

# Bangkok: The River City

An aerial night photograph of Bangkok, Thailand, showing the city's skyline and the Chao Phraya River. The city is illuminated with warm yellow and white lights, with several prominent skyscrapers. The river flows through the center of the frame, with several boats visible. The overall scene is a vibrant, illuminated urban landscape.

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# Bangkok Today

- Floods
- Subsidence
- Pollution
- Traffic
- Political Problems
- Limited mass transit



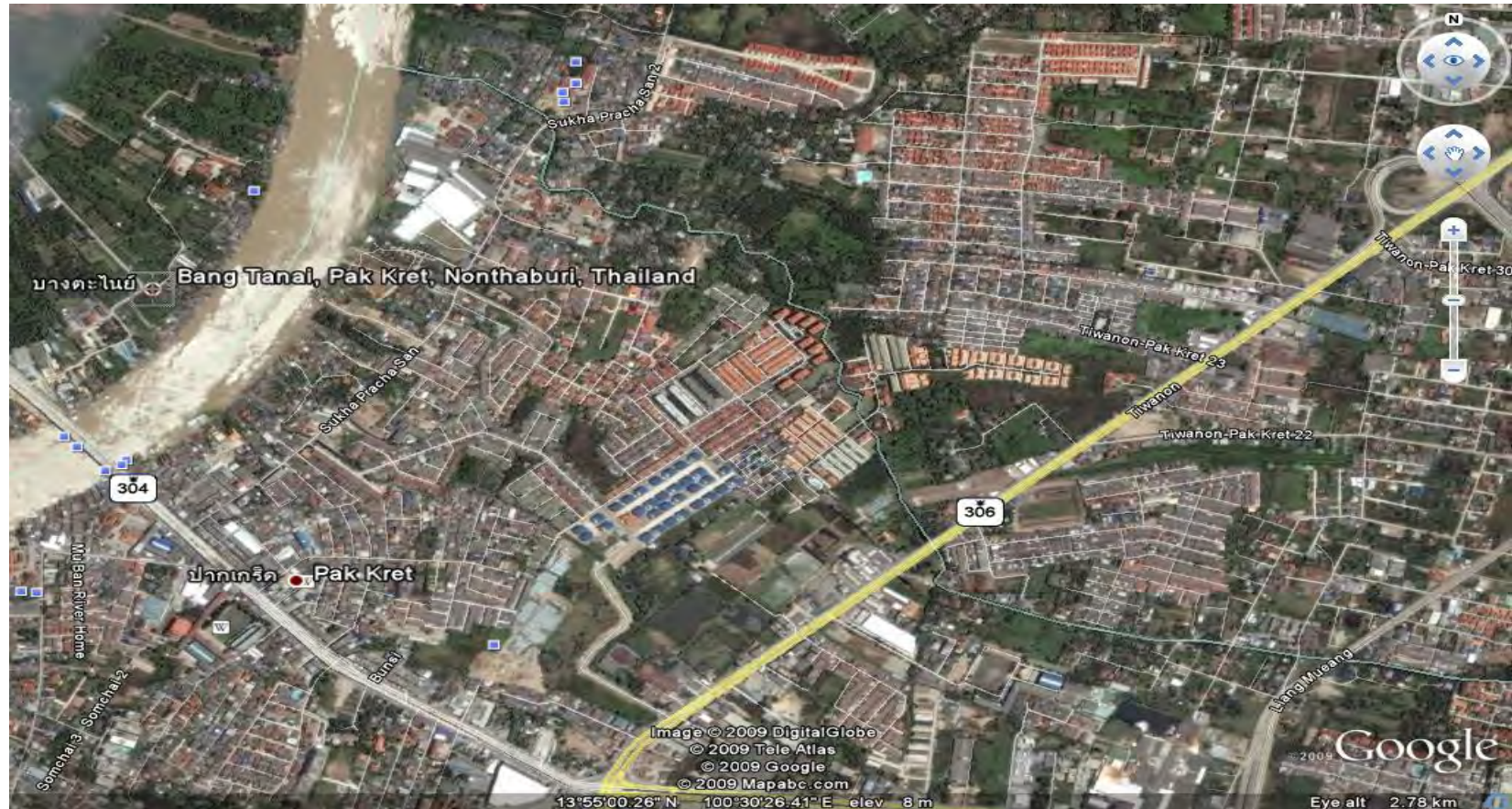
# Agenda



- Overview, The New Master Plan 2009
- Environmental Improvements
