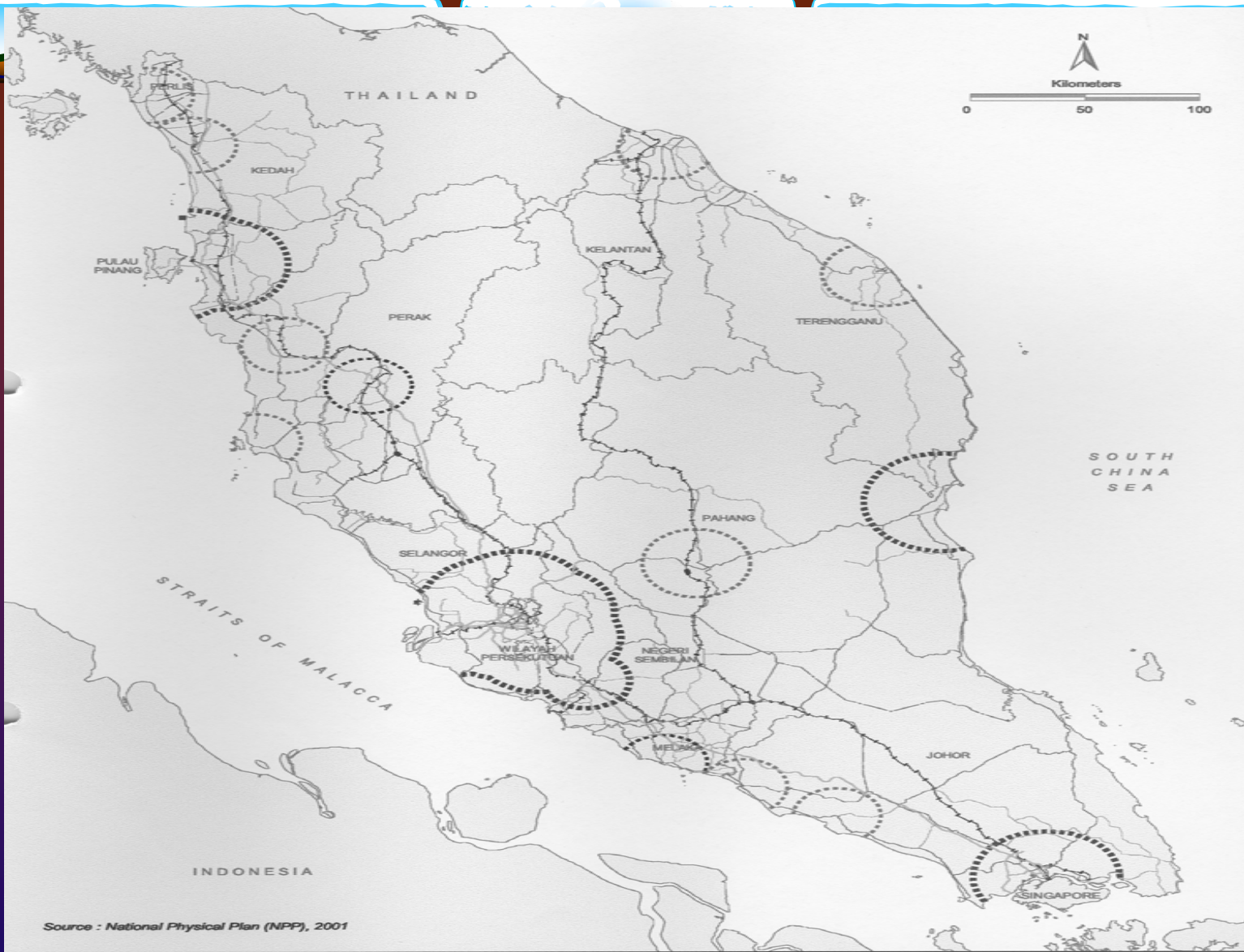


PACIFIC RIM CITIES: CLIMATE CHANGE
MITIGATION AND ADAPTATION
STRATEGIES

UNIVERSITY OF MALAYA
@ KUALA LUMPUR



Source : National Physical Plan (NPP), 2001

Level of Conurbation

