>RE Power (MAC)</td>
<td>2,568</td>
<td></td>
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<tr>
<td>EE Large Industries (MAC &lt; 10$/t-CO₂)</td>
<td>4,762</td>
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<tr>
<td>Building Codes (Large buildings)</td>
<td>5,909</td>
<td></td>
</tr>
<tr>
<td>Transport/Ethanol (AEDP 2012)</td>
<td>5,069</td>
<td></td>
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<tr>
<td>Transport/Biodiesel 1st Gen (AEDP 2012)</td>
<td>5,022</td>
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<tr>
<td><strong>Sub-total</strong></td>
<td><strong>23,330 kt-CO₂</strong></td>
<td><strong>7%</strong></td>
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<tr>
<td><strong>Internationally Supported NAMAs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RE Power (MAC &gt; 10$/t-CO₂ plus AEDP)</td>
<td>13,456</td>
<td></td>
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<tr>
<td>EE Large Industries (MAC &gt; 10$/t-CO₂)</td>
<td>9,743</td>
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<tr>
<td>Transport/Biodiesel 2nd Gen (AEDP)</td>
<td>14,459</td>
<td></td>
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<tr>
<td>Environmental Sustainable Transport</td>
<td>12,000</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>49,658 kt-CO₂</strong></td>
<td><strong>13%</strong></td>
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Sources: DEDE, EPPO, TGO, ONEP, OTP (2012)
Challenges

- Engaging different stakeholders and getting them to agree on Thailand’s NAMAs agenda are difficult.
- Developing NAMA project, based on the existing national policy and plans, linked to other national priorities (such as energy, environment), and also describing and quantifying as accurately as possible are challenging tasks.
- Developing MRV for NAMAs are facing many problems.
- No overlapping among NAMA activities.
Thank you

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