  - Flooding and Pollution Concerns
- Upgrades to Public Transit System
  - Water Transport, Expanded SkyTrain
- Economic Incentive
  - Public-Private Partnerships, Tax Deductions etc.



# Region in Focus



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The City  
Plan

Environment

Water  
Transportation

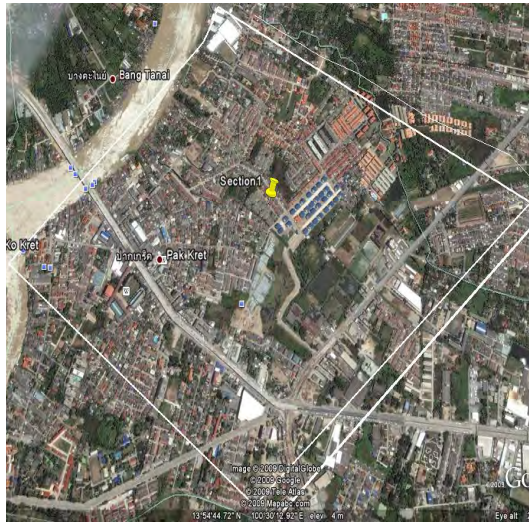
Economic  
Justification

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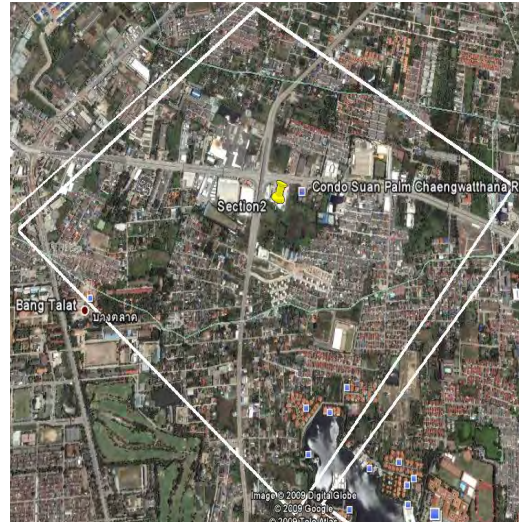


# The River City Plan



Close Range

40 units/ha



Medium Range

30 units/ha



Far Range

20 units/ha

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# Overview of the Greater Bangkok



