

International Workshop on Flood Risk Management
24-26 January 2006, Tsukuba

Flood Management Strategy Study in China

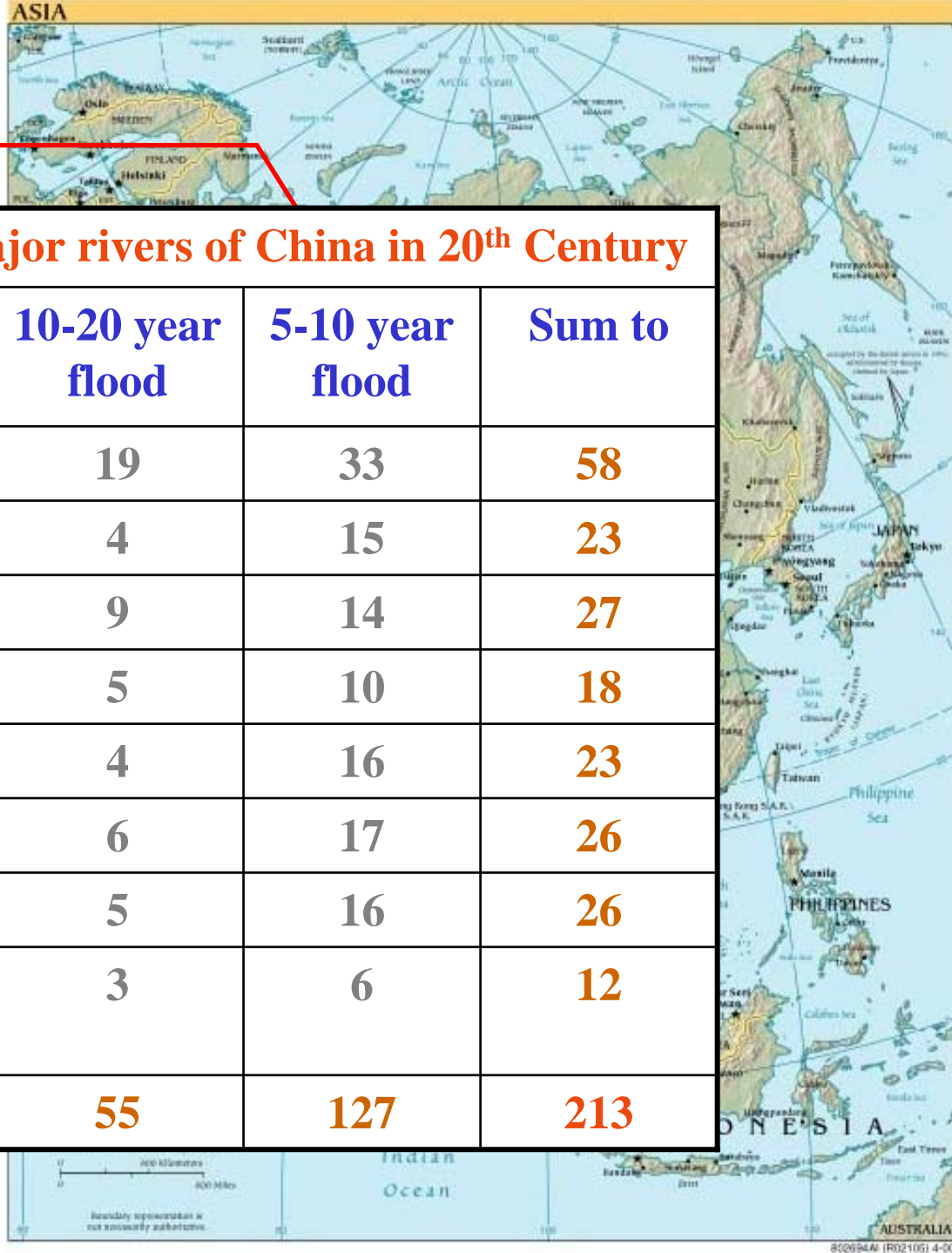
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1. Introduction



