



COASTAL REHABILITATION FOR DEVELOPING ECONOMIC GROWTH IN SEMARANG COASTAL AREA

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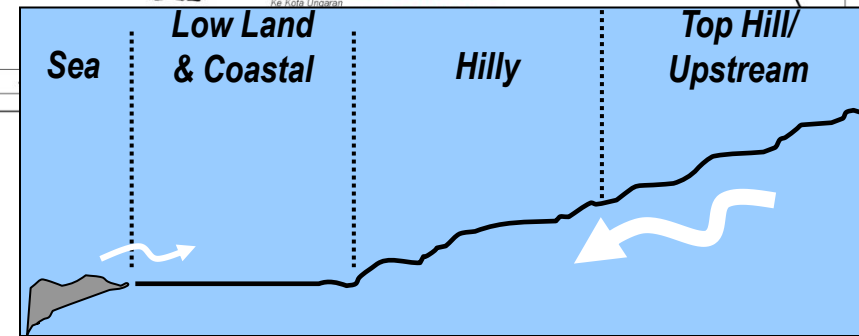
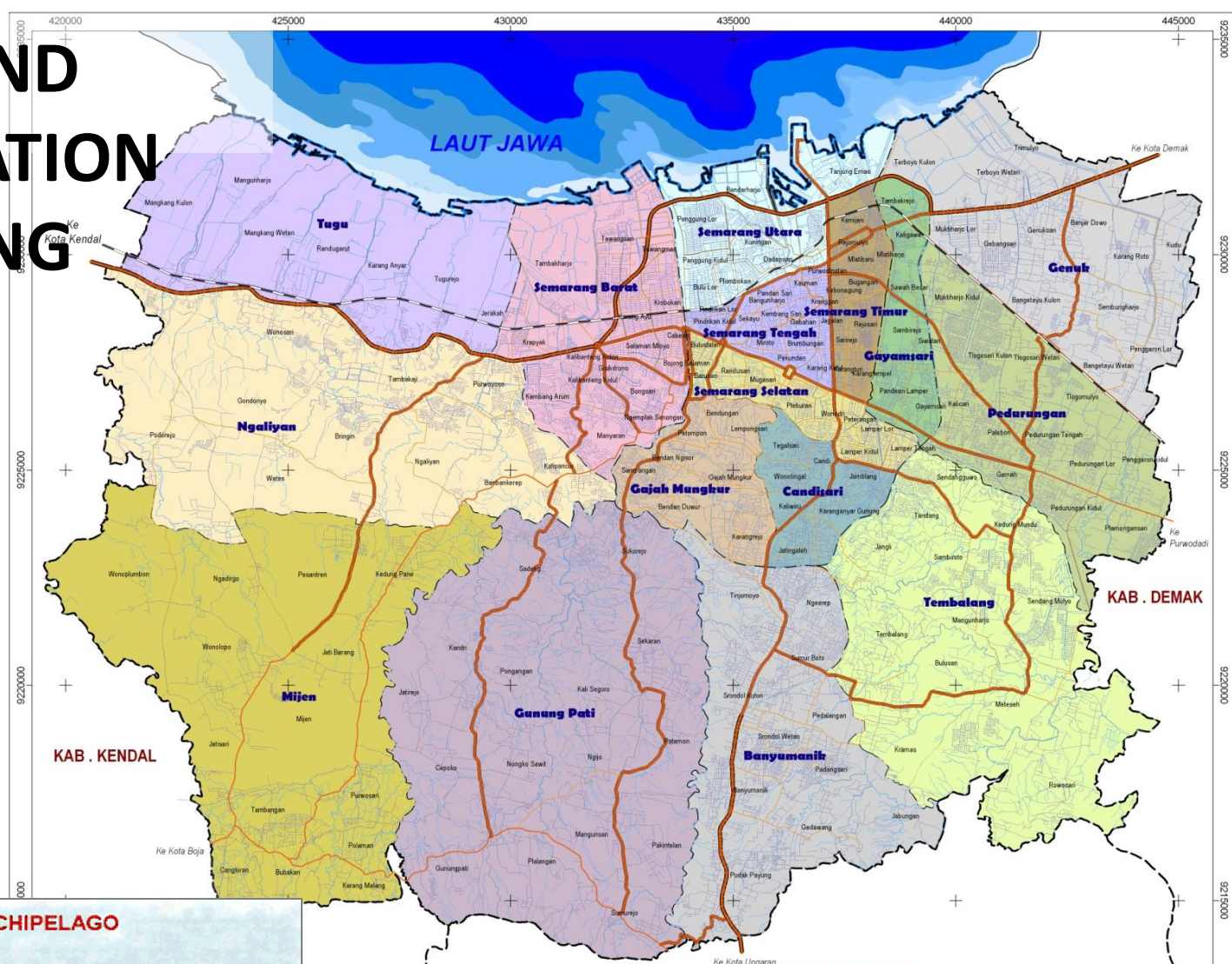
Poverty Environment Partnership 19th meeting
21-23 May 2014, EThekwin Municipality,
Durban, South Africa

