



Needs Of DMAs For Forecast And Warnings Of Hydrometeorological Hazards

By

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NADMA Malaysia

NADMA Malaysia - Core Functions

Planning and
Preparedness

Operation
Activities

Post Disaster
Management

NADMA Malaysia: Urban Flash Floods

Mitigation activities

- Local authorities to ensure all drains are good conditions
- Construction activities do not block drainage system

Preparedness of relevant authorities

- Fire and Rescue Department; Civil Defence; Police; PWD; DID

Warnings to the public

- Local residents
- Road users

NADMA Malaysia: Landslides

Mitigation activities

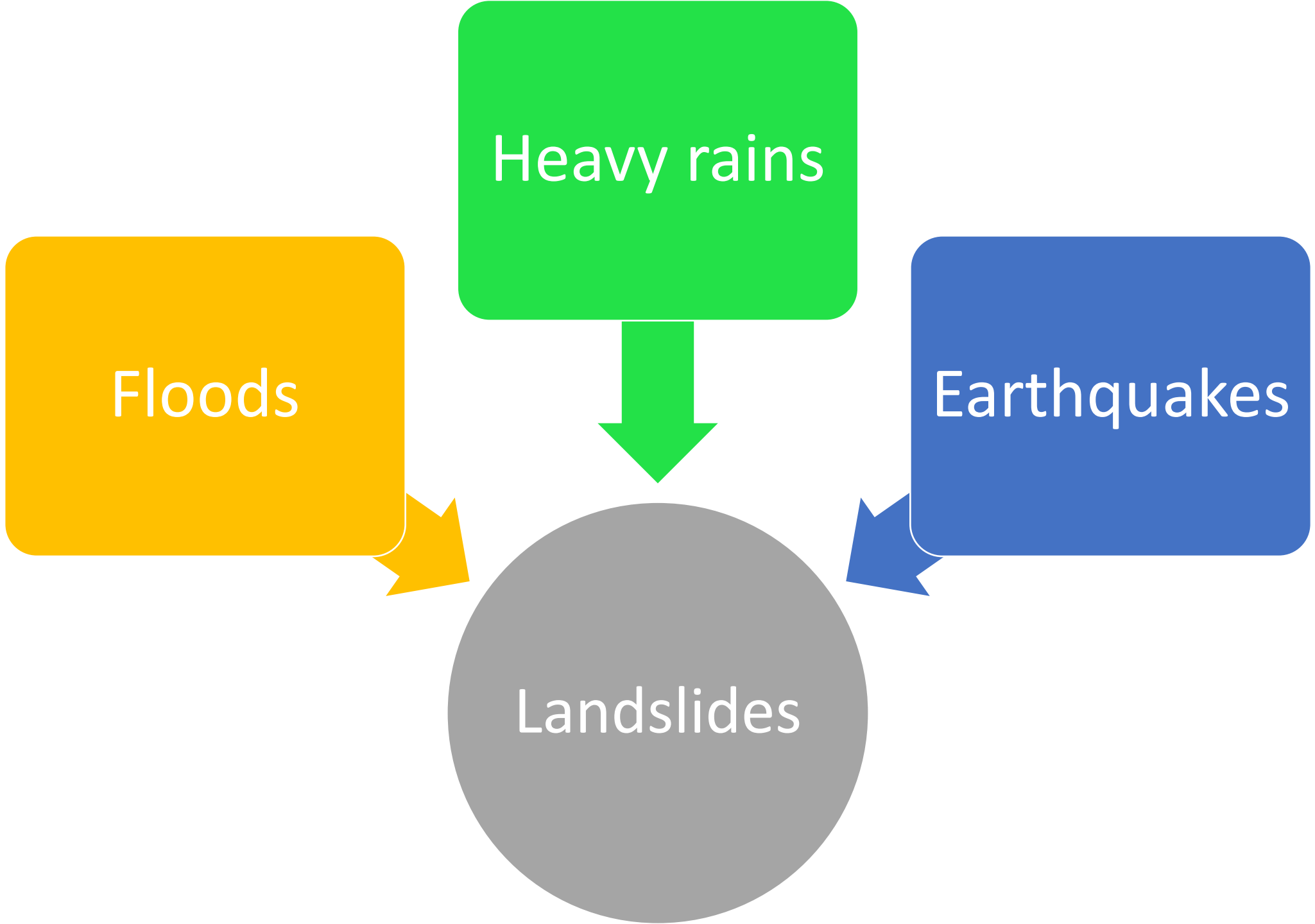
- Continuous surveillance by relevant authorities and parties