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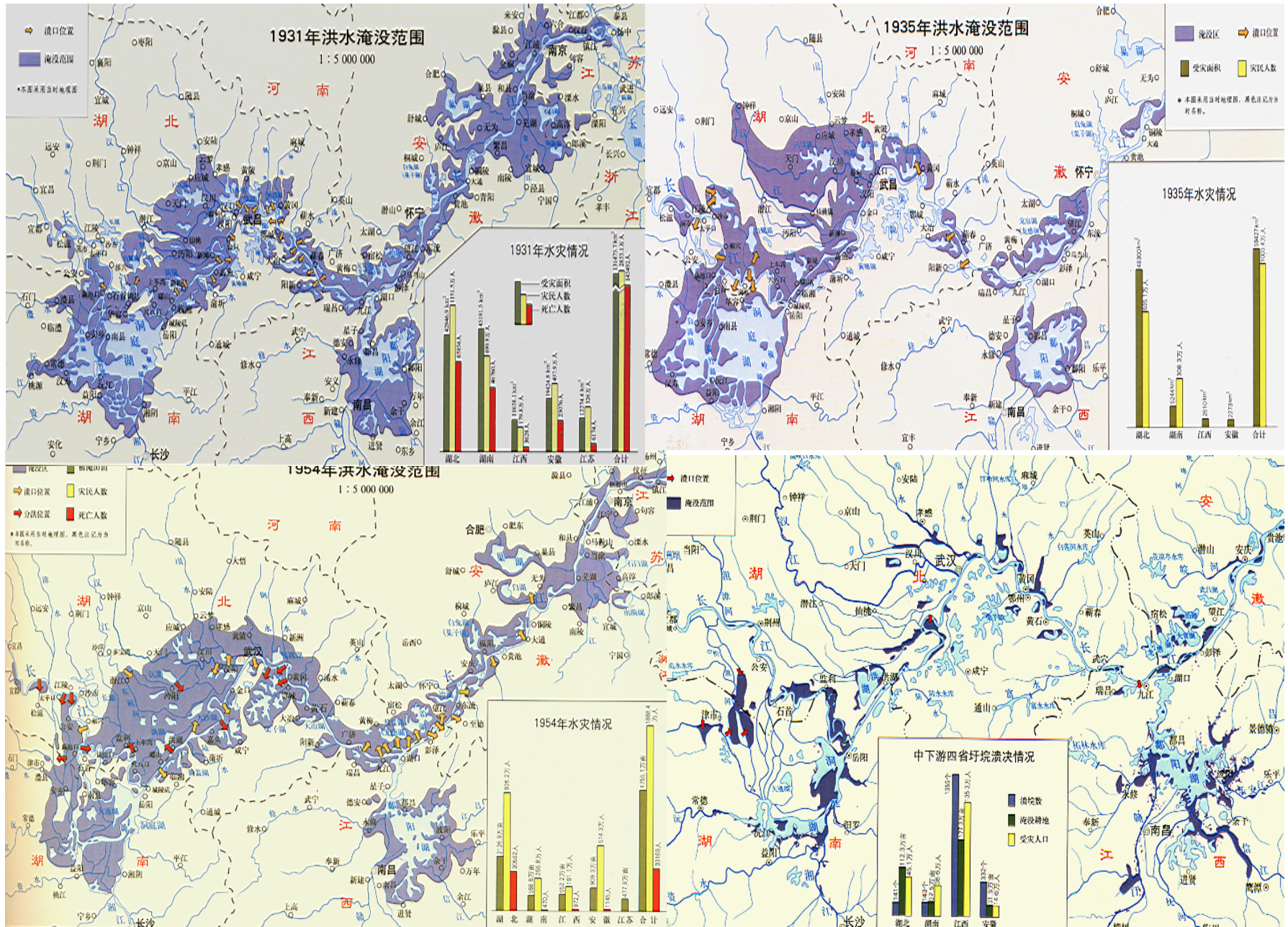
Floods occurred in major rivers of China in 20th Century

River basin	>20 year flood	10-20 year flood	5-10 year flood	Sum to
Yangtze	6	19	33	58
Yellow	4	4	15	23
Huaihe	4	9	14	27
Haihe	3	5	10	18
Songhua	3	4	16	23
Liaohe	3	6	17	26
Zhujiang	5	5	16	26
Zhe-Min area	3	3	6	12
Total	31	55	127	213

