


Water and Flood Management Policy in Thailand

2012 JSCE Annual Meeting International Program



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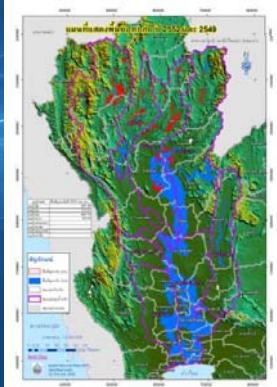
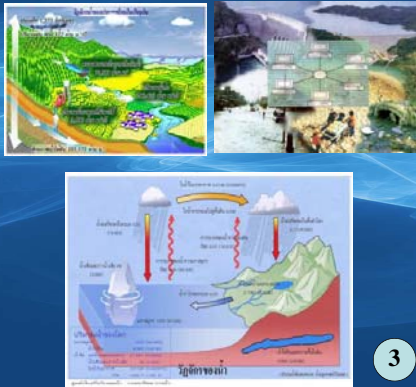
Content.

- **Current Situation of Water Resources in Thailand**
- **Water and Flood Management Strategy**
- **Action Plan for Flood Prevention and Mitigation : Urgent and Long Term Plan**
- **Laws and Institutions**

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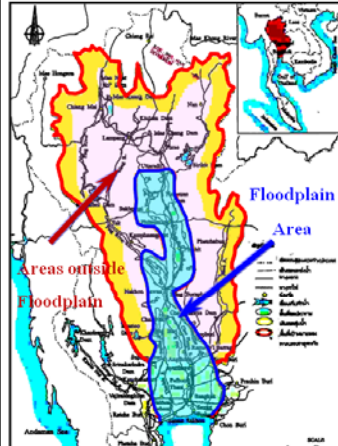
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Current Situation of Water Resources in Thailand

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General Condition of Chao-Phraya River Basin: 158,000 km²



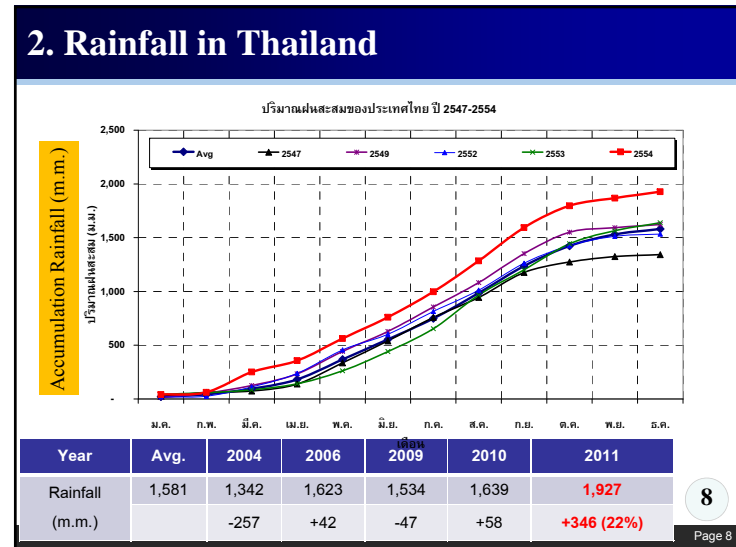
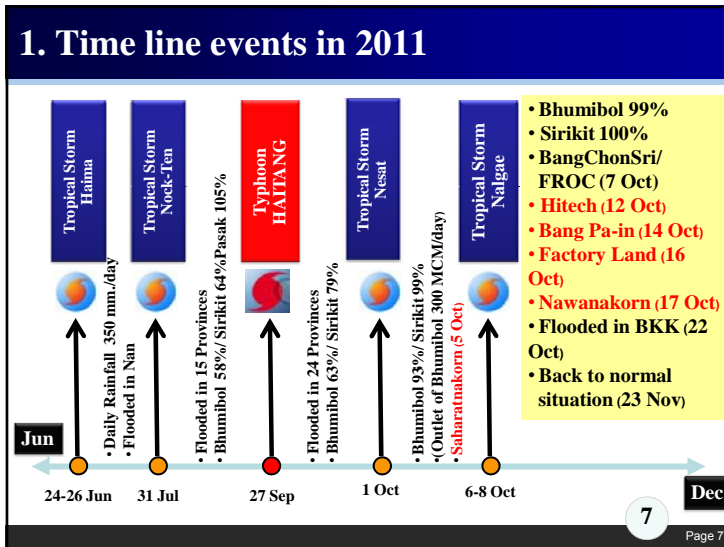
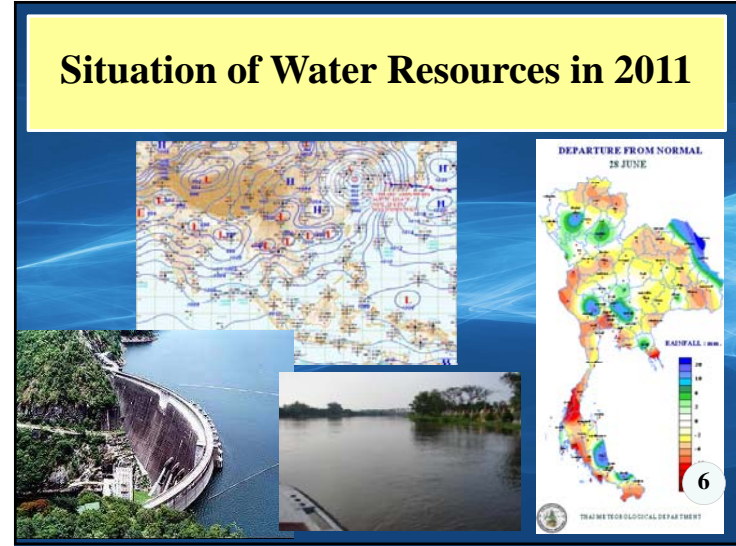
➤ **Floodplain 35,000 km²**

