



How Disaster Risk Reduction Investment Account for Development

Arkhom Termpittayapaisith

Secretary-General

Office of the National Economic and Social Development Board (NESDB)



Tuesday 24th June, 2014, 12.30-14.00 p.m.
Centara Grand at Central World, Bangkok, Thailand

Risk prone area in Asia Pacific

85% of people exposed to earthquakes, cyclones, floods and droughts live in developing countries

In the past 10 years, the average disaster damage cost account for 30-190 US\$ million of which 60% is in developing country.

Source: Gill, I, and H. Kharas, *An East Asian Renaissance: Ideas for Economic Growth* (World Bank, 2007)



Asia Pacific frequently counters with flood where the loss of life is highly reported

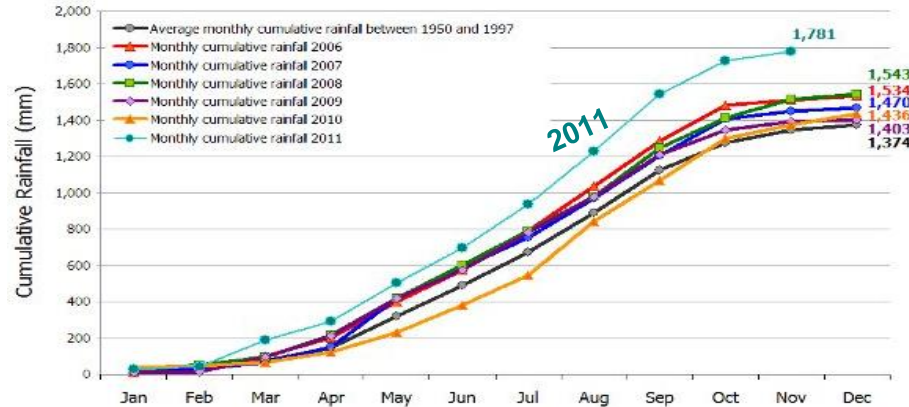
The poor resides near by costal cities in Eastern Asian Continent prone to face higher risk from natural disaster

In terms of population, Bangkok was ranked 7 from 20 counties that prone to flood risk and ranked 10 in terms of asset value

2011 Thailand Flood

In 2011, Thailand encountered with the worst floods crisis in 70 years due to heavy and widespread rainfall in major areas of the country during rainy season influenced by monsoon storms. The worst floods were in October and November, causing tremendous losses to people and affecting the economy.

CAUSES



Source: www.thaiwater.net

Unusually High Accumulated Rainfall

- The accumulated precipitation from January to October 2011 was **35% higher than average** as a consequence of La Niña, which brought five heavy tropical storms and monsoons.
- Consequently, the peak flows of rivers exceeded their capacity.

IMPACTS



67 out of 77 provinces were affected



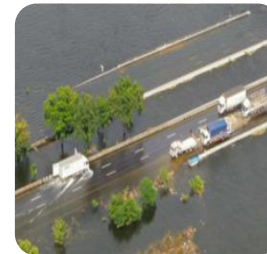
4.9 million acres of agricultural land were flooded