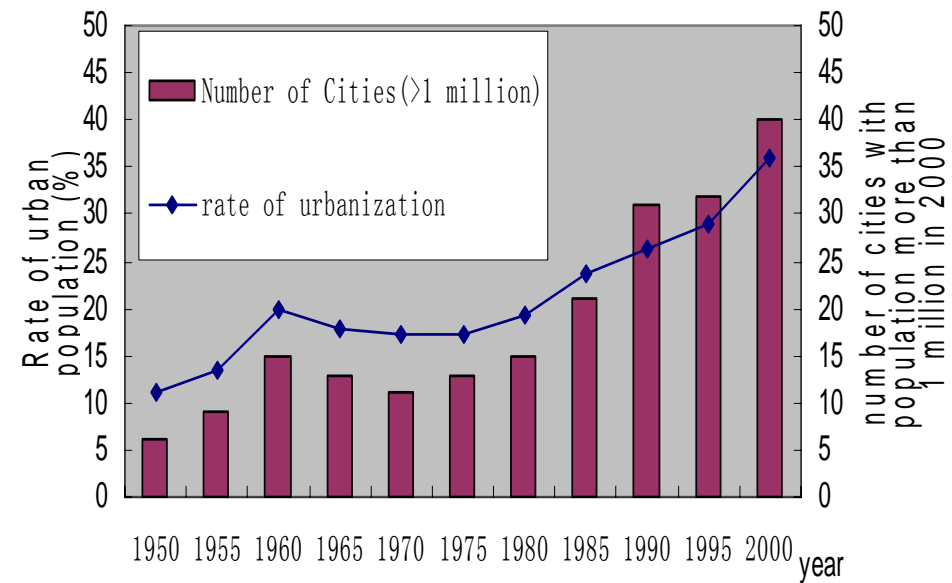
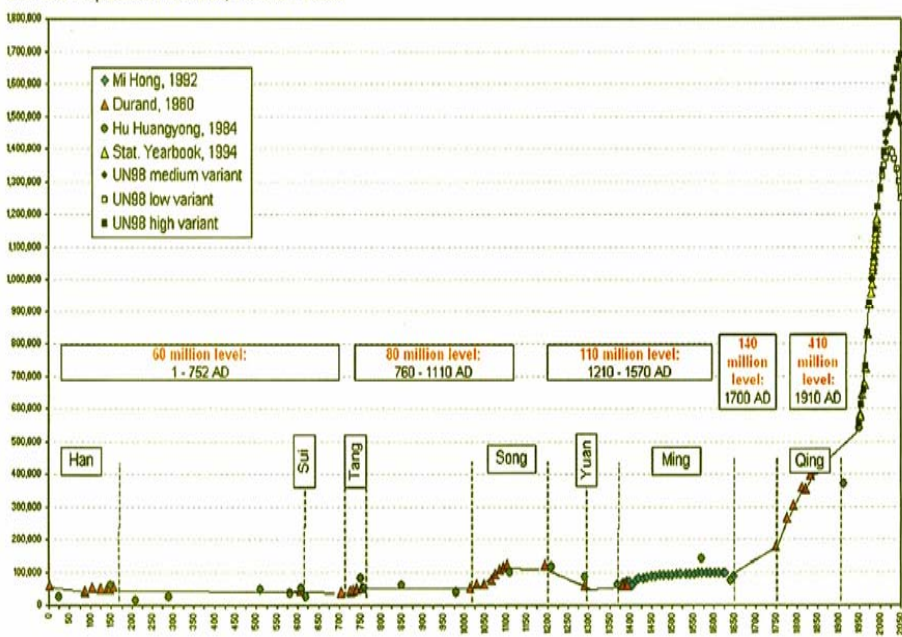
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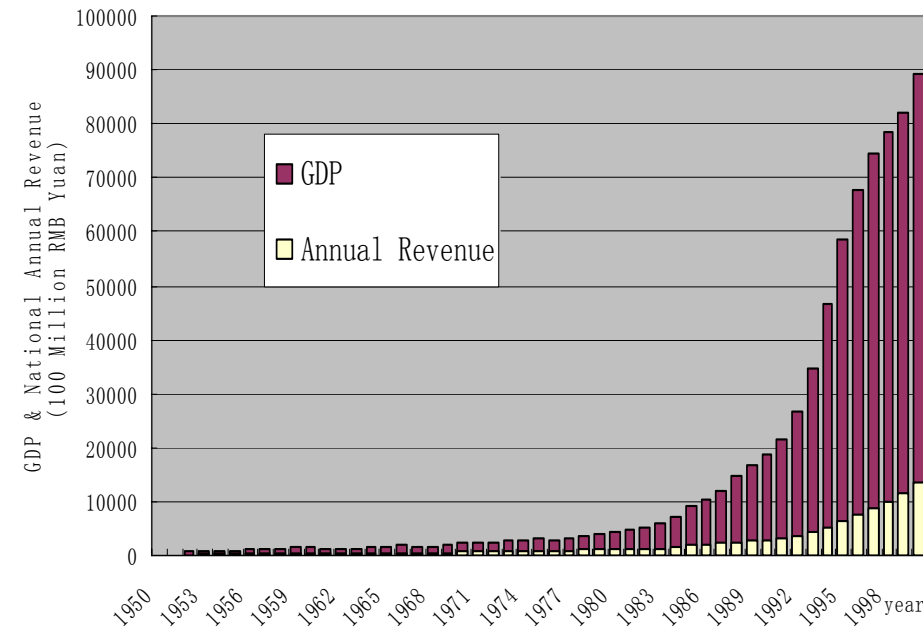
Development of the flood control systems