OUTLINE

- BACK GROUND AND CONTEXT OF SEMARANG
- CHALLENGE IN CLIMATE CHANGE AND GREEN ECONOMIC DEVELOPMENT
- LESSON LEARNED

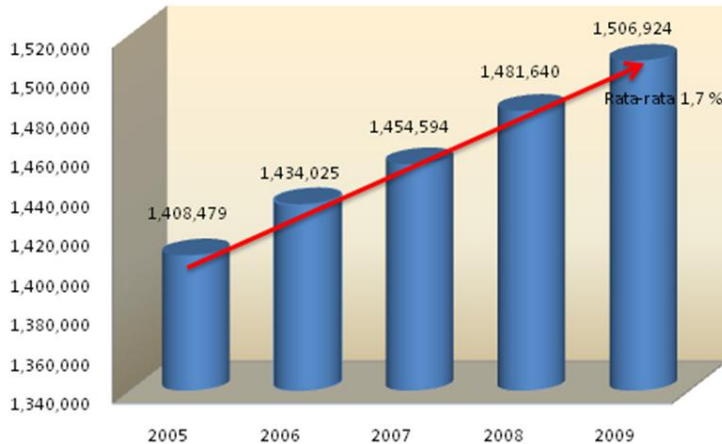
LOCATION AND ADMINISTRATION OF SEMARANG

- Semarang City is the capital city of Central Java Province.
- Semarang consist in 16 districts and 177 sub-districts
- Located in $06^{\circ}50'$ – $07^{\circ}10'$ S and $109^{\circ}35'$ - $110^{\circ}50'$ E
- Semarang area is 373.7 km²