13.4 million people were affected



2,329 houses were completely destroyed.
96,833 houses were partially damaged

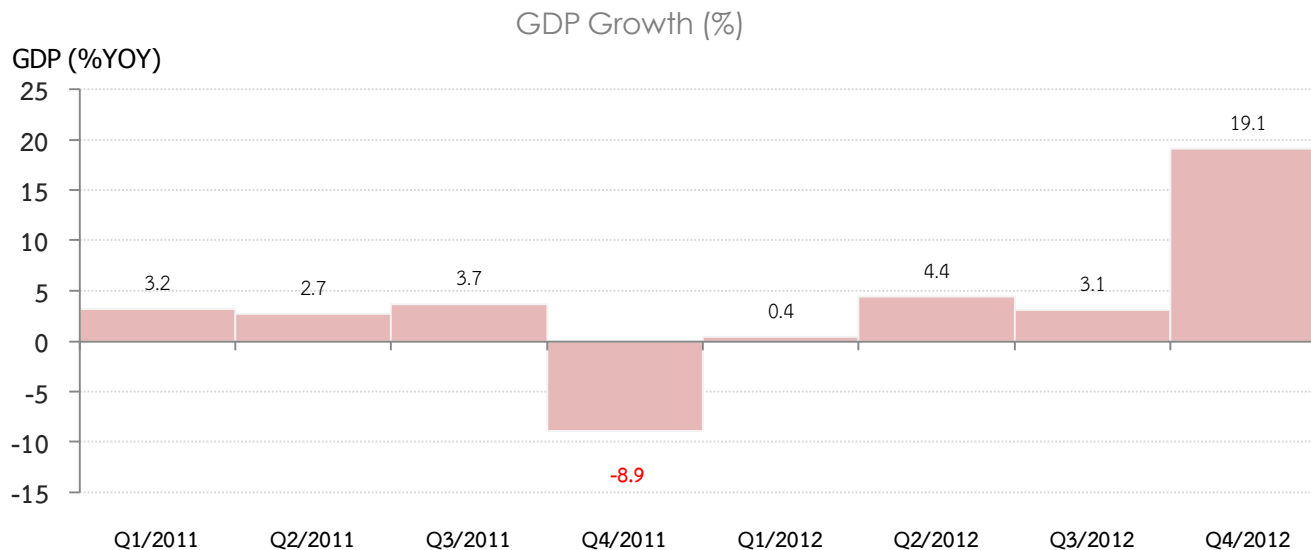


Transport infrastructure was damaged



7 industrial estates (839 factories) were flooded.

2011 Thailand Flood: Impact on GDP



Source: NESDB GDP Quarter 4-2011 Report

Thailand: Impact of
2011 Flood

In the fourth quarter of 2011, Thai economy contracted by 8.9% compared to a 3.7% growth in the third quarter, mainly due to severe flood during October – November 2011.

The flood damages in agricultural, manufacturing and service sectors affected in the reduction of 328,154 Mil. Baht of Thailand's GDP (current price) and contributed to 3.7 percent decrease in economic growth. As a result, Thailand's overall economic growth in 2011 recorded merely 0.1 percent, which was lower than the initial estimated growth of 3.8 percent.

Flood Damages : Social Impacts

Summary of Damage and Losses in Social Sector

Health Sector



Damage: 600 public sector health facilities, provincial health offices and district health offices were damaged. Total damage is estimated at 1.68 billion baht.

Losses: approximately 2.1 billion baht

Housing Sector



Damage: 1.96 million houses were affected, about 19,000 of which were totally damaged. Total damage is estimated at 45.9 billion baht.

Losses: approximately 37.9 billion baht

Education Sector



Damage: 2,934 educational institutions were fully or partially damaged. Around 1,435,378 students were affected. Total damage is estimated at 13.1 billion baht.