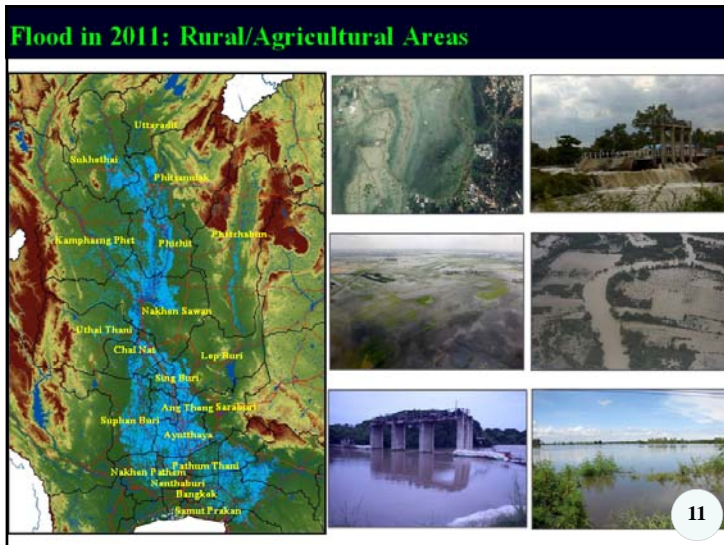
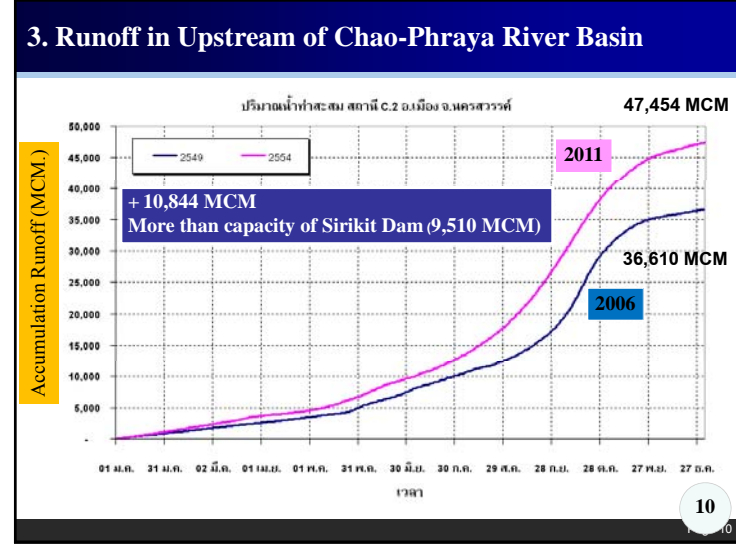
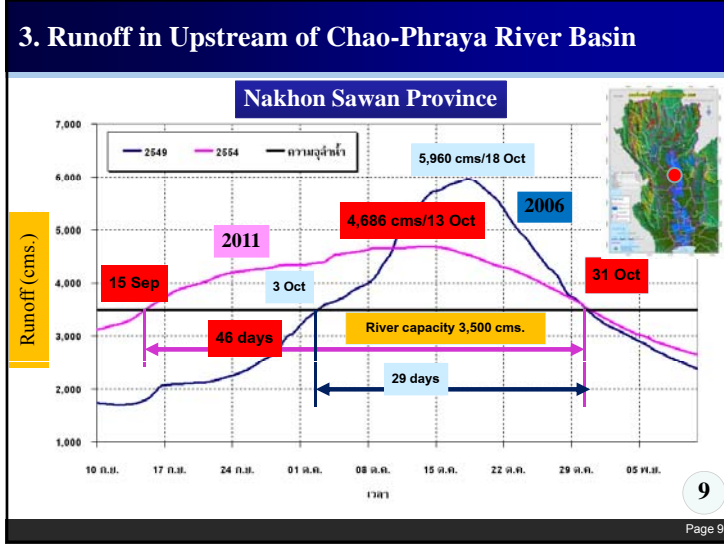
➤ **Areas outside Floodplain 123,000 km²**