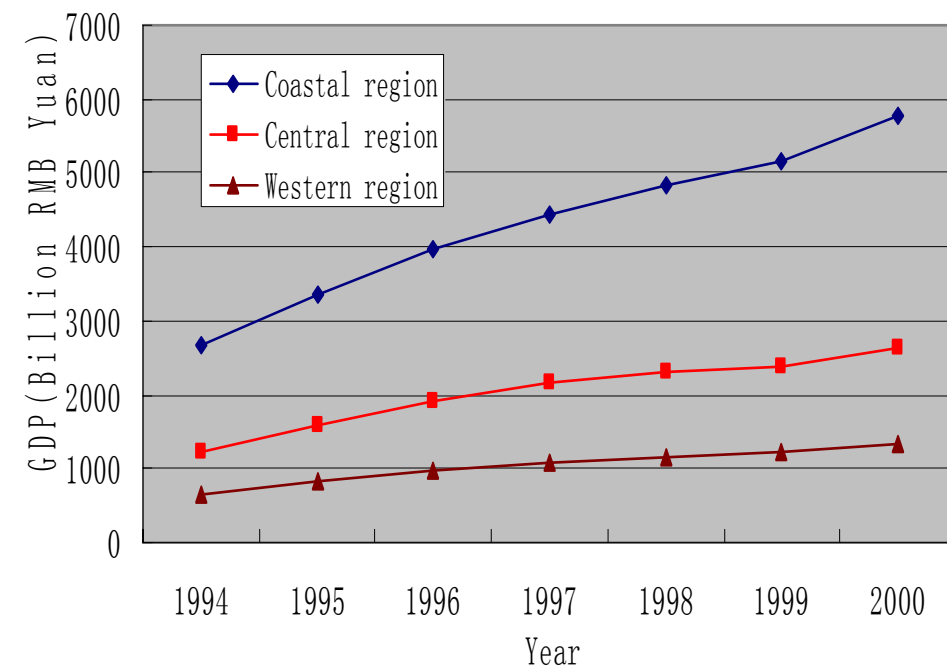
China's Population Growth, A.D. 0 - 2050