Losses: approximately 1.8 billion baht

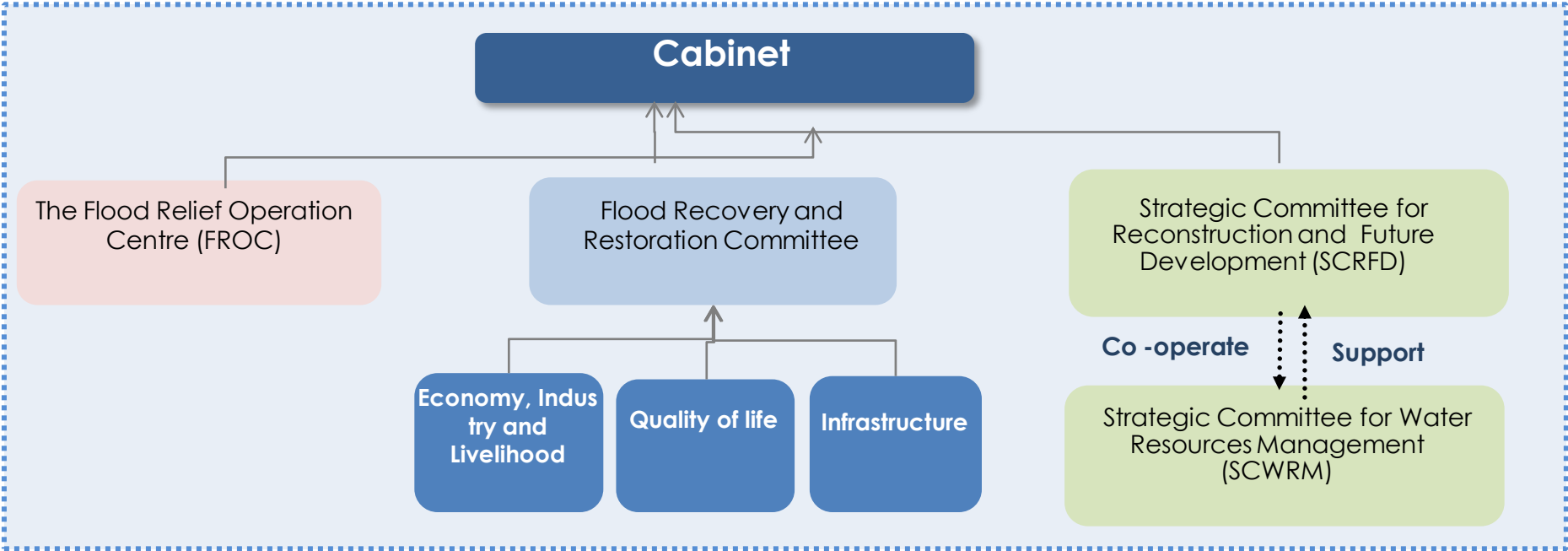
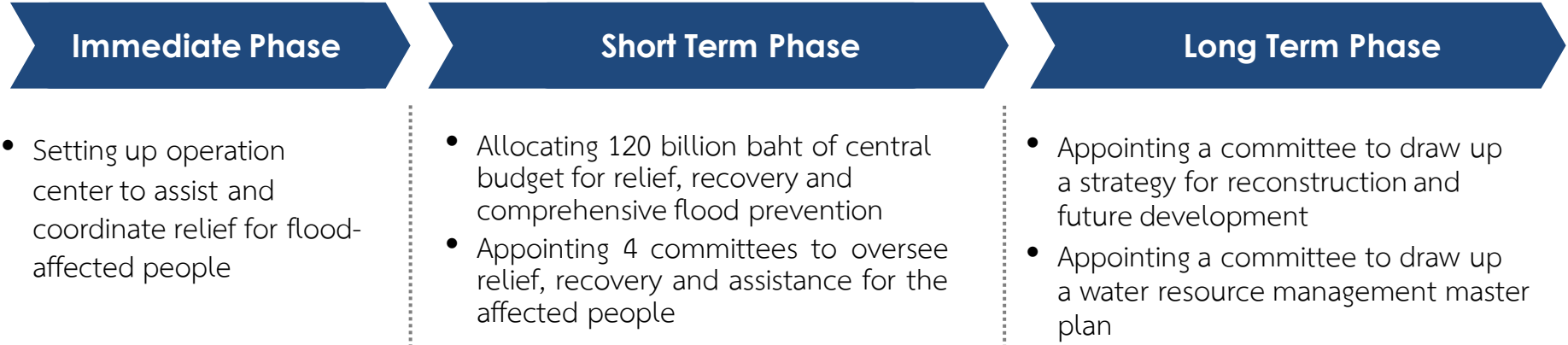
Cultural Heritage



Damage: More than 500 historical sites were damaged. Religious authorities & communities reported damage to 1,532 of their temples and support buildings. Total damage is estimated at 4.4 billion baht.

Losses: approximately 3.1 billion baht

Thailand Responses to 2011 Flood Crisis



Lesson Learned from 2011 Flood

Beside from budgeting, water resource management must take into account:

1

**Integrated and
Systematic Water
Resource
Management**

Management has to consider linkage between upper, middle, to lower basins and it has to be carried out by a single command authority instead of many water-related organizations.

2

**Preparedness for
unexpected
flood**

All stakeholders must be ready for any unexpected flood at all time with effective early warning systems under a clear responsible organization.

3

**Public participation
in all activities is
essential**

Public participation must be organized at all steps of water management from formulation of master plan to the project levels including monitoring and evaluation.

