



# **City and Biodiversity in Thailand**

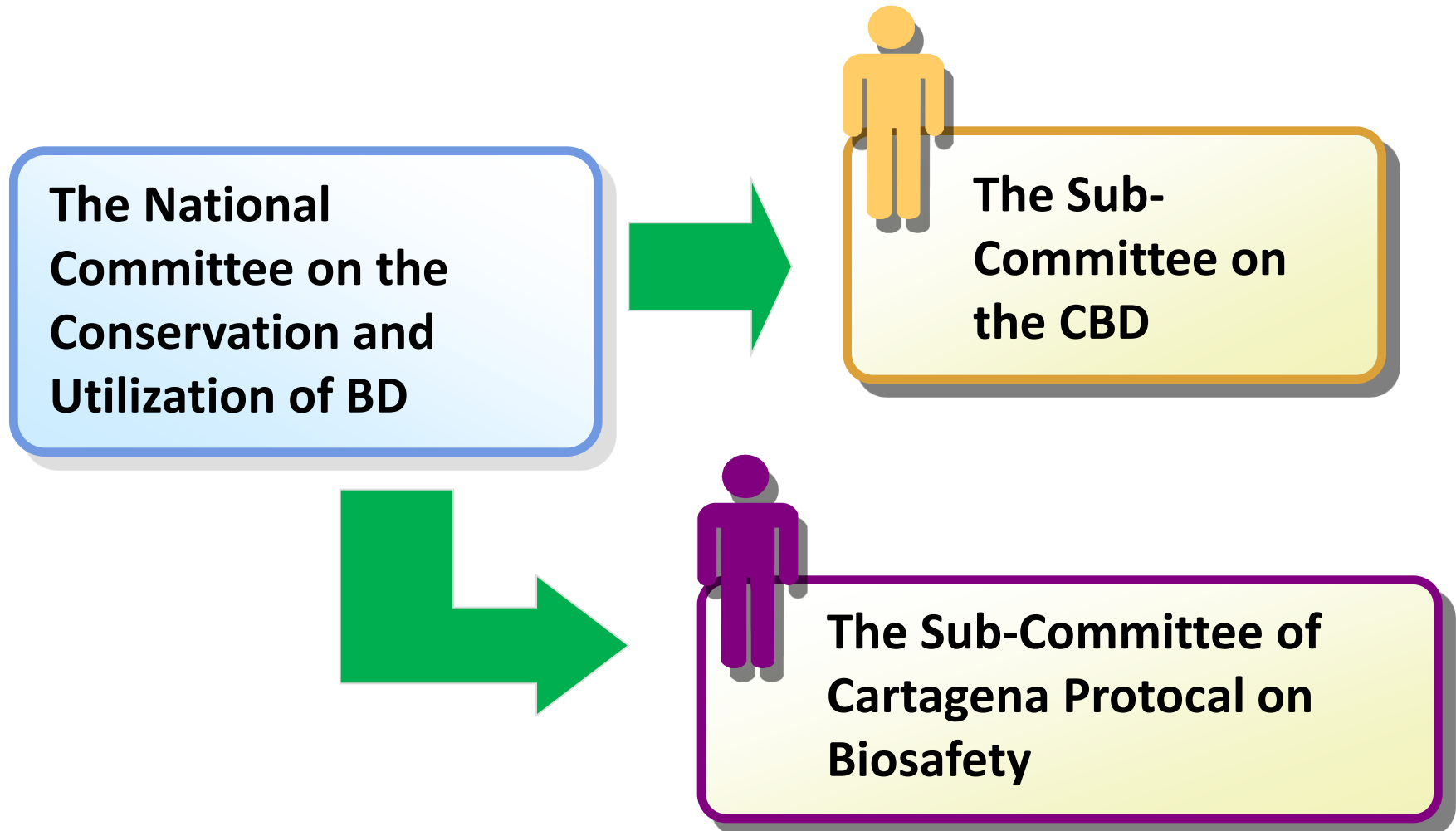
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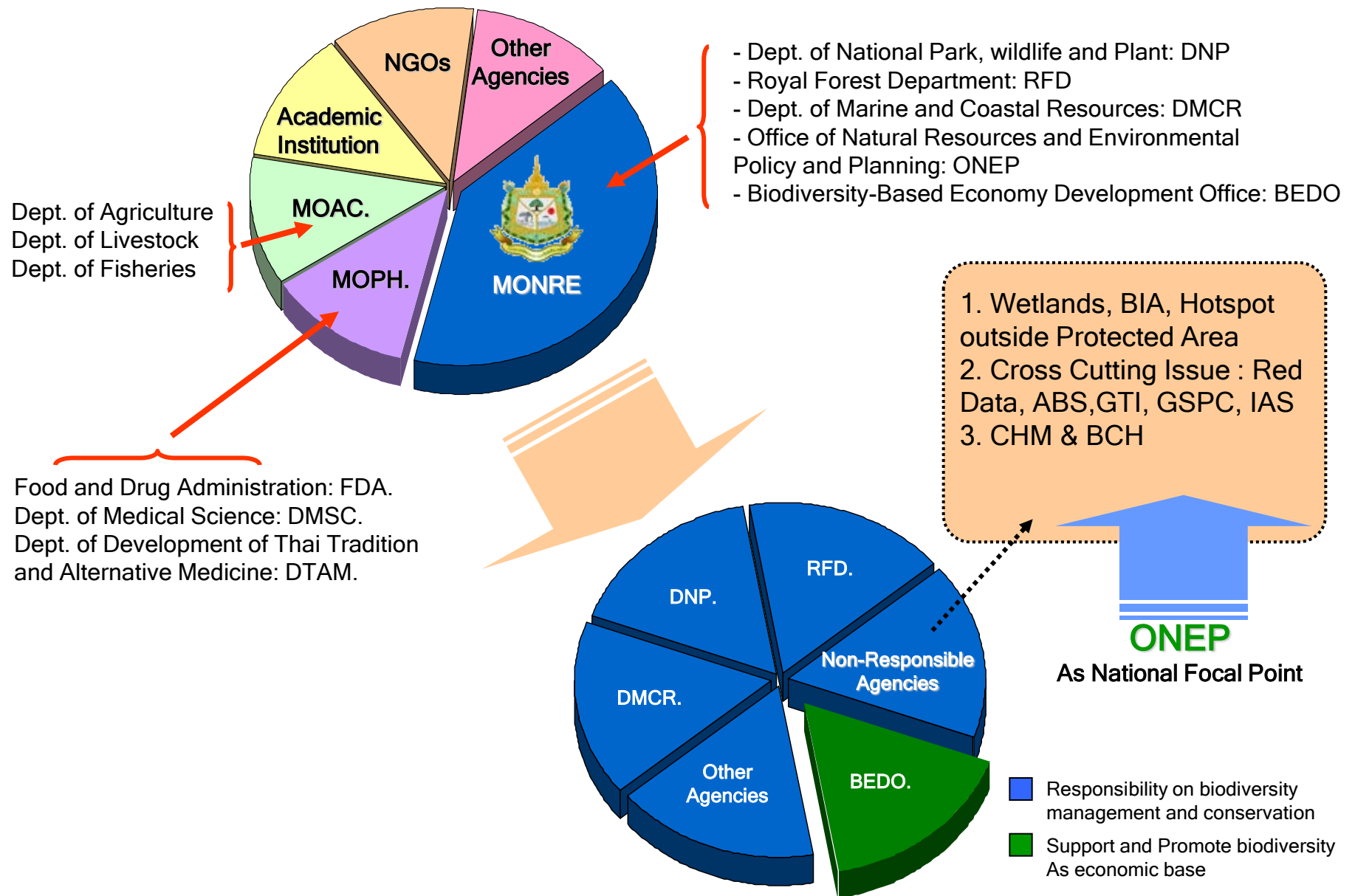