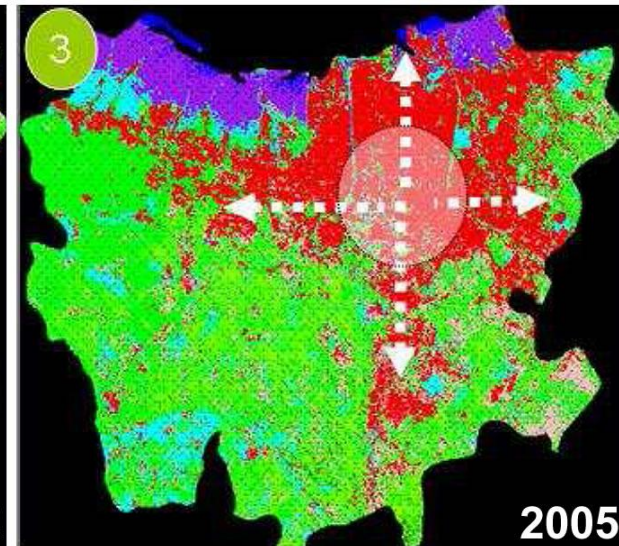
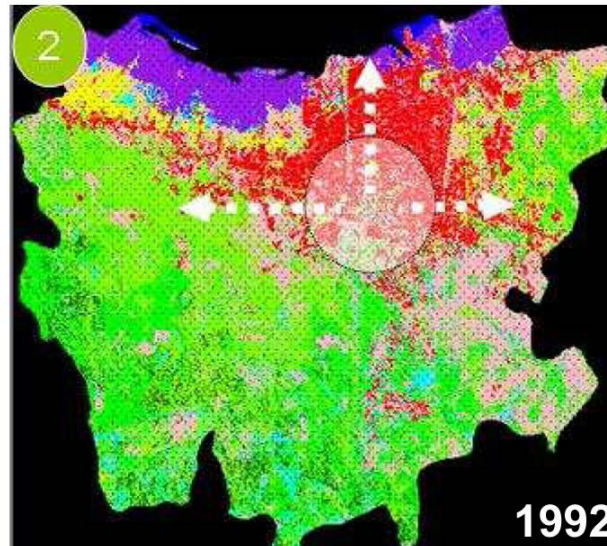
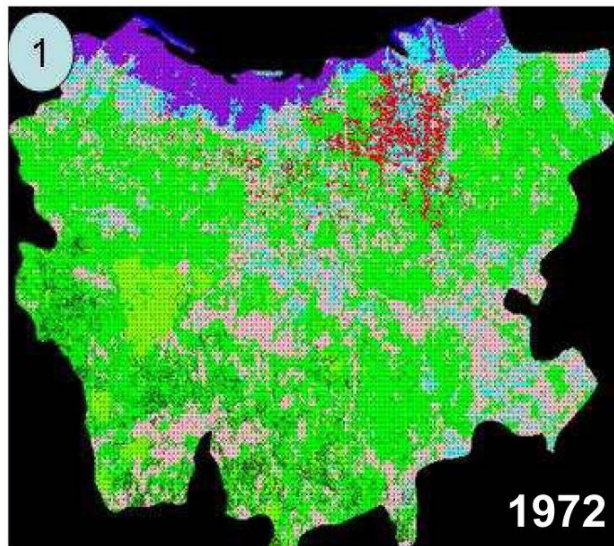


POPULATION & LAND USE

Population number is 1.7 million (2012) with population growth 1.5% per year 0.9 % natural growth, 0,6 % migration