Preparedness of relevant authorities

- Local authorities
- Highway authorities

Warnings to the public

- Local residents
- Road users



Heavy rains

Floods

Earthquakes

Landslides

NADMA Malaysia: Requirements for forecast

Lead times

- Depends on the monitoring activities by relevant authorities and parties

Location of disaster

- Prior identification of flood and landslide prone areas

Accuracy of forecast

- Difficult to achieve

Impacts of forecast

- Reduce losses both economic and lives
- Reduce hardships face by the communities

Need for closer collaboration of forecasting agencies

Flash floods

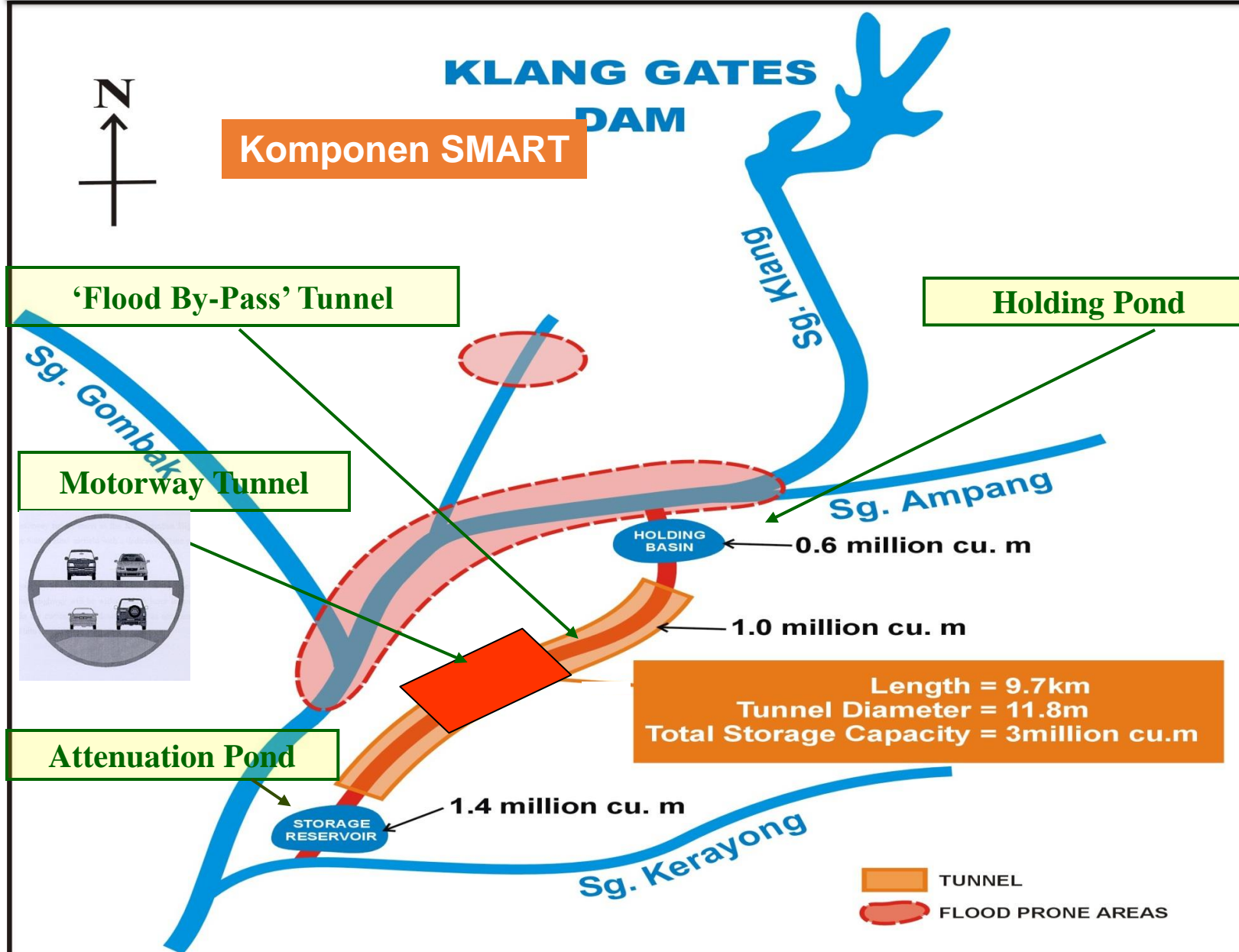
- Met Malaysia
- DID

Landslides (federal roads)