➤ **Population 25 million**

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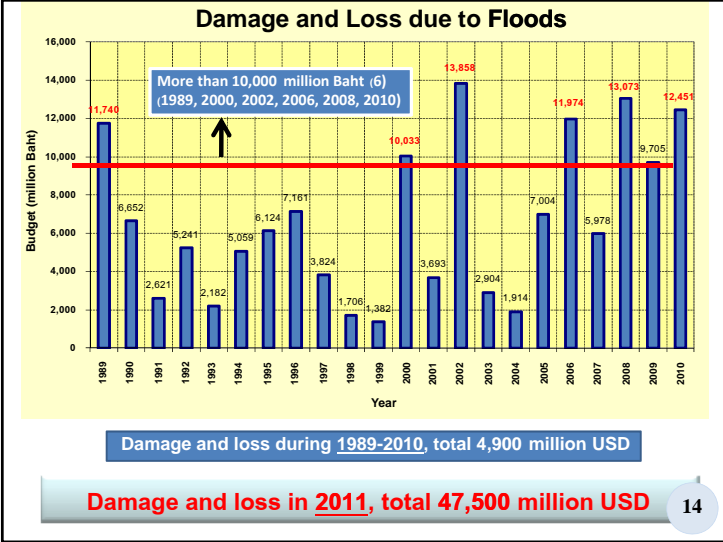
Source: Strategic Formulation Committee for Water Resources Management (SCWRM)





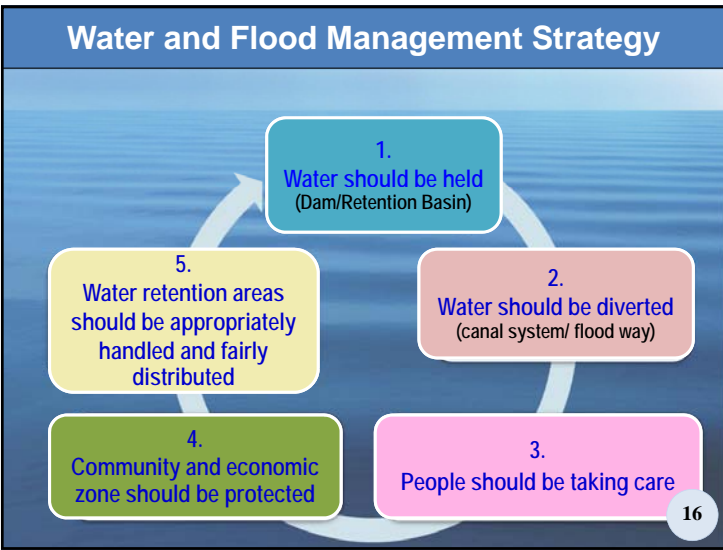
Flood in 2011: Industrial Areas and Major Infrastructure