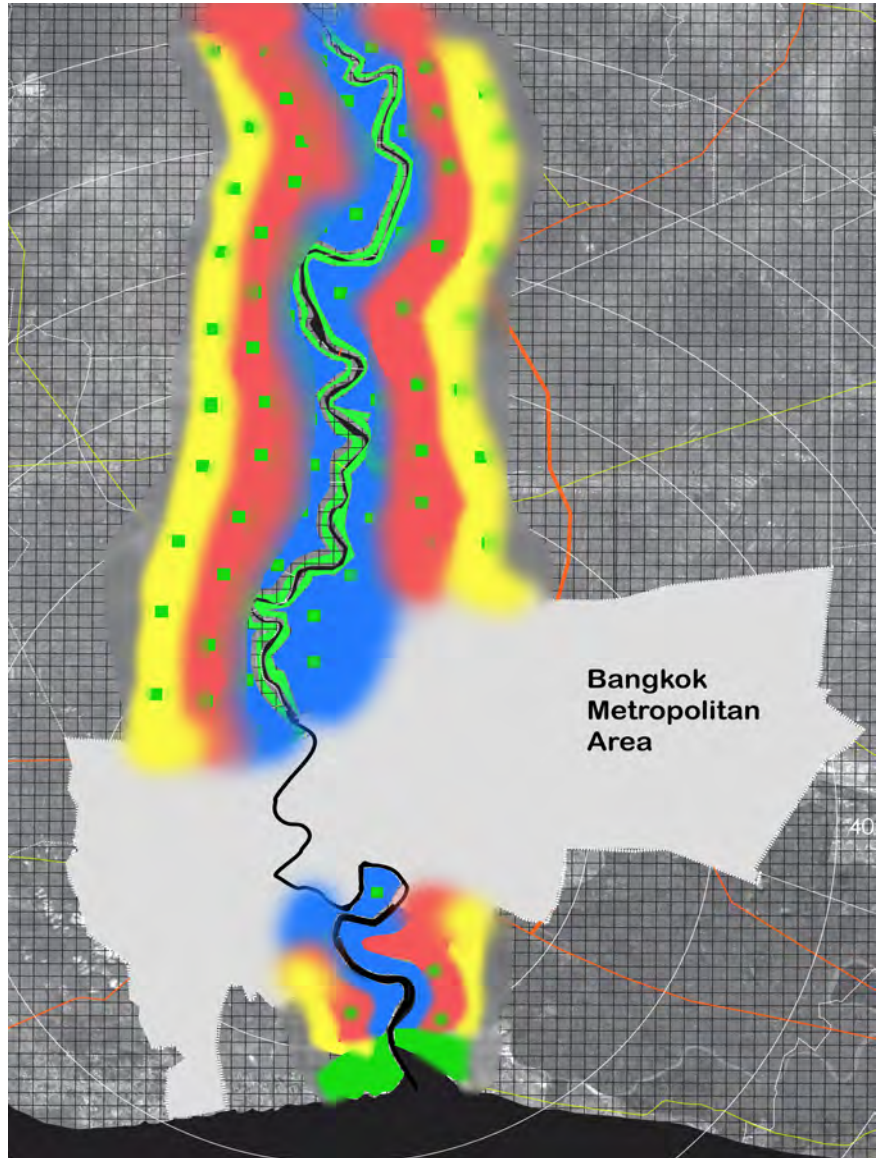
- 2 million people
- 13,300 hectare



- 4 million people
- 26,600 hectare



- 2 million people
- 13,700 hectare



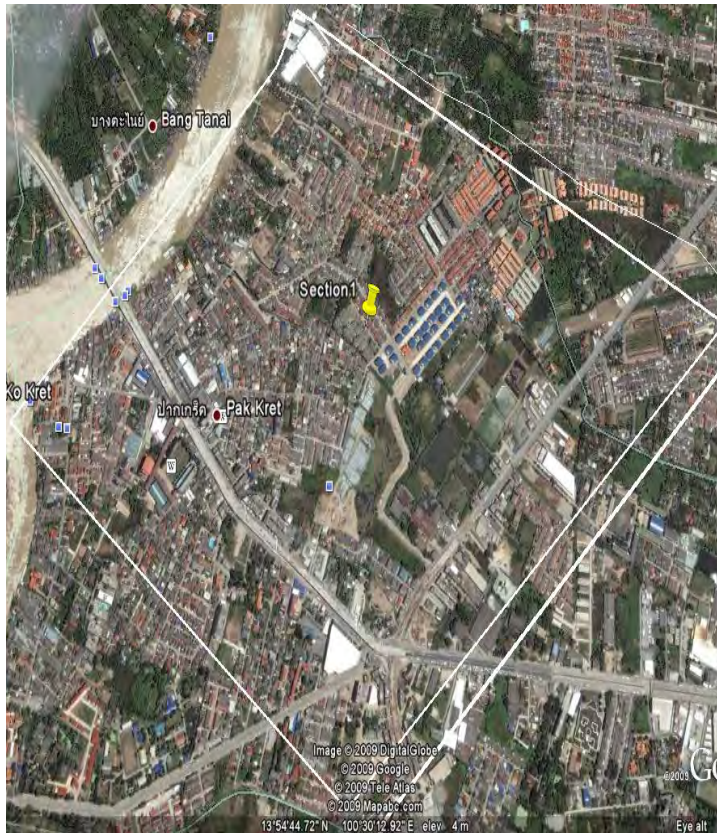
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