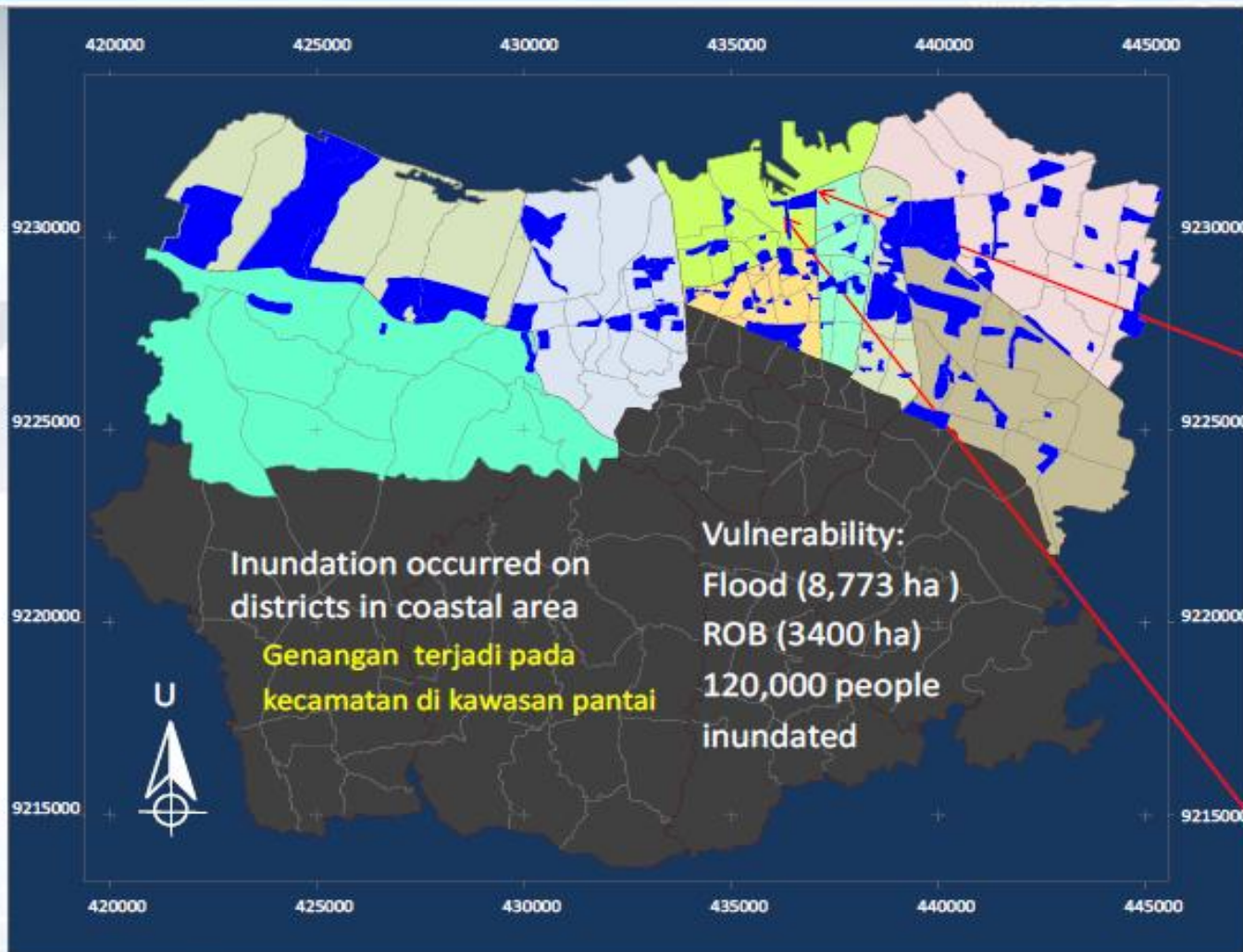
Land Use	Area (Ha)	%
Settlement	12,355.96	33.06
Dry Field (non-irrigated agricultural land)	12,024.56	32.18
Rice Field	4,360.88	11.67
Plantation	873.48	2.34
Mining	137.31	0.37
Industry	1,023.03	2.74
Transportation	483.14	1.29
Forest	1,377.21	3.69
Public Space	413.80	1.11
Fish Pond	1,775.00	4.75
Others	2,545.63	6.81
Total	37,370.00	100.00