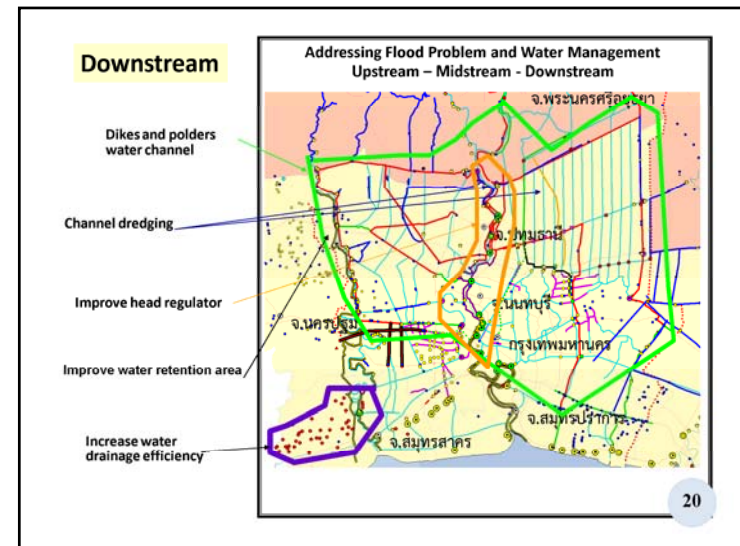
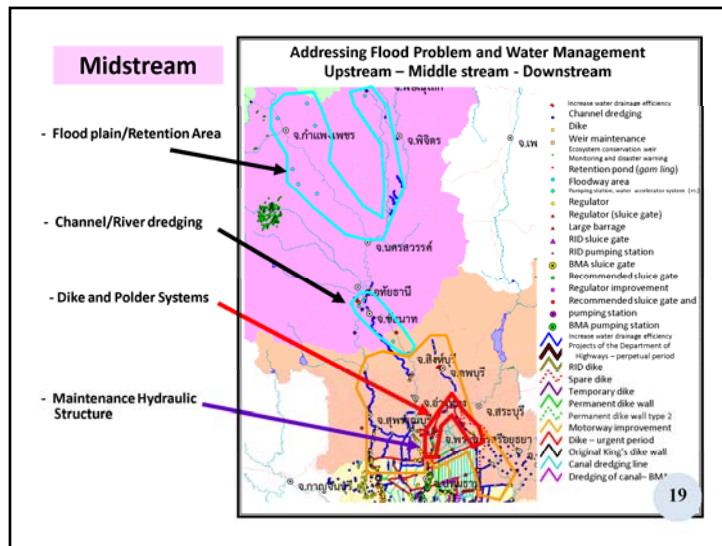
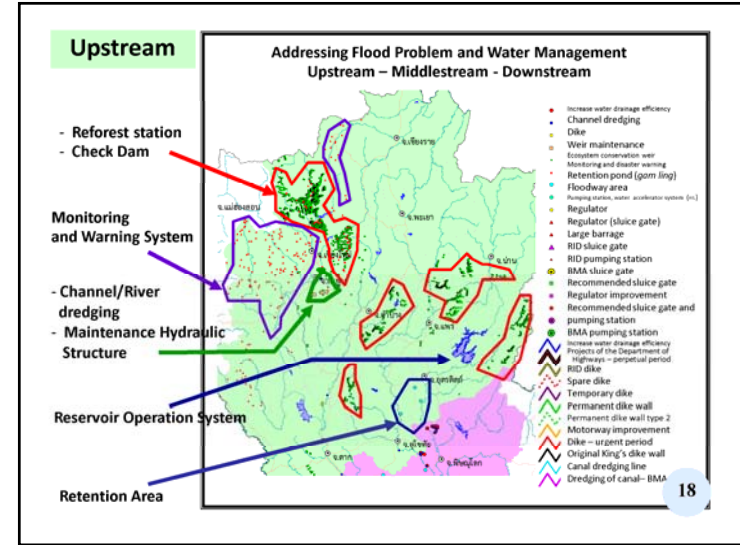
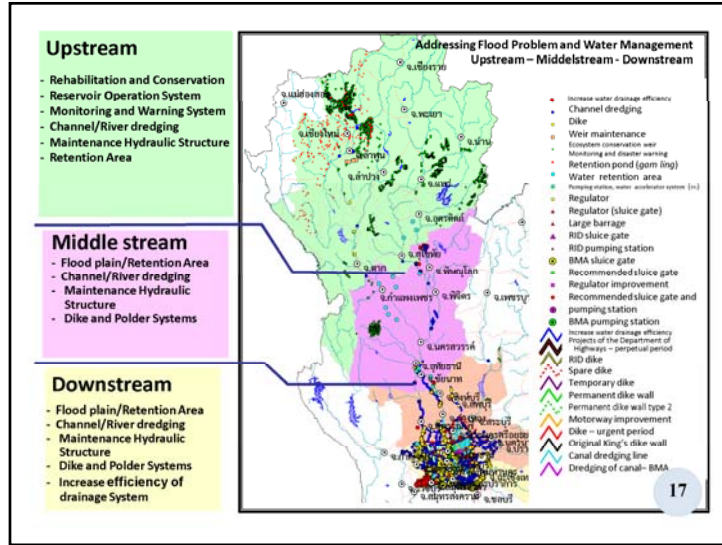
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Water and Flood Management Strategy