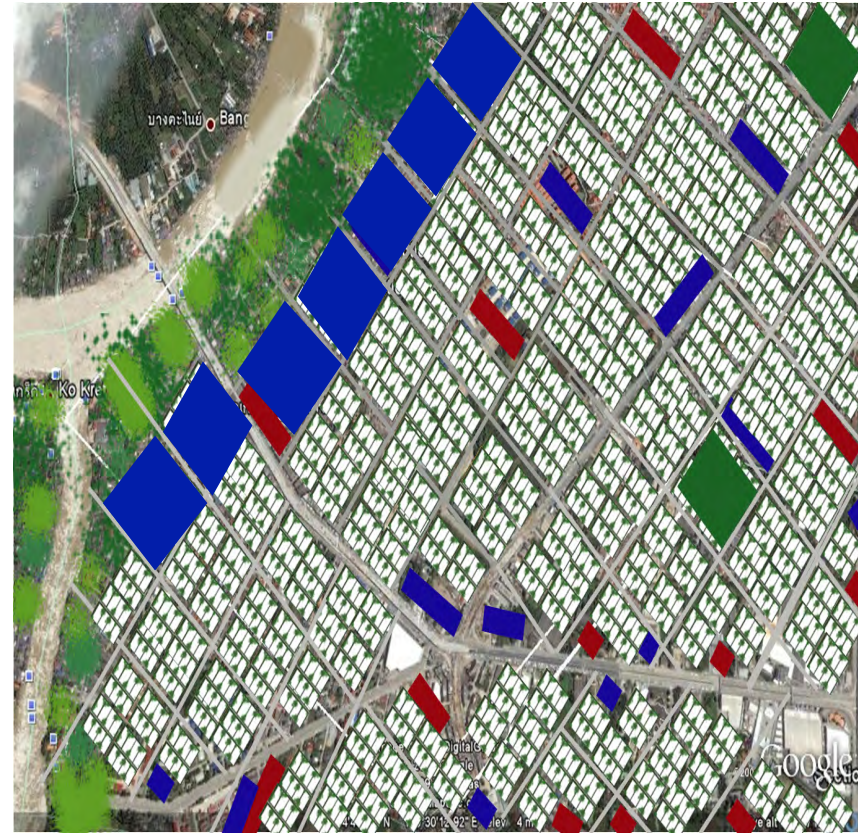


# The Plan Along the River (High Density)

Before



After



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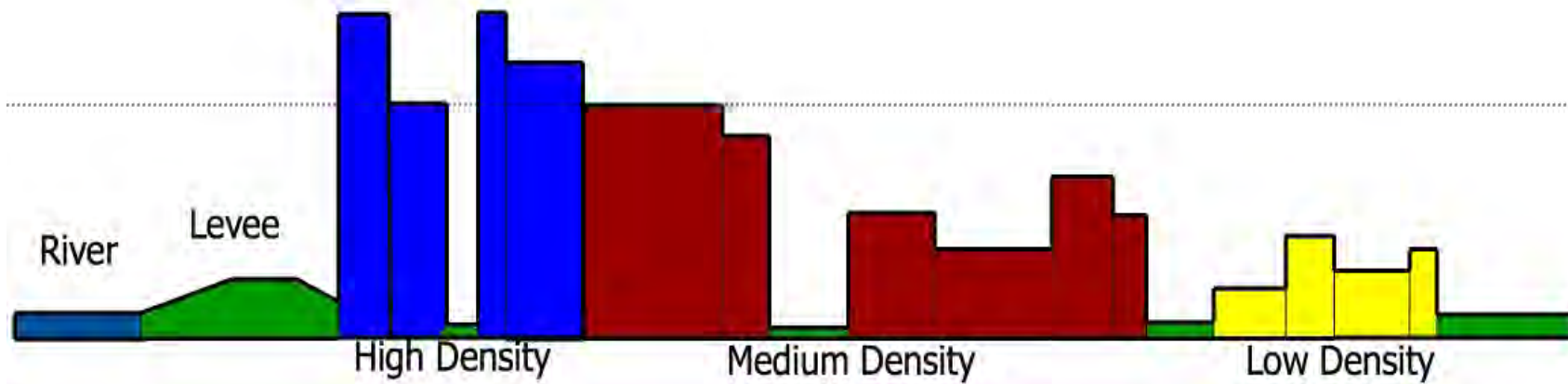
Water Transportation