# Contents

- National Implementation on city and biodiversity and ongoing programmes
  - Policy and Action Plan
  - Guideline for biodiversity conservation in the city
  - Tool and guideline support
- Sub-national (Provincial and Municipality) implementation
  - 2-3 Case studies from sub national government on biodiversity

# Coordinating mechanisms for the implementation on the CBD





# National Policy, Strategies and Action Plan for the Conservation and Sustainable Use of Biodiversity

1998-2002



**Approval on:** 15 July 1997

**Goal:** To maintain and conserve ecological process and ecosystems for the conservation and sustainable use of biodiversity

2003-2007



**Approval on:** 11 June 2002


**Goal:** To maintain and conserve ecological process and ecosystem for biodiversity conservation and sustainable use based on the equitable benefit-sharing principle

2008-2012



**Approval on:** 15 January 2008

**Goal:** Significantly Reducing Biodiversity Loss by Year 2010 (2010 Biodiversity Targets)



# **(Draft) Integrated Biodiversity Management Plan 2013-2021**

## **Strategic 1**

**To integrated value of biodiversity and managed by participation at all level**

## **Strategic 2**

**To conserved and restored biodiversity ,(in-situ and ex-situ conservation)**

## **Strategic 3**

**To promote the access and the Fair and Equitable Sharing of Benefits**

## **Strategic 4**

**To develop knowledge and database system of biodiversity**

# Invasive alien species

- Measures to Prevent the Introduction, Control or Eradicate Alien Species
  - Approved by cabinet resolution on 22<sup>nd</sup> April 2009
  - There are 4 measures and 15 guideline, definitions and standard for categorized alien species and lists of alien species.