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Action Plan for Flood Prevention and Mitigation : Urgent and Long Term Plan

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Action Plan for the Prevention and Mitigation of Floods : Urgent Period

Objectives

- To prevent and mitigate urgent flood problems, and to formulate a solution to address their short-term and long-term effects
- To improve the efficiency of flood diversion structure, canal, floodway, dike, as well as the drainage system and flood management during critical periods
- To increase forecasting and warning capability and database efficiency

6 Work plans

- National Work Plan on Management of Upstream and Major Dams
- Work Plan on Rehabilitation and Improvement of Existing and Planning Constructed Structure
- Work Plan on Development of Database, Forecasting and Warning System
- Work Plan on Specific Area Handling
- Work Plan on Identification of Water Retaining Areas and Measures to Support Flood Victims due to Use of such Retaining Areas
- Work Plan on Institution Improvement for Water Management

Action Plan for the Prevention and Mitigation of Floods : Urgent Period

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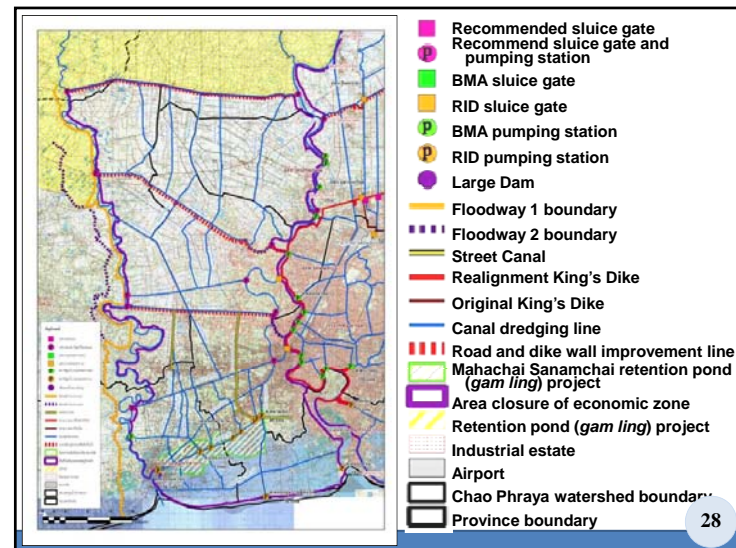
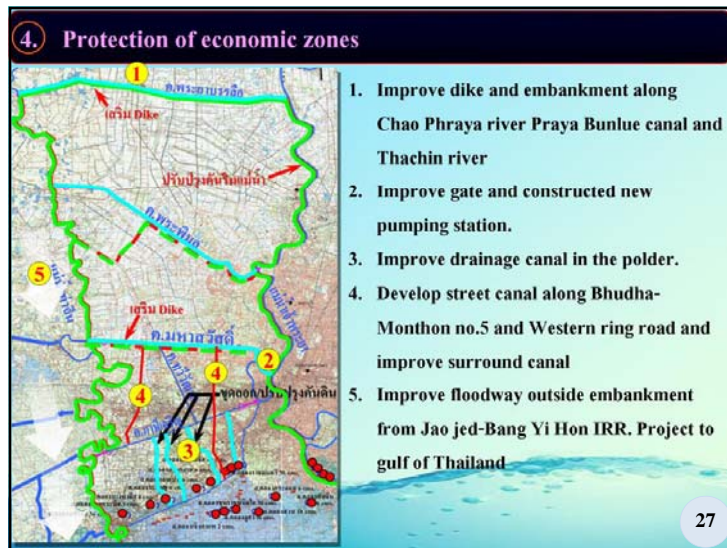
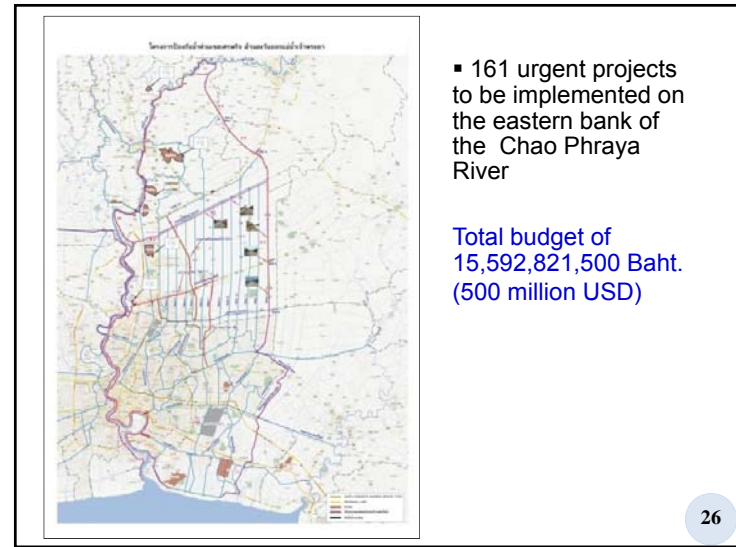
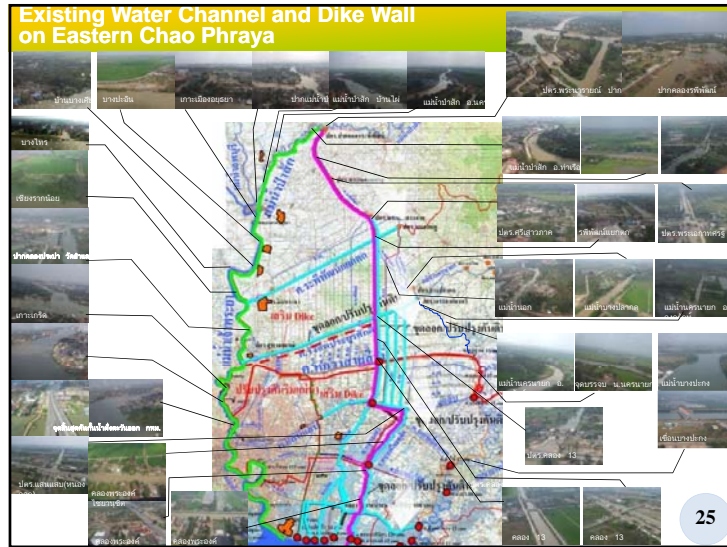
4. Protection of economic zones