Economic Justification

Summary



# A Cross Section:



The City Plan

Environment

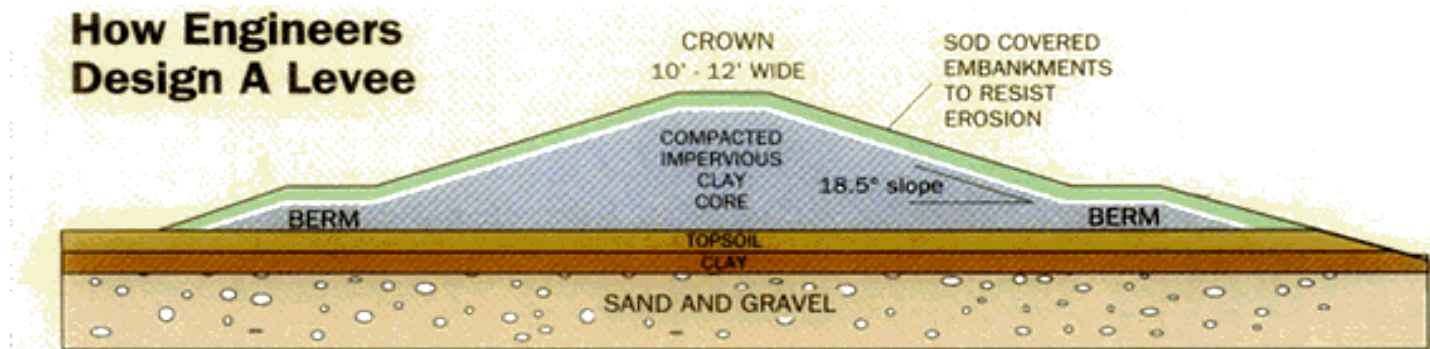
Water Transportation

Economic Justification

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# Environmental Issues: Flooding

- Methods of Mitigation
  - Levees along the length of the river
  - Floodgate Installation
  - Pumping system
- Improvement in Water Quality
  - Managed Bioremediation