Bappeda Semarang, 2005

■ Settlement Area
 ■ Fish Pond
 ■ Green Area

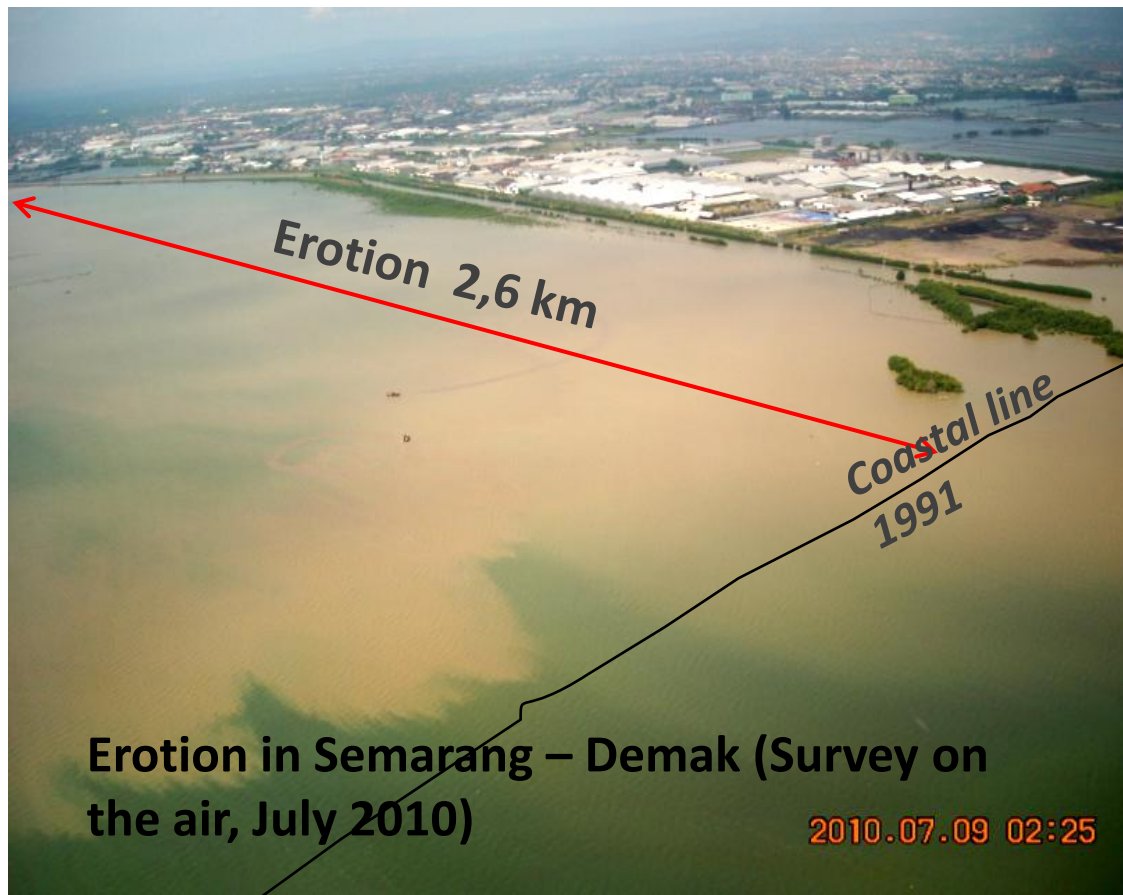
COASTAL CONDITION



Source: semarang.go.id.