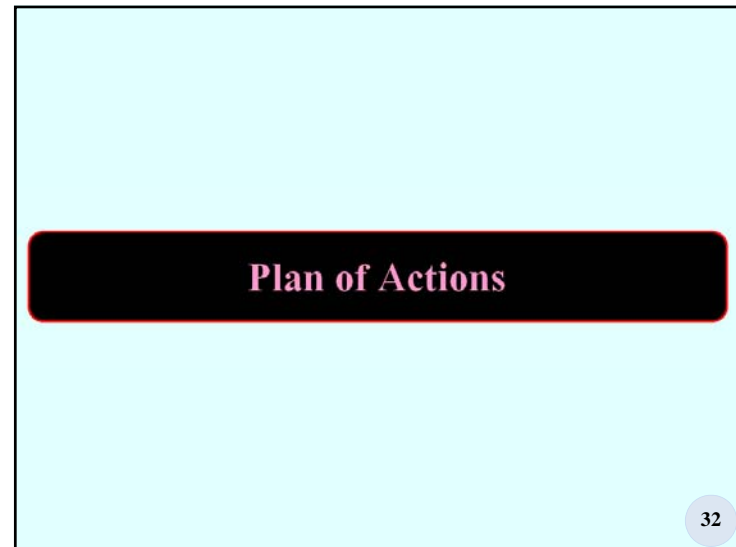
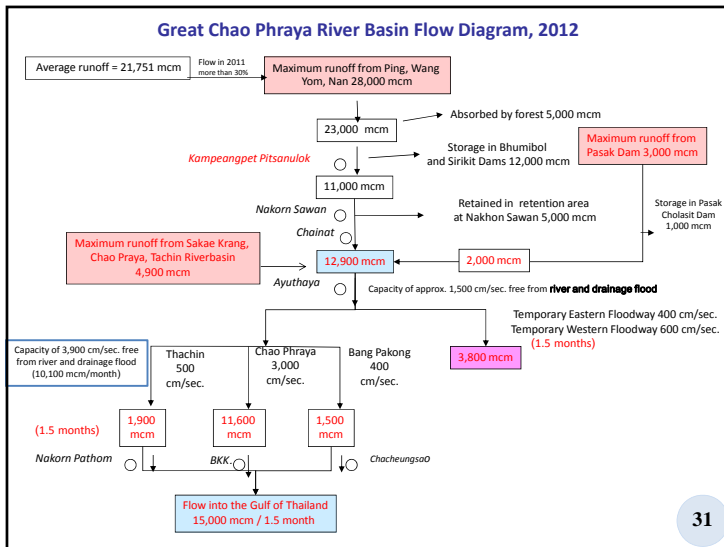
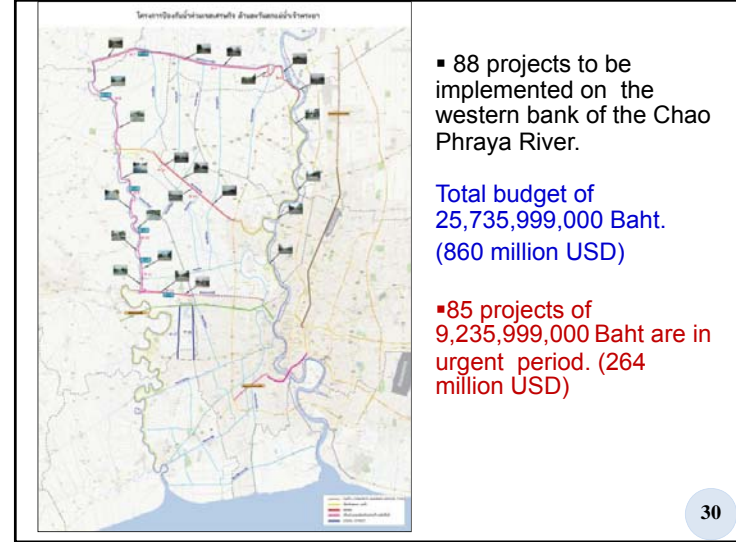
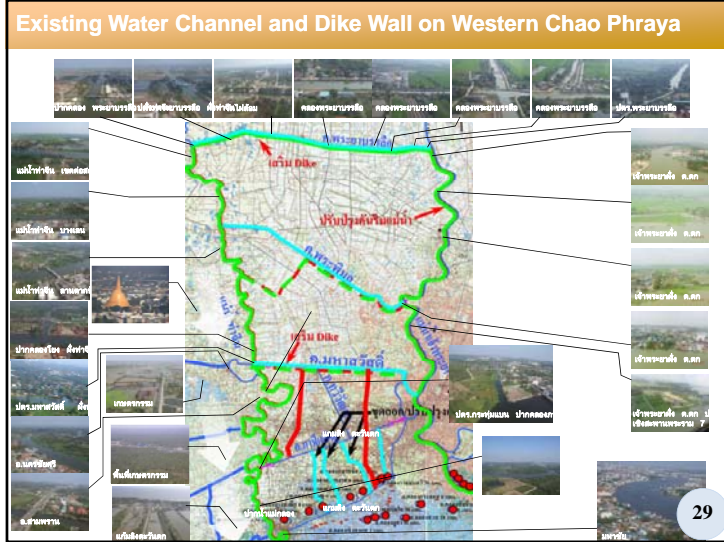
1. Improve dike and embankment along Chao Phraya and Pasak river and along Rapee-phat Klong13 and Pra-ong Chaiyanuchit canal
2. Improve gate and constructed new pumping station.
3. Improve drainage canal in the polder.
4. Improve and shift King's dike to Rungsit canal and Nimitre-Mai Rd. and constructed more gate and pumping station.
5. Improve floodway outside embankment from Pasak river to gulf of Thailand (along Rapee-phat Klong13 and Pra-ong Chaiyanuchit canal)