Urbanization process in China

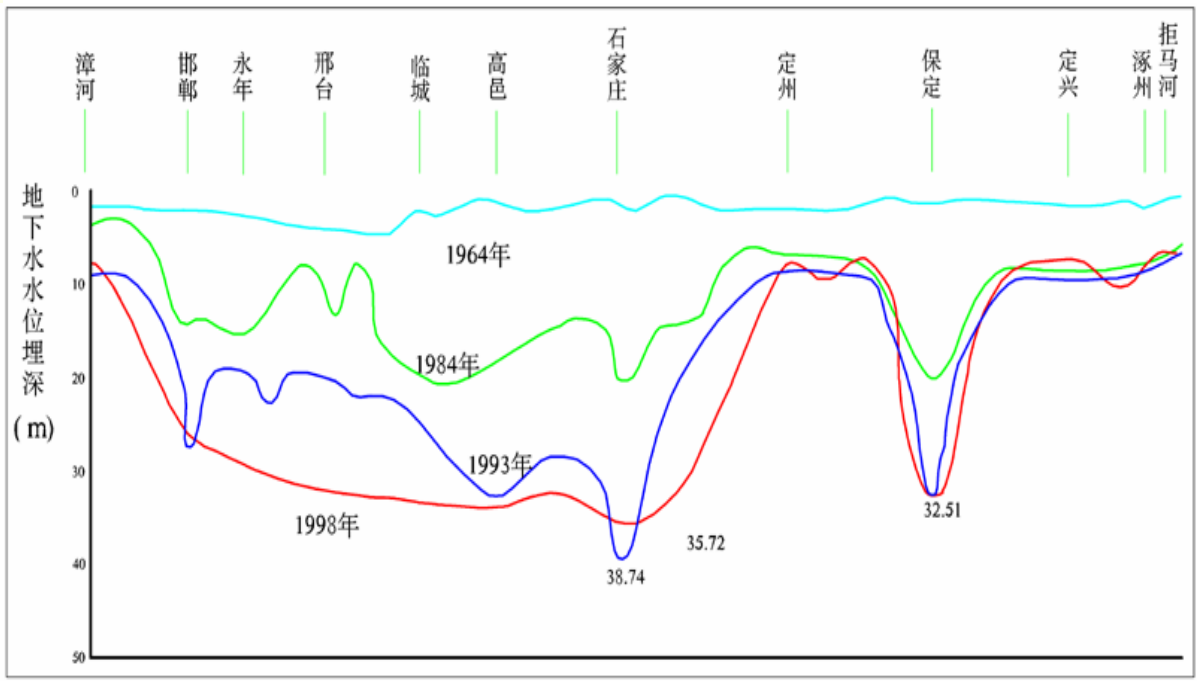
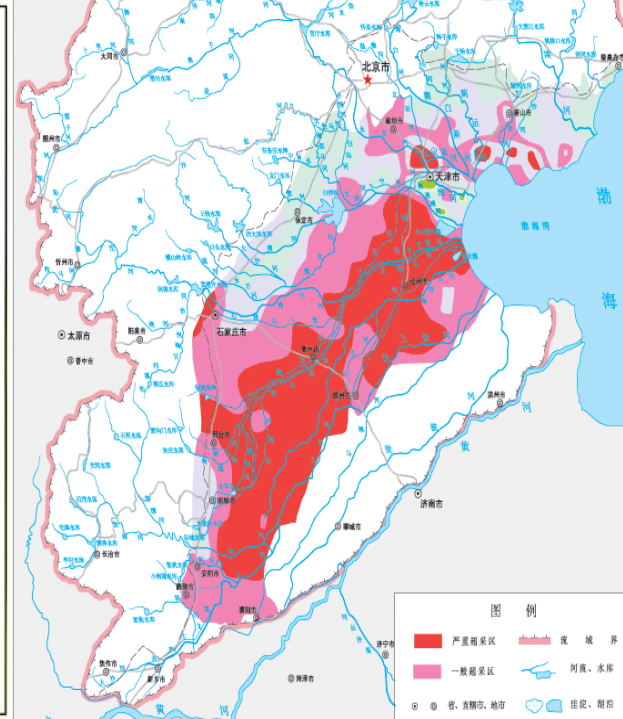
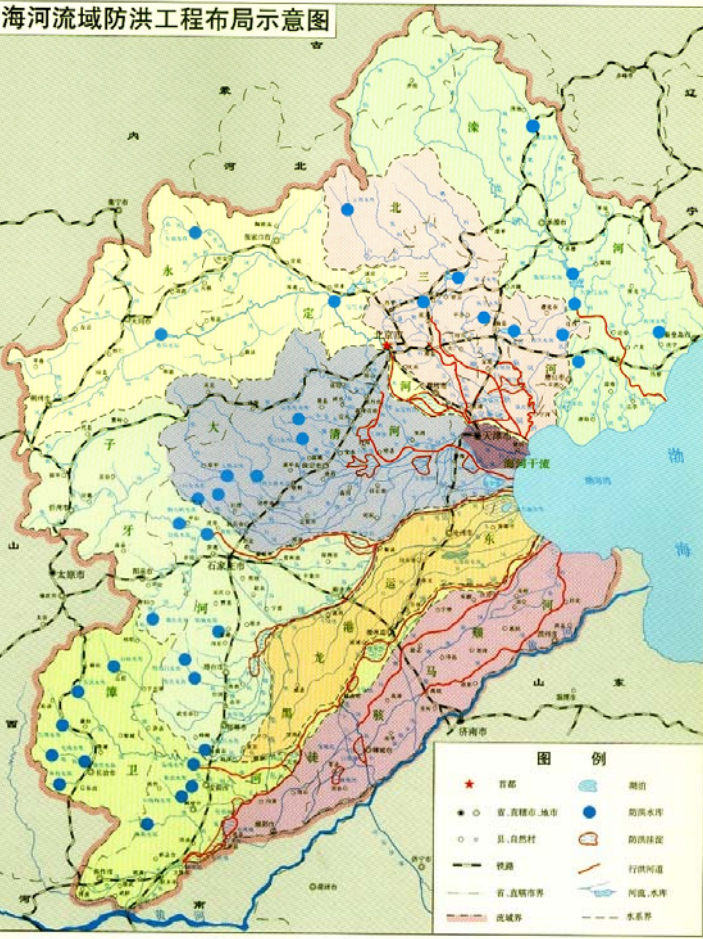


Rapid economic growth in China since 1980's



Environment Changes greatly

海河流域防洪工程布局示意图



Introduction

- In the beginning of 2003, the SFCDRH and MWR declared that the flood and drought disaster mitigation in China should shift “**from flood control to flood Management**” and “**from simplex drought-fighting to comprehensive drought management**”.
- Since then, the concept and meanings of Flood and Drought Management have been widely discussed and a series of new measures have been taken for the “Two transitions” in China.