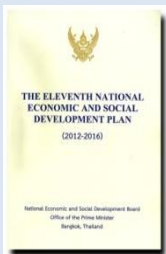
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**Laws and
regulations must
be updated**

Laws and regulations concerning public land encroachment, especially waterway must be updated and strictly enforced.



Conceptual Framework for Next Phase of Water Management



Conceptual Framework

Integrated Approach

Water resource management of the country needs an integrated approach, with all relevant agencies working together through an efficient management mechanism.

Benefits to people and country as first priority

Effects the projects have on the people needs to be taken into account, such as people's relocation, occupation, and income.

Creating understanding

Project implementation needs to inform stakeholders about relevant information prior to and during implementation with simple and straight forward language.

Clear direction on management

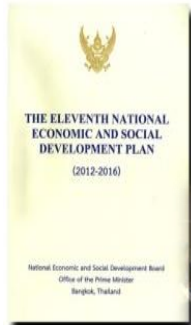
Short-term, medium-term, and long-term plans are needed (1-year, 5-year, and 10-year plans) with clearly stated objectives and the activities and implementation in each year, as well as public relations to ensure information dissemination.

Direction for the Next Phase



Restructuring of water resource management approach

National Council for Peace and Order (NCPO) laid down a new structure for water resource management, with a clear and concise chain of command, covering all relevant areas, so that water resource management will be integrated and efficient.



Integrated water resource management

Prioritizing water resource management projects to be in line with the 11th National Economic and Social Development Plan (2012-2016) and to ensure that the Thai people will benefit the most. Moreover, selected projects must be ready and do not cause financial obligation for future governments. Management of water resource at a country and a basin level will be coordinated.



The 10th National Economic and Social Development Plan (2007-2011)

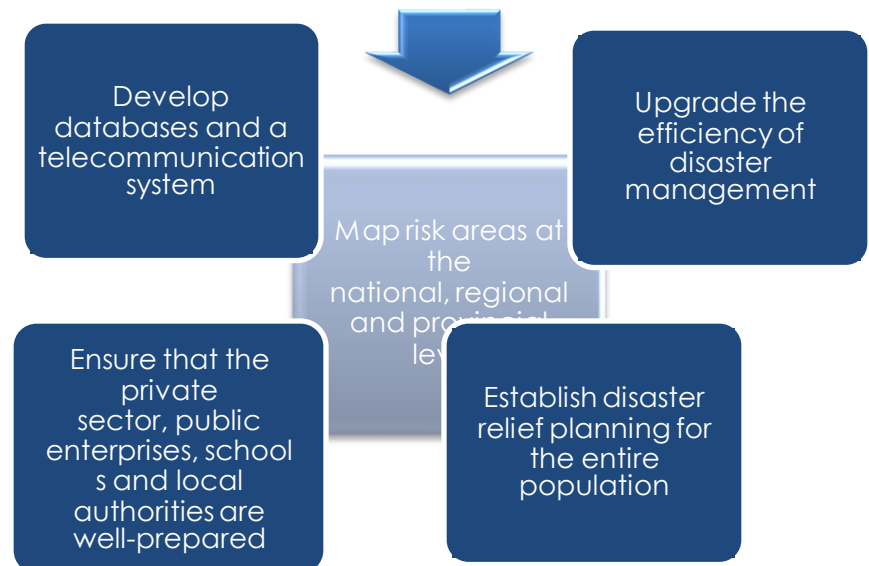
"Upgrade disaster management and prevention system ... develop an advance alarming system, emergency rescue and impact prevention"