<http://www.earthsci.unimelb.edu.au/Thomas/lteng/engeimg/enge1327a.GIF>

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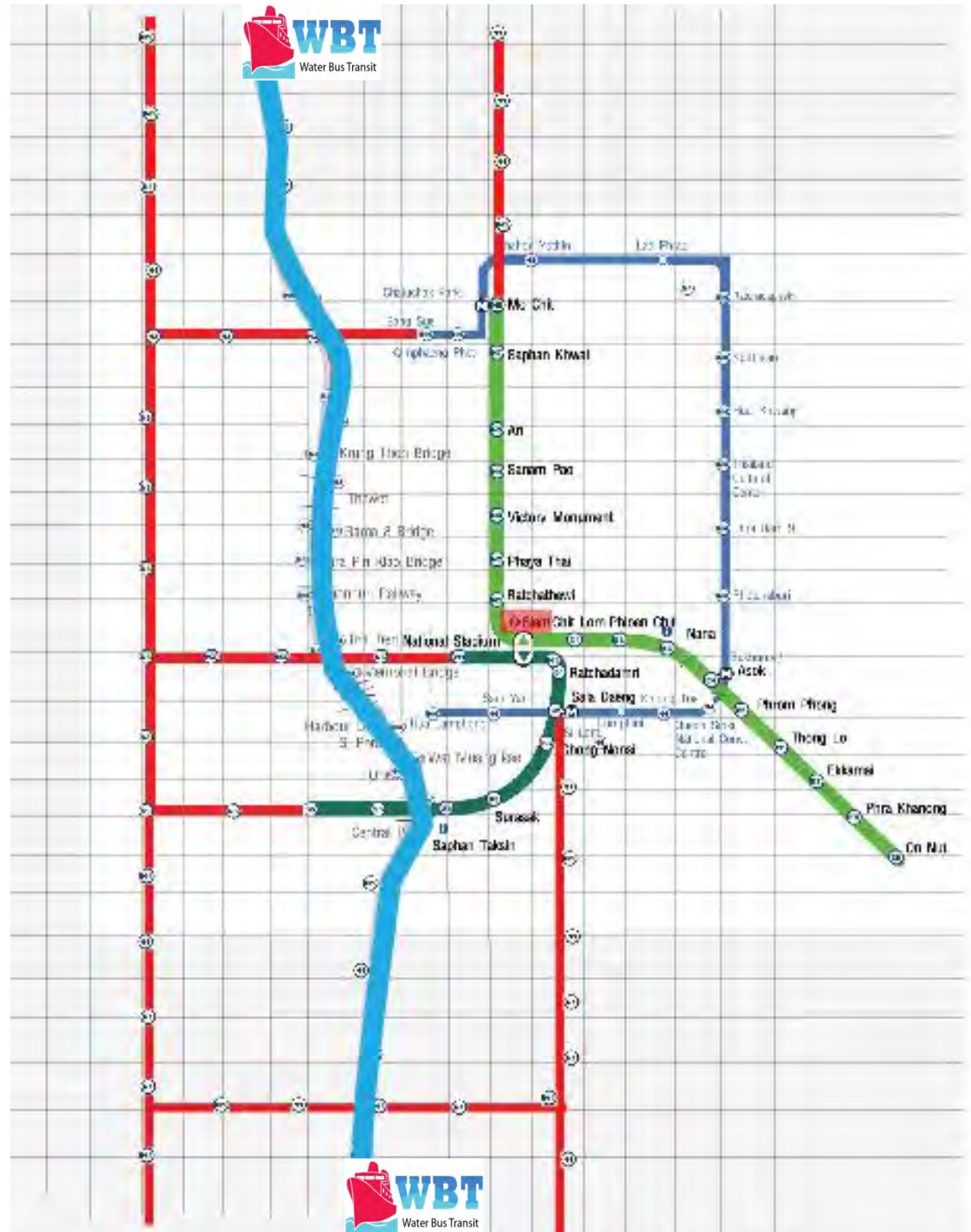


# Bangkok Mass Transit System

 MRT :  
 Dark blue line

 BTS :  
 Sukhumvit Line  
 Silom Line  
 Extended Line

 WBT:  
 Blue line



# Improvements on Existing Water Transportation

Before



After



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# Implementation and Economic Justification

Incentive  
for private  
developer

- Expected 30% increase in land value within 3 years.
- Benefits to private developer, land owner and central government

Tax  
Exemption

- 50% tax exempt for 5 years for land and property
- Benefits land owners

Incentive  
for local  
govt'

- Set up a new metropolitan area along the river with its own development authority (Pattaya case).

Pollution  
controls

- Subsidy for pollution control setup cost and double-tax deduction for environmental expense
- Support ISO 14001 for factories along the river

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# Housing Policies

Ensure that low-to-middle income people have a chance to live in all density areas by using tax subsidies.

Zoning to establish commercial facilities and residential areas along the river.

Provide better accommodations, public services and social networks to relocate existing development along the river.