Introduction

New measures taken for the “Two transitions”

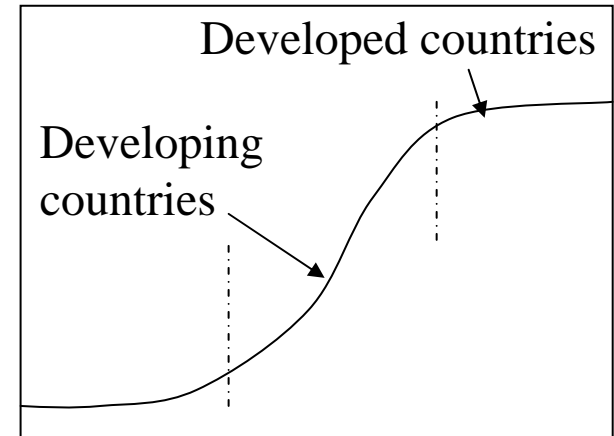
- To enhance policies and regulations
- To institute and improve flood prevention and drought relief schemes
- To initiate some specific planning
- To promote the development of information systems for flood and drought management.
- To undertake some research projects

2. Flood Management Strategy Study Project

- To develop a strategy for integrated flood management appropriate to the flooding characteristics encountered in China and pressures produced by the very rapid rate of development.
- Workshop No,1(Nov. 25, 2004), inception report,
- Workshop No.2(Apr. 25/26, 2005), Interim report
 - Current flood management practice in the PRC, through case study investigation of six selected provinces;
 - Advanced flood management practice internationally;
 - Strategic Framework and Action plan to advance integrated flood management in the PRC
- Workshop No.3(Dec.5, 2005), draft form of final report,
- The reports will be finalized in the beginning of 2006.

Basic Analysis for Making Flood Management Strategy

- What are the new issues?
- What are the new demands?
- What are the influencing factors?
- What are the restricting conditions?



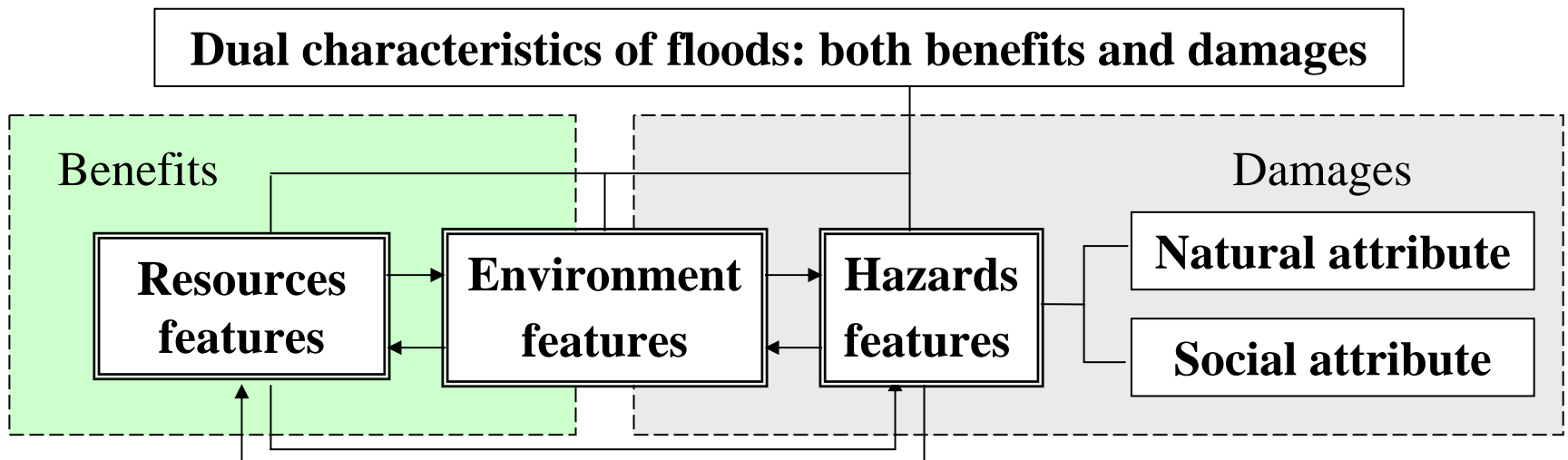
Shifting from flood control to flood management is an inevitable choice to deal with new water issues and to suffice new demands;

Shifting from flood control to flood management never means from taking structural measures to taking non-structural measures;

Shifting from flood control to flood management will be a long-term task, we have to shift step by step in light of local conditions.