- Level 1
- Level 2
- Level 3
- Level 4

- Highway
- Federal Road
- State Road
- Railway



Figure 6.6.1

Hierarchy of Conurbations

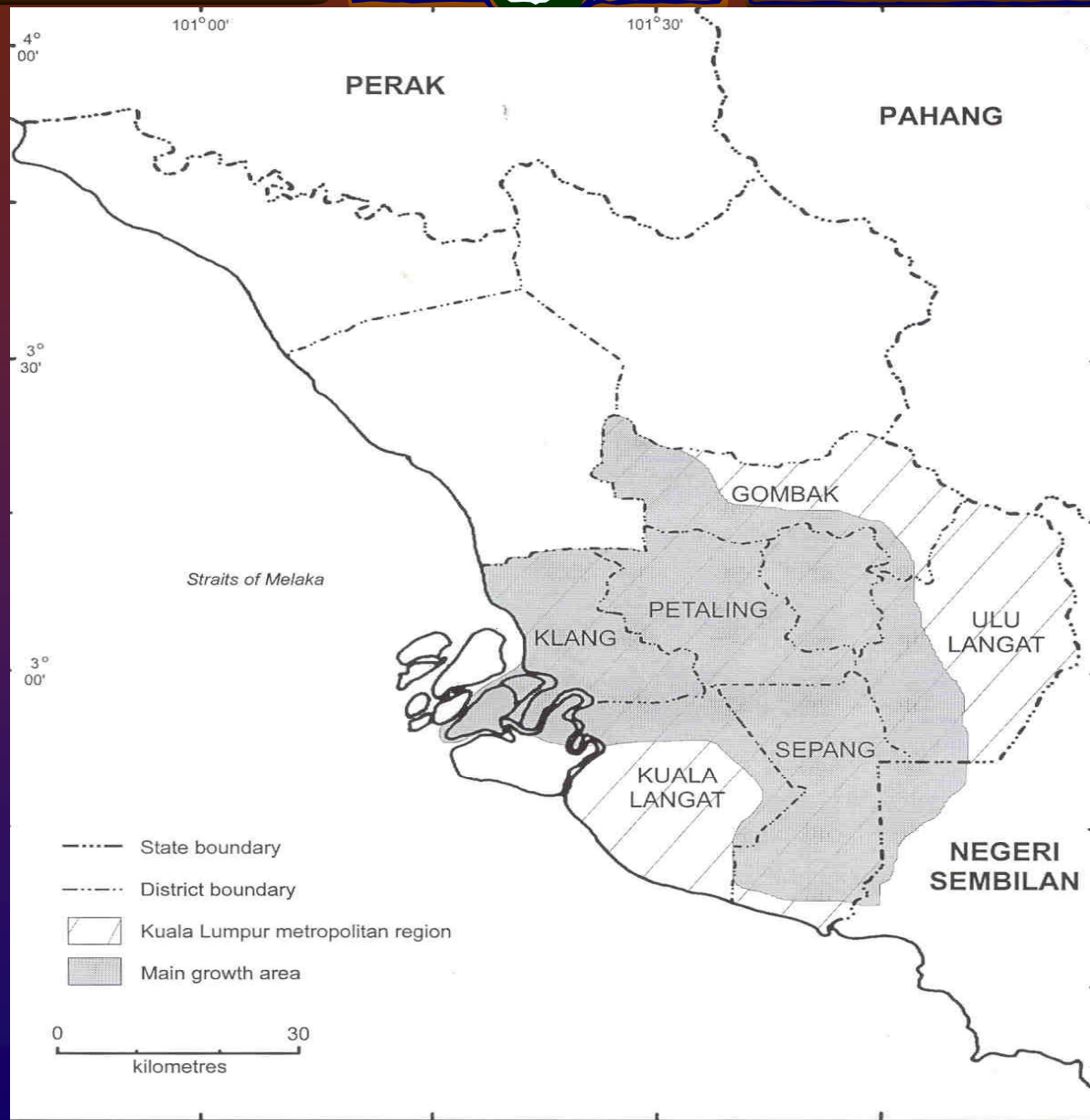
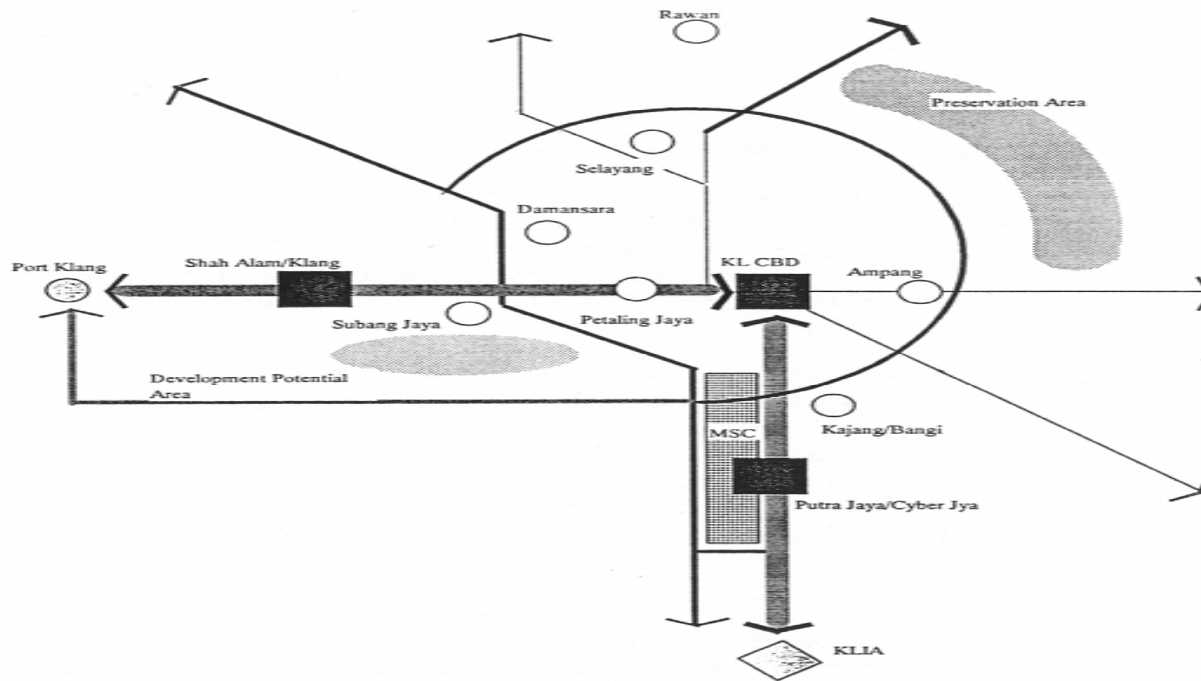