Climate Change Phenomena in Coastal Area



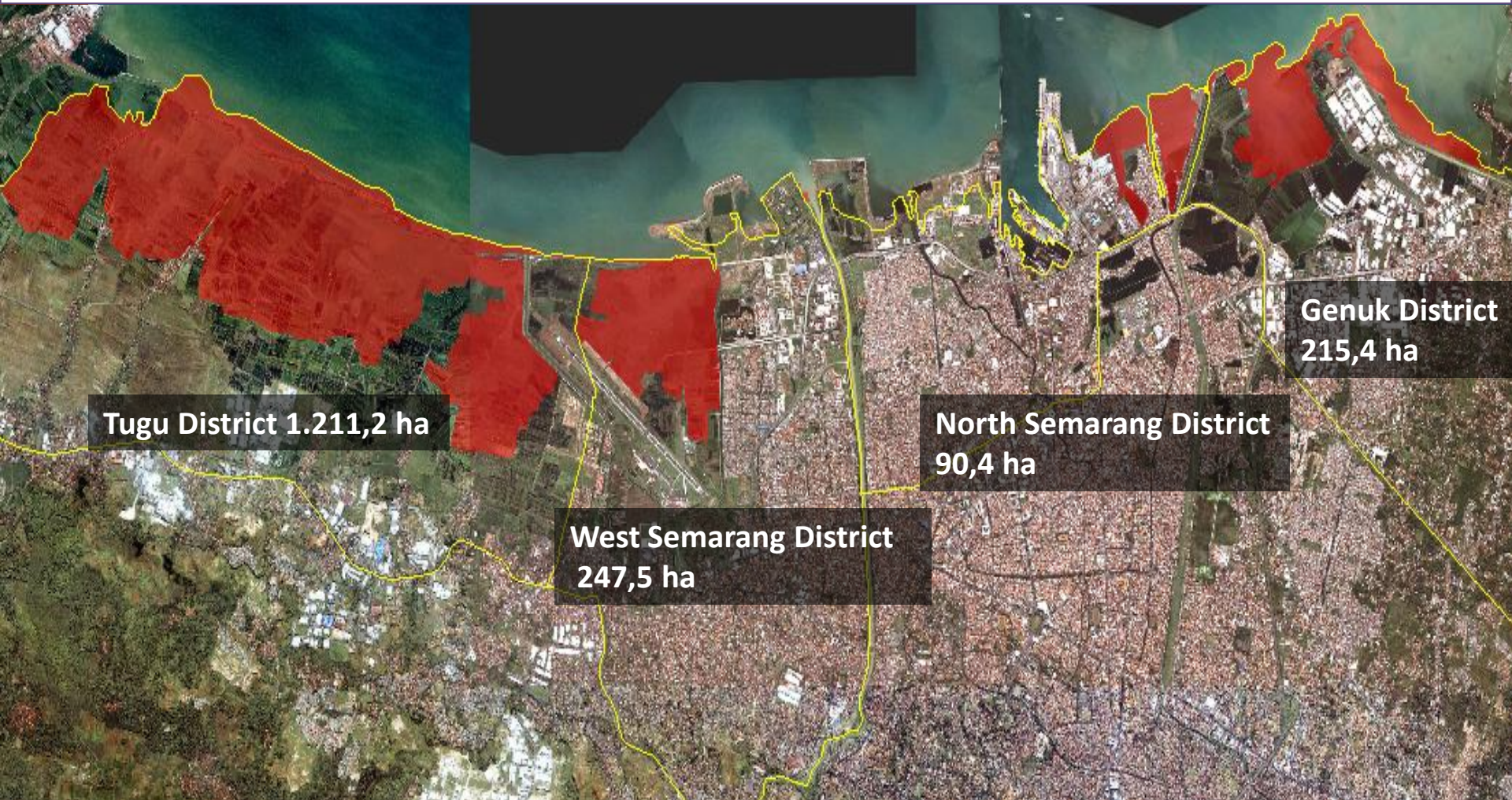
Coastal Erosion Terboyo Kulon, North Semarang , 2003 -2009