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- Recommended sluice gate
- Recommend sluice gate and pumping station
- BMA sluice gate
- RID sluice gate
- BMA pumping station
- RID pumping station
- Large Dam
- Floodway 1 boundary
- Floodway 2 boundary
- Street Canal
- Realignment King's Dike
- Original King's Dike
- Canal dredging line
- Road and dike wall improvement line
- Mahachai Sanamchai retention pond (gam ling) project
- Area closure of economic zone
- Retention pond (gam ling) project
- Industrial estate
- Airport
- Chao Phraya watershed boundary
- Province boundary

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Plan of Actions for Chao-Phraya River Basin

Programme	Project	Budget (MB)	Timeframe (years)	Responsible Agency
1. Forest and Ecological System Rehabilitation and Conservation	1. Rehabilitation and conservation of upstream soil of Ping, Wang, Yom, Nan, Sakaekrang, Tachine and Pa-Sak Rivers by reforestation, check dam construction, soil conservation	10,000	from 2012 onward	Ministry of Natural Resources and Environment / Ministry of Agriculture and Cooperative
	2. Construction of Reservoirs in Ping, Yom, Sakaekrang, Nan and Pa-Sak River Basins	50,000	from 2012 onward	

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Plan of Actions for Chao-Phraya River Basin

Programme	Project	Budget (MB)	Timeframe (years)	Responsible Agency
2. Major Dams' Water Management Plan and Annual Water Management Plan	Develop water management plans for major dams in important river basins and develop water management plans in different scenarios, including	Normal Budget	From 2012 onward	Department of Royal Irrigation/EGAT

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Plan of Actions for Chao-Phraya River Basin

Programme	Project	Budget (MB)	Timeframe (years)	Responsible Agency
3. Restoration and Improvement of existing infrastructure	1. Construction of floodway/flood diversion channel, with the minimum capacity of 1500 m ³ /sec. and relevant infrastructure, to diver flood from Pa-Sak and Chao-Phraya Rivers to the East, or both East and West	120,000	From 2012 onward	Ministry of Agriculture and Cooperative/Ministry of Natural Resources and Environment/Ministry of Interior/Ministry of Transport/Office of the Prime Minister
	2. Land use zoning/ Land development regulation/ Flood protection structure for	50,000	From 2012 onward	
	3. Restoration of major waterways and flood protection walls	7,000	from 2012 onward	

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Plan of Actions for Chao-Phraya River Basin

Programme	Project	Budget (MB)	Timeframe (years)	Responsible Agency
4. Database and forecast and early warning system	Develop database and forecast and early warning system, including establishing necessary institutions and rules and promoting public participation	3,000	From 2012 onward	Office of the Prime Minister

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Plan of Actions for Chao-Praya River Basin

Programme	Project	Budget (MB)	Timeframe (years)	Responsible Agency
5. Flood preparedness plans for specific areas	Increase efficiency of water feeding for pumping stations and flood diversion tunnel, including restoring by-part cannel, King's dikes and flood protection walls along Chao-Praya River	Normal Budget	From 2012 onward	Ministry of Interior/ Ministry of Agriculture and Cooperative, Ministry of Natural Resources and Environment, Ministry of Transport

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Plan of Actions for Chao-Phraya River Basin

Programme	Project	Budget (MB)	Timeframe (years)	Responsible Agency
6. Designation of retarding basins and formulation of compensation regime	Transform 2 million rai of irrigated land into retarding basin (Kam Ling) in order to absorb 6,000-10,000 million m ³ and to enable 1 seasonal crop and 2 non-seasonal crops of rice annually - e.g. in Pisanuloke Irrigation District, Chao-Praya Yai Projects, or using natural	60,000	From 2012 onward	Ministry of Agriculture and Cooperative/ Ministry of Natural Resources and Environment/ Ministry of Interior

625 rai = 1 sq.km.

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Plan of Actions for Chao-Phraya River Basin

Programme	Project	Budget (MB)	Timeframe (years)	Responsible Agency
7. Development of national institution for integrated water resources management	<p>1. On an interim basis, establish an ad hoc committee to manage the Plan of Actions, with the mandate to make orders and follow up the</p> <p>2. Establish a national committee for integrated water resources management</p>	Normal Budget	From 2012 onward	Office of the Prime Minister/ other relevant agencies

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Plan of Actions for Chao-Phraya River Basin

Programme	Project	Budget (MB)	Timeframe (years)	Responsible Agency
8. Promotion of public awareness, support and participation in flood management	Educate, inform, make people aware of and understand the progress made by the government in terms of water management plan. Promote public participation, e.g. via public hearing, in all stages including planning, decision making and implementation. Train local volunteers.	Normal Budget	From 2012 onward	Office of the Prime Minister/ other relevant agencies

Total Budget 300,000 MB

Note: Projects to commence in January 2012