FIGURE 2 : KUALA LUMPUR METROPOLITAN REGION



LEGEND






	Transport Corridor
	Major Expressway
	Planned Arterial
	Existing Arterial (or Under construction)
	Sub Center

Fig. 5.1.1

Spatial Regional Structure Framework

SMURT-KL
 Study on Integrated Urban Transportation Strategies
 for
 Environmental Improvement in Kuala Lumpur



Major Issues

- ❖ Direct issues – water availability, water supply and water pollution
- ❖ Indirect issues – floods, water-related hazards such as landslides, land subsidence
- ❖ Issues need to be addressed in comprehensive manner in order to achieve sustainable water sector



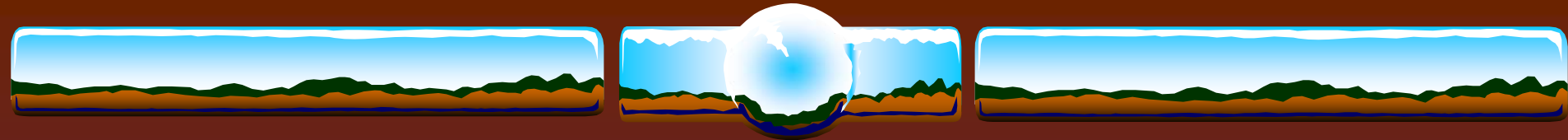
Issue 1: Inadequate water resources and poor distribution system