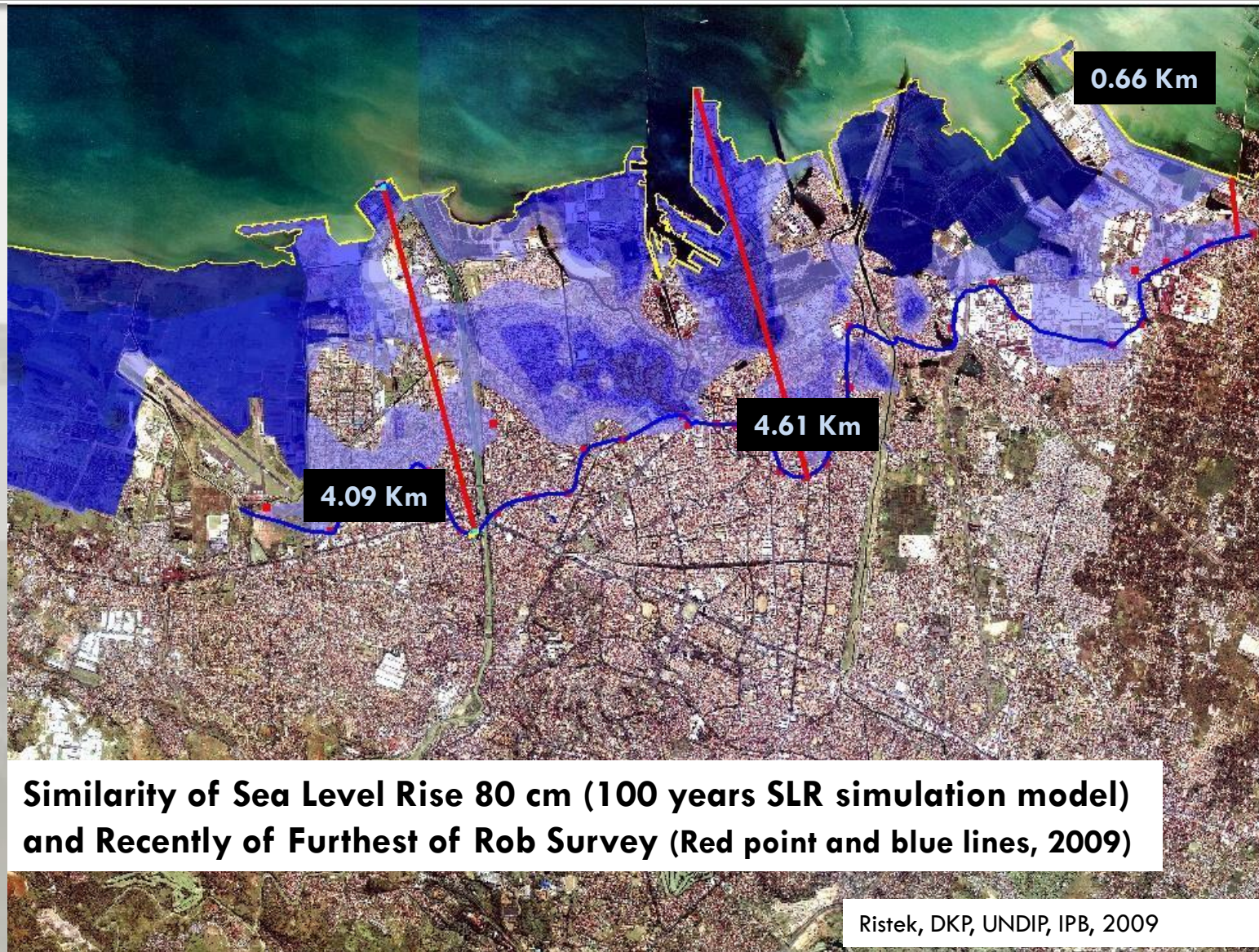
.....Do We Know?.....sea level rise 8 mm/year.

