

Planning flood resilient city in Nonthaburi, Thailand



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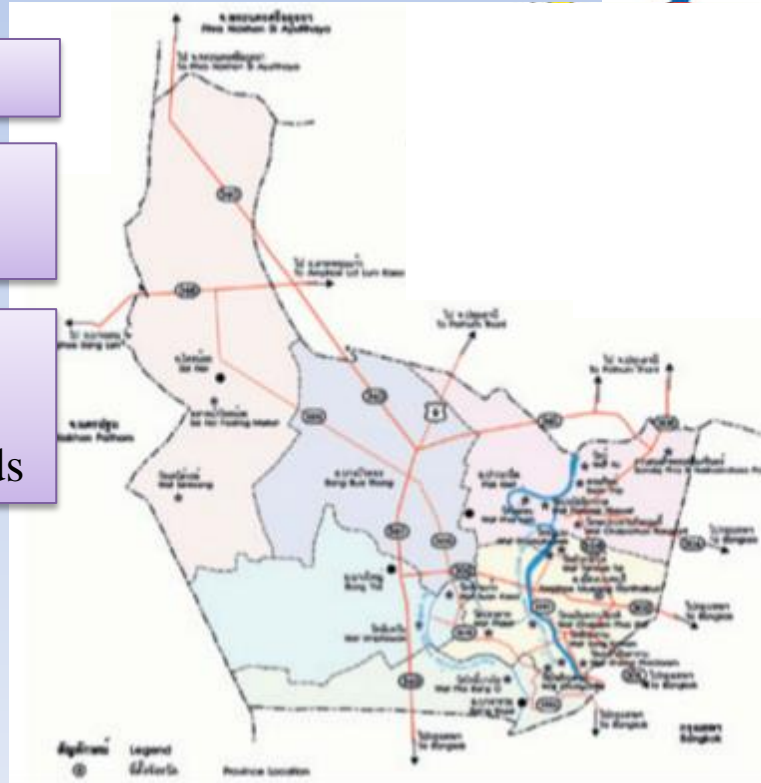
General Information about Nonthaburi Municipality



Area : 38.9 sq.km.

Population :
256,256 people

Number of
Households :
129,374 households



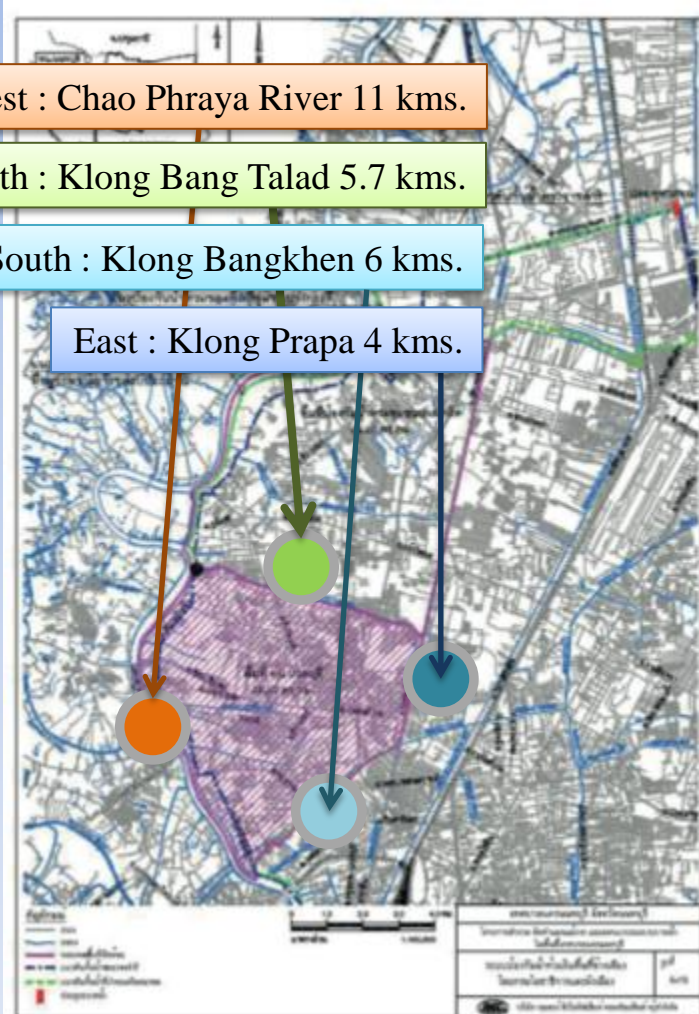
Existing disaster risks and vulnerabilities (FLOOD)

West : Chao Phraya River 11 kms.

North : Klong Bang Talad 5.7 kms.

South : Klong Bangkhen 6 kms.

East : Klong Prapa 4 kms.



Flood prevention system
(area under pink stripe)



Flooding risks and vulnerabilities to the human lives and city's infrastructure and public services



Actions/Response Designed and Taken by City



Actions/Response Designed and Taken by Multi-stakeholders



Challenges

Government

- Lack of budget for large construction project
- Insufficient of materials and equipment
- Coordination among government organizations ineffective
- The amount of officials were not enough and exhausted
- Nonthaburi municipality is prone area
- Laws and regulations are ineffective

People/Private sectors

- People become alert and cooperative to the municipality when the situation went worse
- They were in panic and did not understand how the municipality worked on flood prevention
- Volunteers did not understand how to pack sandbags, and built an effective barrier line
- No flood evacuation training

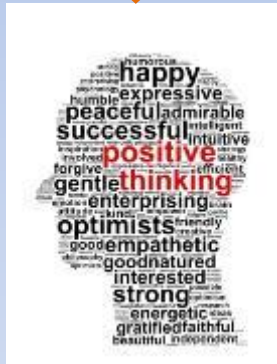
Infrastructure

- No permanent flood protection dam along the Chao Phraya River
- Watergates, drainage system and pumps were not efficient
- Canals could not drain properly due to shallowness
- Insufficient drainage system
- Building structure intruded public area and blocked the waterway

Key lessons learned from Flood Protection Management

1. POSITIVE THINKING

PROBLEMS



**OPPORTUNITIES/
CHALLENGES**



VICTORY



OBSTRACLES



DEFEATISM

2. FACTORS OF SUCCESS

T

TECHNIC, TIME

E

EVALUATION

A

ADMINISTRATION

M

MANPOWER

S

SPIRIT, SACRIFICE