Benefits

versus

Risks

Reduce cost of transportation infrastructure

Reduce traffic problem (water transport)

Difficult to regulate people not to pollute the river

Possibility of urban flood

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Benefits

versus

Risks

Increased economic activities from tourism

Reduce cost of transportation infrastructure

Reduce traffic problem (water transport)

Difficult to regulate people not to pollute the river

Possibility of urban flood

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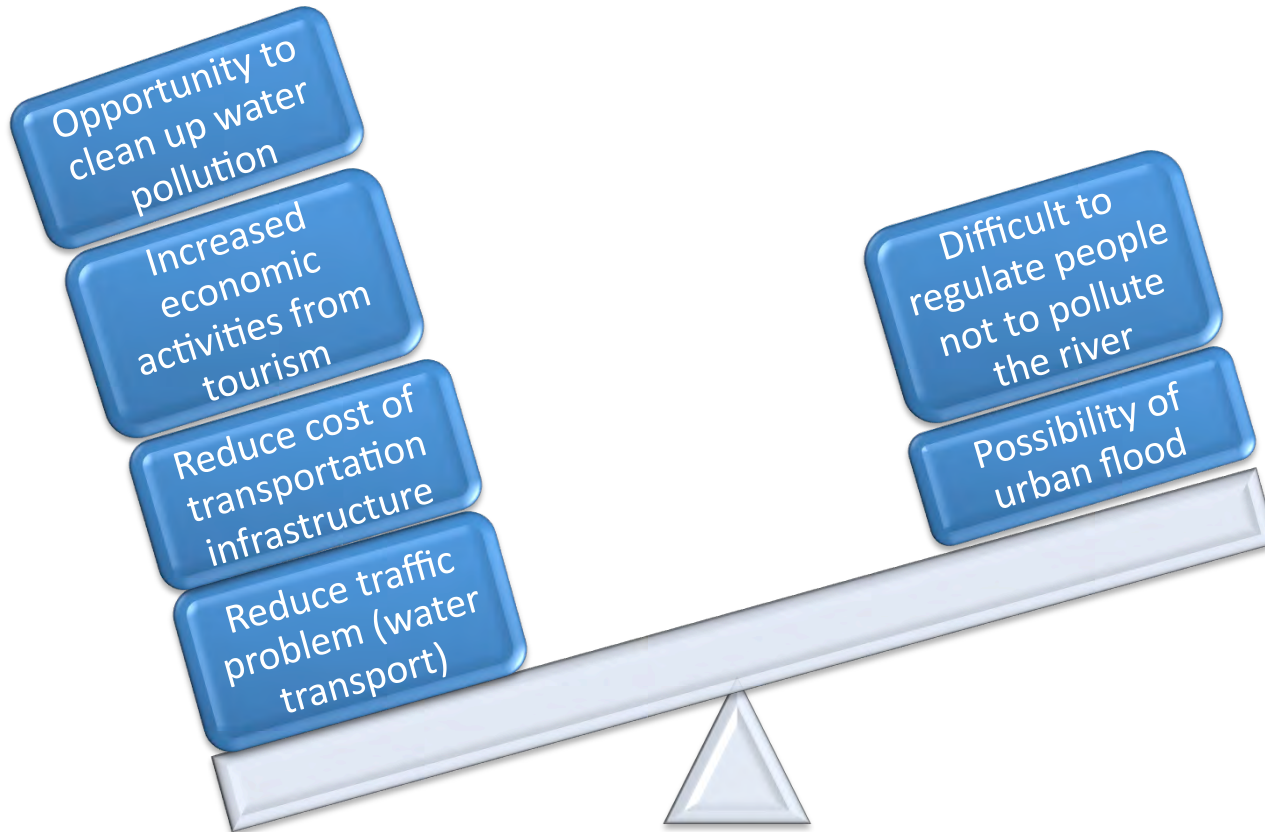
Economic Justification

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Benefits

versus

Risks



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Benefits

versus

Risks

- Reduce urban heat and better city environment
- Opportunity to clean up water pollution
- Increased economic activities from tourism
- Reduce cost of transportation infrastructure
- Reduce traffic problem (water transport)

- Difficult to regulate people not to pollute the river
- Possibility of urban flood

The City Plan

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**Why not implement the master plan 2009 today?**



# References

- <http://www.bsigroup.com/en/Assessment-and-certification-services/management-systems/Standards-and-Schemes/ISO-14001/>
- <http://images.google.co.th/images?source=ig&hl=en&rlz=1R2GGL en&q=river%20city&lr=&um=1&ie=UTF-8&sa=N&tab=wi>