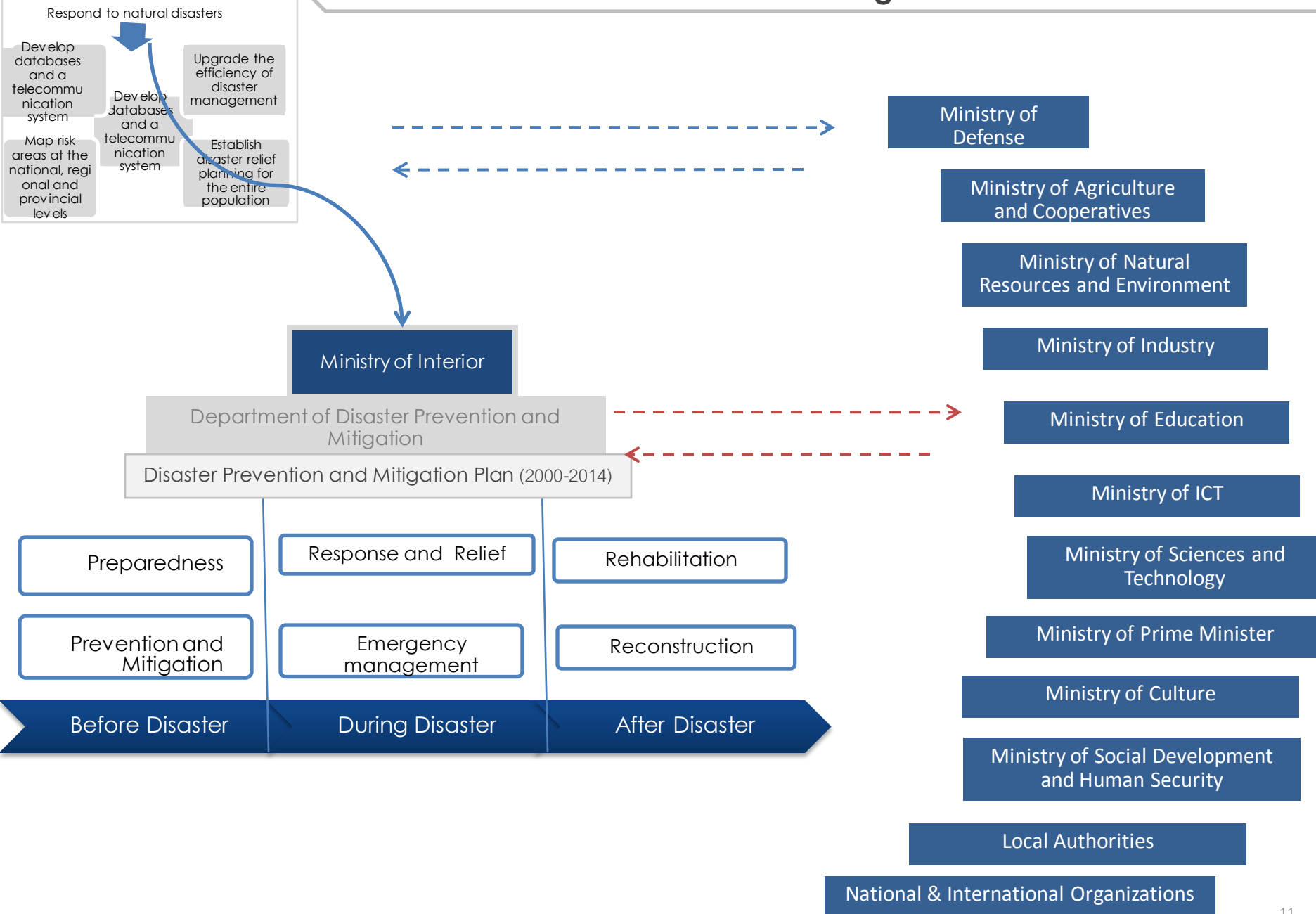


Develop a Disaster Prevention and Mitigation Plan

The 11th National Economic and Social Development Plan (2012-2016)