3 Definition and its meaning of the flood management in China

- Floods present not only a hazard, but also opportunities and benefits for natural resource and the environment.
- There are complicated relationships, interactions and transformations among them.



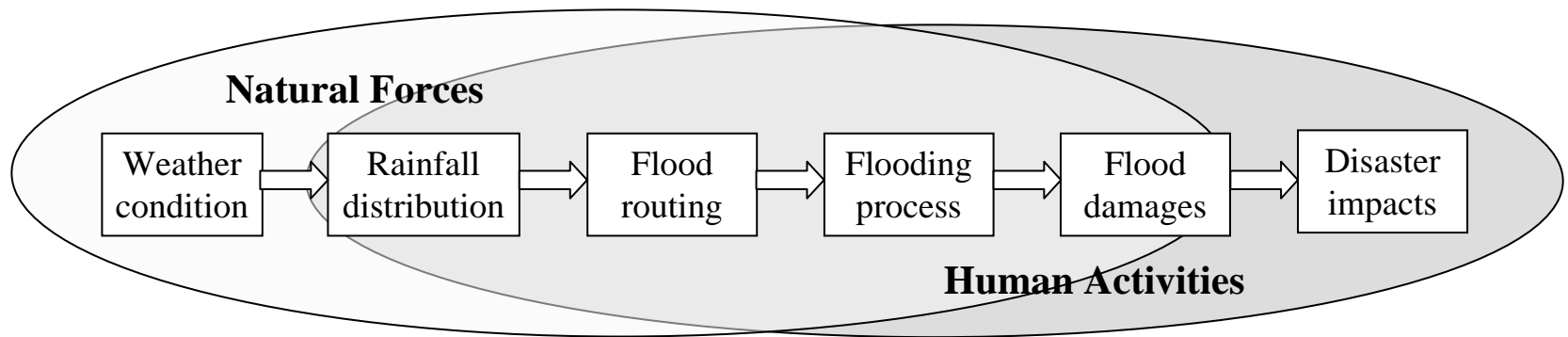
Definition of Flood Management

Definition

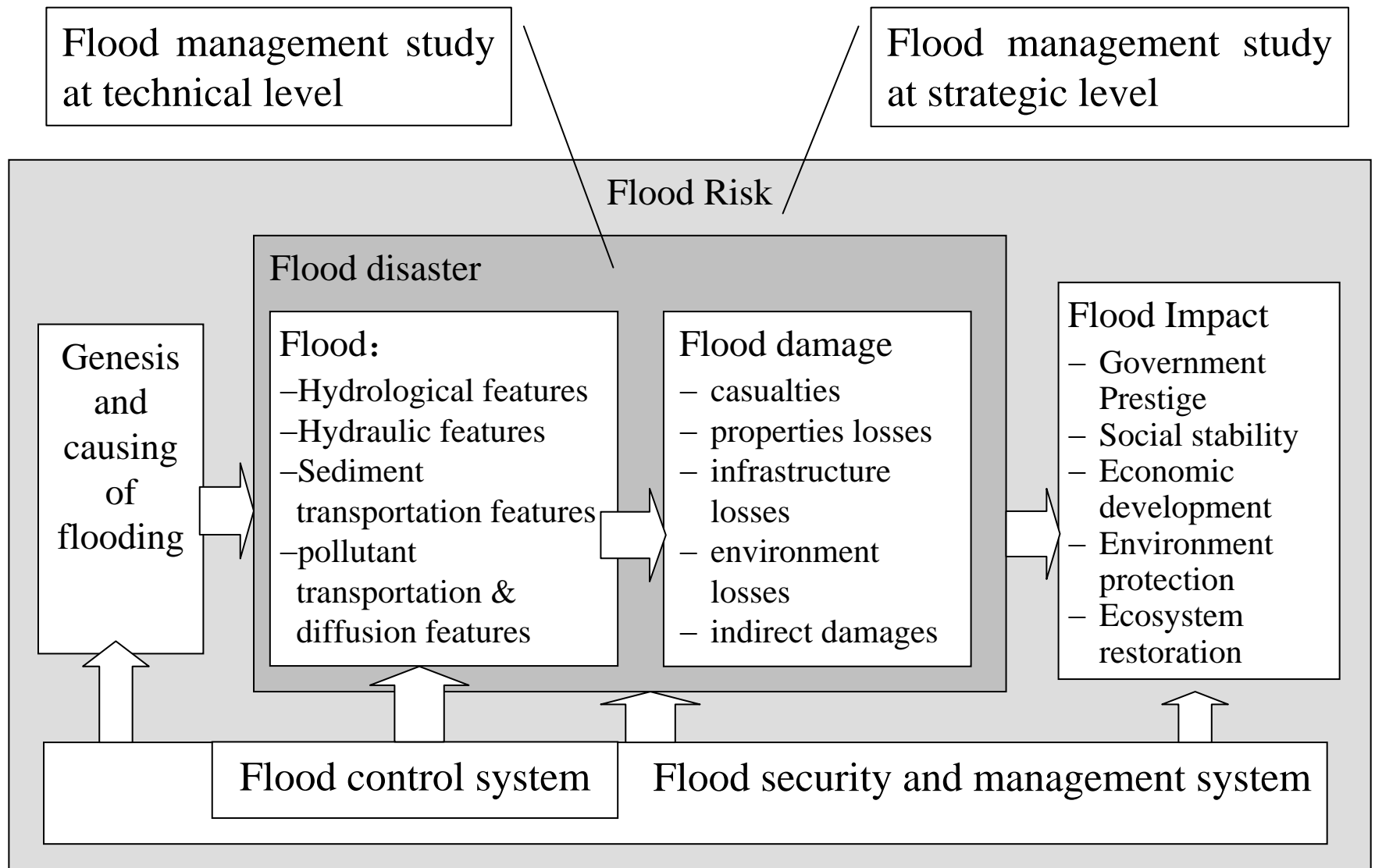
- flood management is a collective noun for a series of activities following sustainable development principles, aimed at the harmony between man and nature, normalizing flood control and operation activities into a rational approach, enhancing self-resilience capacities, and accepting a certain risk in moderation to utilize floodwater as a resource and help to improve the water environment.

Definition of Flood Management

- Flood management is to strive for the most favorable possibility through effective improving and operating all related flood prevention and mitigation systems under a series of uncertainties.
- It should be stressed that the measures to minimize the flood damages may not always bring the best impacts in political, social, economic and ecological aspects.



Flood management on each phase and the convertible results



The objects of the flood management strategic study

The essential of the flood risk management

- It is the essential of the flood risk management to modulate the interests concerned with flood risks existing objectively among communities and between man and nature by means of legal, executive, economic, technical, educational and engineering measures comprehensively.

4. The Main Outputs of the Flood Management Strategy Study

- Fundamental Concept of Flood Management
- Strategic Framework
 - Objectives: Long term and intermediate
 - The general strategy and strategic tasks
 - The major strategic measures