**82** Invasive alien species

**52** Nearly invasive species

**49** Invasive alien species in other countries but have not invade Thailand yet

**Not invade Thailand**

## The 4 operative measures on the following issues:

- The Alien species management.
- The prevention and monitoring of AS
- The promotion of studies and research regarding AS
- Education, communication and public awareness on AS issues.



# (Draft) Guideline and measures of biodiversity conservation in the city

- There are **3 guidelines 7 measures** of biodiversity conservation for city and municipality.
  - To encourage the biodiversity conservation at city and municipality level by using CEPA
  - To mainstream biodiversity issues to development plan
  - To apply the policy and/or economic tools to support biodiversity conservation



# Problem and obstacles

- Understanding, knowledge related to the value of ecosystem service and national commitment with Global issues.
- Law enforcement
- Impact of urban development to ecosystem in the city or local area
- Low priority of policy
- Linkage between organization.



# Ongoing programming at national level

**City and Biodiversity Index – *Singapore Index***

**Low Carbon Municipality**

**Invasive Alien Species**

**Guideline / Tools**

# The promotion of low carbon city across municipalities in celebration of his majesty the king's 84 birthday



## Mixed deciduous forest ecosystem



1. Participatory-approach survey program for biodiversity conservation at Doi Saken and Doi Prabaht community forests



### Outcomes...

- Short, middle, long-term plan for Doi Saken forest conservation with plant, wildlife, and insect survey report for public distribution
- Biodiversity conservation and learning center, and Doi Saken forest indigenous plant nursery for learning and propagation purpose
- Establishment of "Doi Prabaht Bird Watching Club" and activist group on environmental conservation of Doi Prabaht community



What we have been doing to conserve

the urban ecosystems and biodiversity

There are 4 ecosystems in Chiang Rai city where conservation activities take place in each ecosystem i.e.

## Urban ecosystem



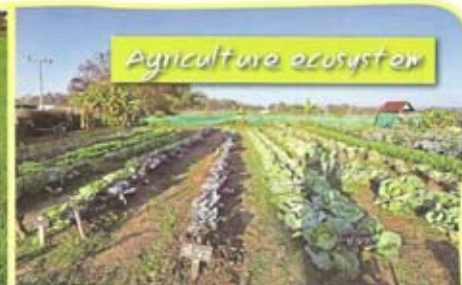
1. Research on lichens survey in 4 municipal public parks for the indication of urban air quality
2. Large and admirable tree competition campaign
3. Urban agriculture and botanical garden in schools
4. Banana diversity conservation program



### Outcomes...

- Over 500 species of lichens found in public parks and the assessment report of using lichens as air quality indicator in Chiang Rai urban area
- Over 50 candidate trees for the competition, and 12 out of those won the prize as large and admirable trees of this year (3 categories: personal premise, corporate area, and community area)
- There are 5 out of 8 municipal schools that owns a farming plots/or botanical garden, some received royal support in plant genetics conservation initiative under her patronage of Princess Mahasirindhorn by having "School Botanical Garden" sign board
- Over 108 banana species found at present

## Agriculture ecosystem



1. Program to promote the urban organic farming and using micro-organism to eradicate paddy stubble to replace field burning
2. Indigenous vegetable and traditional food consumption conservation and promotion program

### Outcomes...

- Over 400 Rais of paddy field area joining the program using micro-organism to eradicate paddy stubble instead of burning
- Daily community market for indigenous vegetable and traditional food, vegetable supply daily to the province's general hospital, and product sales at a local mall as local community products



## Wetland ecosystem



1. Biodiversity conservation and landscape development program at Nong Peung
2. Ecosystem development and cultural promotion program in the inner HoH Noi river
3. Biodiversity inventory program in HoH river
4. Water quality monitoring program in municipal wastewater treatment, using invertebrates as indicator
5. Biogas production from slaughterhouse waste and wastewater treatment by constructed wetland project

### Outcomes...

- Biodiversity survey report (aquatic plant and aquatic animal) in Nong Peung swamp and Mae Kok river
- The inner Mae Kok Noi river development plan with participation from all sectors
- Alternative energy from biogas used as fuel in municipal slaughterhouse
- Learning center at slaughterhouse constructed wetland



# Workshop on the monitoring of implementation of cabinet resolution on IAS



- Nakorn Pathom (Water Hyacinth)
  - Lack of management budget (machine, man)
  - Lack of awareness from the people to take Care the river
  - Coordination between related agency
  - Policy maker view
- Udonthani Province (Golden applesnail)








# Bio Kit for kids



- Insect
- Shell
- Rare Marine Species
- Alien species
- Birds
- Fish
- Crab



# **The key entry point for integrating biodiversity in urban area**

-  **Communicate to policy decision making**
-  **Overlapping function of agencies**
-  **Budget support/ management**
-  **Application policy into practice at local level**
-  **Communication, Participation and Awareness**