Respond to natural disasters



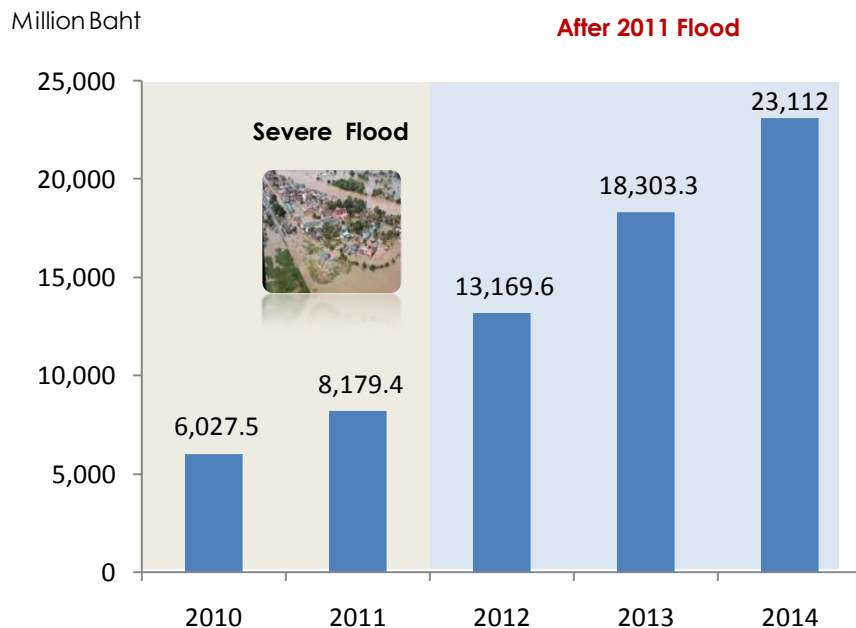


Disaster Management in Thailand

Trend of Budget Allocation: After severe flood in 2011, Thai government has allocated more budget on disaster management including recovery, restoration and prevention, with approximately 5 percent increase annually during Fiscal Year 2010-2014. Key projects in 2014 include construction of river bank prevention dam for preventing flood and soil erosion, construction of flood prevention system in major communities, flood recovery and restoration in flood-hit area, and development of warning system and disaster prevention

Technical assistance: JICA conducted a study on The Comprehensive Flood Management Plan for the Chao Phraya River Basin. Now asking TA from JICA on Disaster Risk Management and Business Continuity Plan (BCP) is in the process

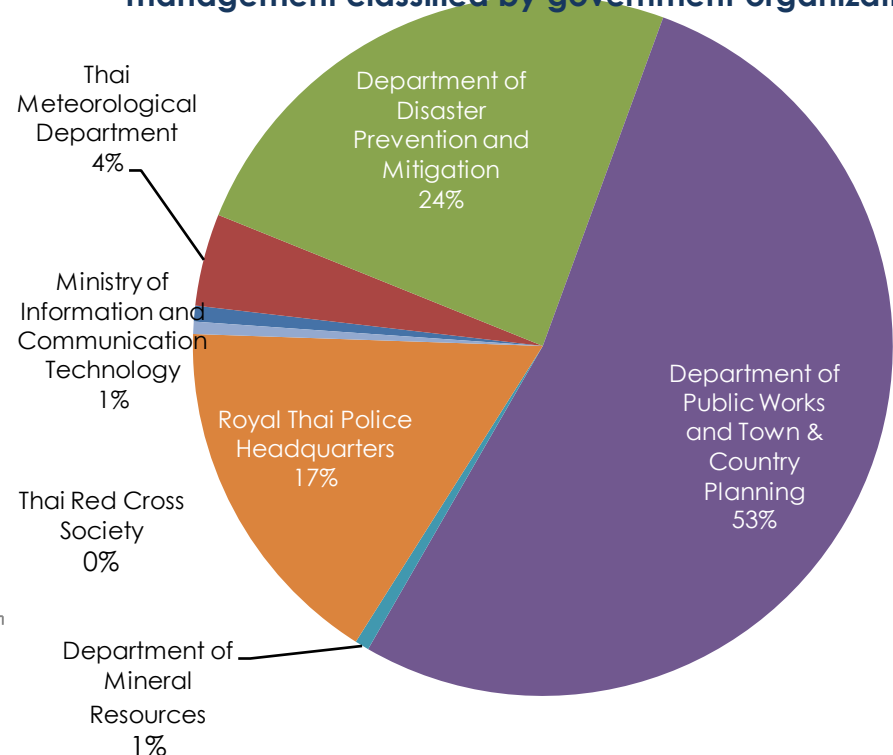
Budget on Disaster Management



Source: GF MIS & NESDB

Note: Fiscal Year 2013 data is budget allocation

Fiscal Year 2014 budget allocation for disaster management classified by government organization





Thank you

www.nesdb.go.th