Coastal Erosion in Semarang, 1991 to 2009

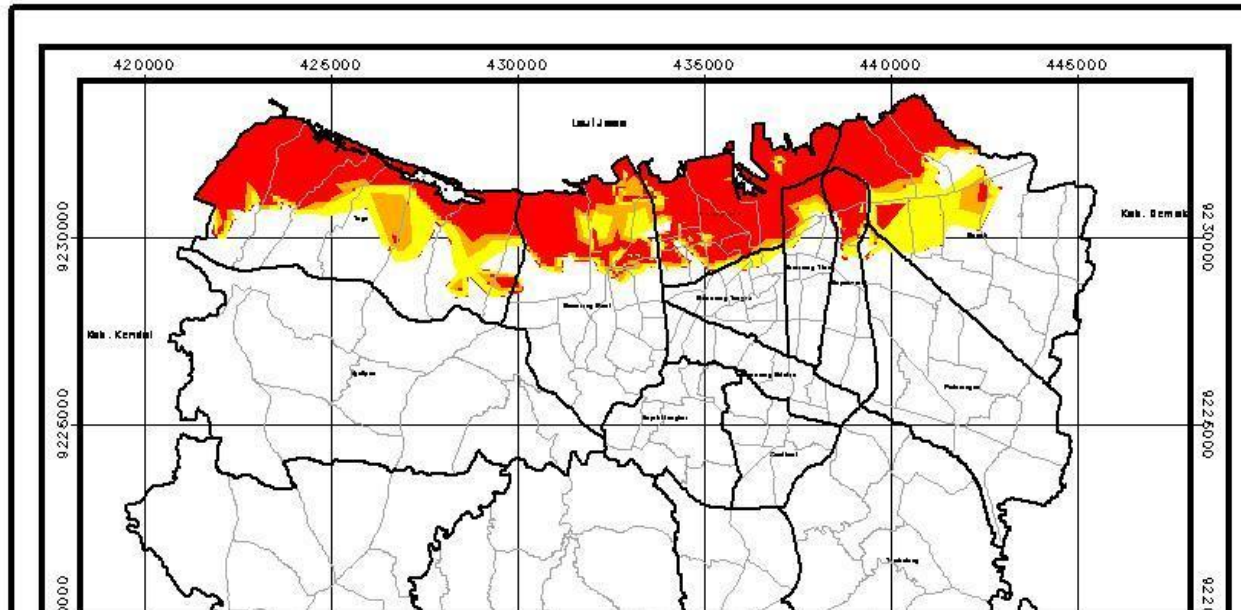
Coverage area 1.764,5 ha (98,2 ha/year)



SEA LEVEL RISES



LOWLAND AREA



Impact of flood and SLR

ACTIVITY	IMPACT
Fishpond	2,889 ha
Farming	902 ha
Settlement	10,425 houses
Infrastructure	2,27 km

Economic Loss (IDR)/year

ACTIVITY	IMPACT
Mangrove	729 million
Fishpond	110 million
Farming	29 billion
Settlement	208 billion
Infrastructure	5 billion

*1 US\$ = 11,000 IDR



ACTIVITIES & INFRASTRUCTURES AFFECTED BY FLOOD & INUNDATION

TRANSPORTATION



Railway



Airport



Bus Station



Port

ECONOMIC



Rice Field



Fish Pond



Fisheries



Industry

INFRASTRUCTURE



Road



Settlement



Water

Challenge on Climate Change and Green Economy

- Economic losses due to extreme climate events such as flood and drought.
- The disasters reduce work productivity especially if the main jobs of the society are vulnerable to disasters, such as the agricultural, fisheries etc.
- The impact of flooding in coastal areas is reducing working people in the fisheries sector, while in coastal areas; flood tides resulted in a decline in farmer incomes.
- Drought caused losses in agriculture, fisheries and drinking water. The disaster also caused an increase in prices of some agricultural products like rice, crops and livestock, but this occurs only in the area surrounding the disaster.

Resource: Vulnerability Assesment, 2010

Coastal Rehabilitation for Developing Economic Growth in Coastal Area

- Government cooperation with University and Local NGO's Promoting and providing the concept Mangroves reforestation for coastal rehabilitation, particularly inhabitants surrounding coastal.
- Engaging for implementing and funding with a wide range of research, NGO's, funders

Mangrove Rehabilitation and Seawall









Lesson Learned

- ❑ Local community empowerment and involvement are the key factors in encouraging environmental protection
- ❑ Government roles in inviting private involvement
- ❑ Term of “potential resources” is needed to invite private
- ❑ Coastal rehabilitation is key in “saving” coastal community and city.

Constraints and Challenges

- ❑ Understanding of Sustainable Development in any sector of development, not only environmental issues only
- ❑ Availability of technology in Coastal Rehabilitation
- ❑ Institutional and individual capacity
- ❑ Gender issues

dank u
ju faleminderit
Tack
Asante 谢谢 Tak multumesc
kiitos
Salamat! Gracias
Terima kasih Aliquam
Merci
Dankie Obrigado
ありがとう
köszönöm grazie
Aliquam Go raibh maith agat
děkuii Thank you