- ❖ Malaysia endowed with ample water supply
- ❖ However, water supply has become a major issue especially in major conurbations
- ❖ Water availability of less than 2000 m³ per year per capita considered very low, less than 1000 m³ per year per capita as catastrophic
- ❖ Selangor predicted being in catastrophic category by year 2050



Issue 1: (cont)

- ❖ Although Selangor would not yet fall under water stress category until 2050, much of its water resources are not used due to pollution
- ❖ Efforts should be made to rehabilitate river water quality to enable maximum safe utilization of resource



Issue 2: Inappropriate siting of industrial areas in water catchment areas

- ❖ 61 industrial areas located in water catchment in Peninsular Malaysia
- ❖ Selangor has 12; concentrated mainly in Langat river basin
- ❖ Problems-degradation of water quality, increased costs in water treatment, loss of recreational or other economic opportunities



Issue 3: Groundwater use

- ❖ Groundwater utilization is only significant in Kelantan and Selangor
- ❖ In Selangor, major use of groundwater is for industries and irrigation
- ❖ This mainly occurs in Klang, Kuala Langat and Shah Alam areas
- ❖ Problems: over-extraction, subsidence, contamination



Issue 4: Flood Hazards

- ❖ Peninsular Malaysia has annual average rainfall of 2470 mm
- ❖ Most of storm water drained through 49 main rivers that form drainage arteries of PM
- ❖ Low-lying areas comprising of floodplains susceptible to floods esp. during rainy seasons
- ❖ Occurrence of frequent and severe flash floods create havoc disruptive to economic activities



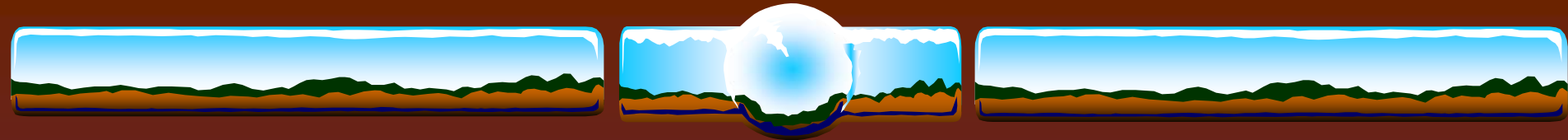
Issue 4 (cont)

- ❖ Natural drainage system of Kuala Lumpur includes 3 primary rivers with total length of 32.8 km and 8 other rivers with combined length of 40.6 km.
- ❖ Department of Irrigation and Drainage primarily responsible for major capital works associated with maintenance of river system in KL



Issue 4 – cont

- ❖ Areas susceptible to flash floods are areas along Sungai Klang esp. Kg. Datuk Keramat, Jln Yap Kwan Seng, Kg. Bharu, Jln. Dang Wangi, Jln. Tun Perak/Jln Melaka in city centre



Issue 5: Threats to coastal ecosystems

- ❖ Major and potential threats to marine and coastal ecosystems include:
 - ❖ Alteration and loss of habitat (acc. To WWF 1998, 62% of Msian coastline altered)
 - ❖ Pollution
 - ❖ Over exploitation
 - ❖ Coastal erosion



Initial way forward

- ❖ Define issues of water stresses in each city region
- ❖ Indicate governance for water resources in each city region
- ❖ Describe effects of city forms and implications on water resources
- ❖ Document best practices in water resource management in each city region

A decorative header at the top of the slide. It consists of three rounded rectangular panels. The left and right panels show a stylized landscape with green hills and brown ground under a blue sky. The middle panel features a white globe with blue continents, centered between two smaller versions of the landscape panels.

Thank you