 - The operation mode and promoting mechanism
- Action Plan
 - Perfecting legislation system and policies
 - Enhancing institutional organization for flood management
 - Pushing integrated flood management planning
 - Forming a viable and effective flood management mechanism

5 Conclusions

- It is a gradual process to shift from flood control to flood management, implying the adjustment and improvement of conceptual frameworks, administration systems and operating mechanisms.
- We should select a flood management approach based on the risk of flooding in relation to the Chinese conditions.
- Flood management is not a denial of flood control structural measures, but stresses a more rational layout and operation of flood control systems.

5 Conclusions

- In the next two decades, it will still be the golden phase for large-scale construction of infrastructure.
- Wise planning, designing, constructing and operating of flood control systems, will not only meet the demands of flood damage reduction, but also play an important role in dealing with water shortages and water environment degradation.
- Flood Emergency management is an important component of the flood management. To enhance the emergency response capacities is an urgent task.

An aerial photograph of a city, likely Shanghai, showing a dense urban landscape with numerous skyscrapers and residential buildings. In the foreground, there is a large green park area with a winding river or lake. A large, white, hand-drawn thought bubble is superimposed over the upper half of the image, containing the text 'Thanks for your attention!' in red. The bubble has several smaller circles leading down to it, suggesting a thought process. The text 'Chengxt@iwhr.com' is written in yellow at the bottom left of the image.

Thanks for your
attention!

Chengxt@iwhr.com