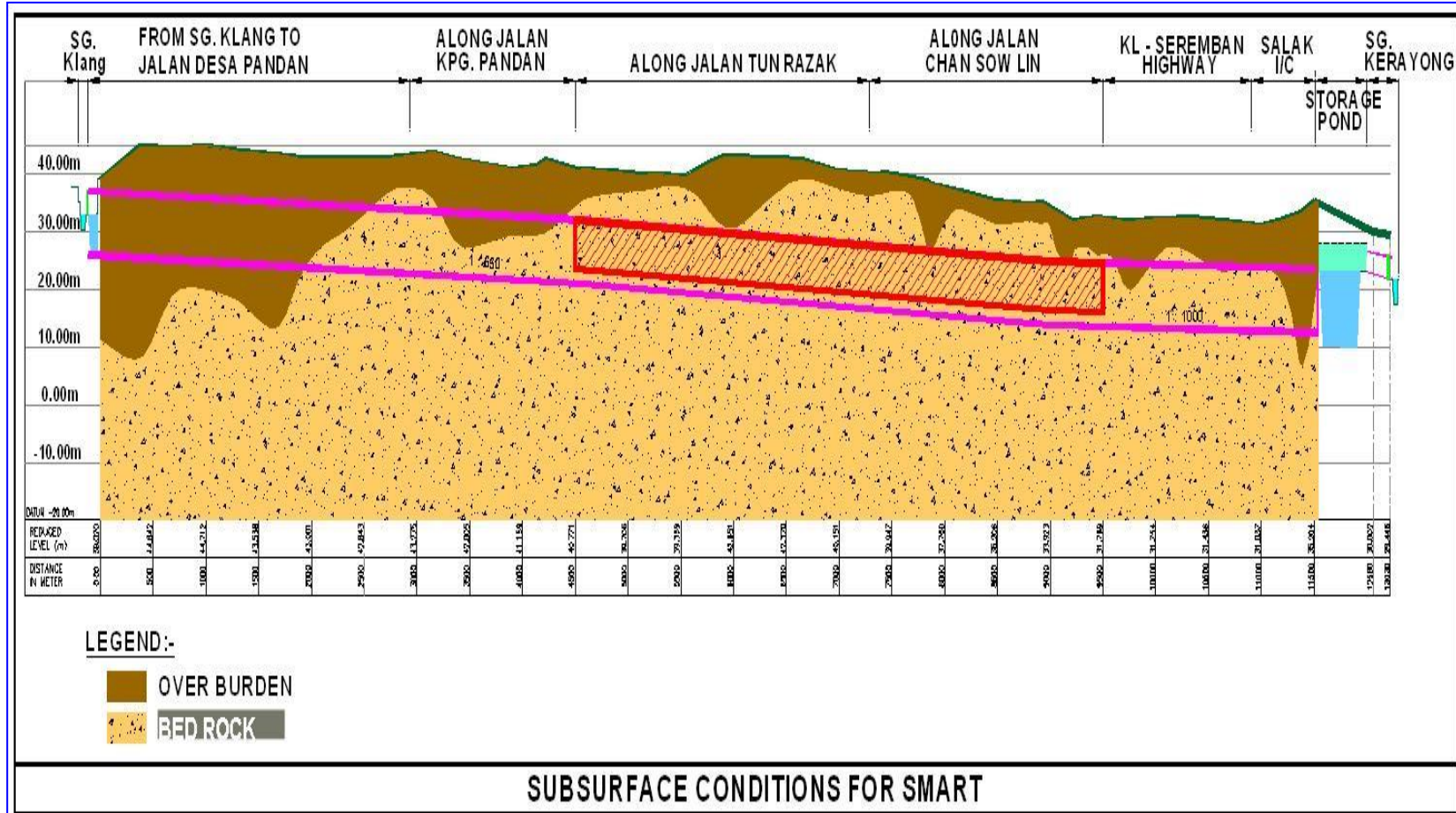
- Met Malaysia
- PWD

Kuala Lumpur Flood Mitigation Project: Reducing flash floods

KLFM PROJECT : SMART TUNNEL



SMART TUNNEL : CONSTRUCTION



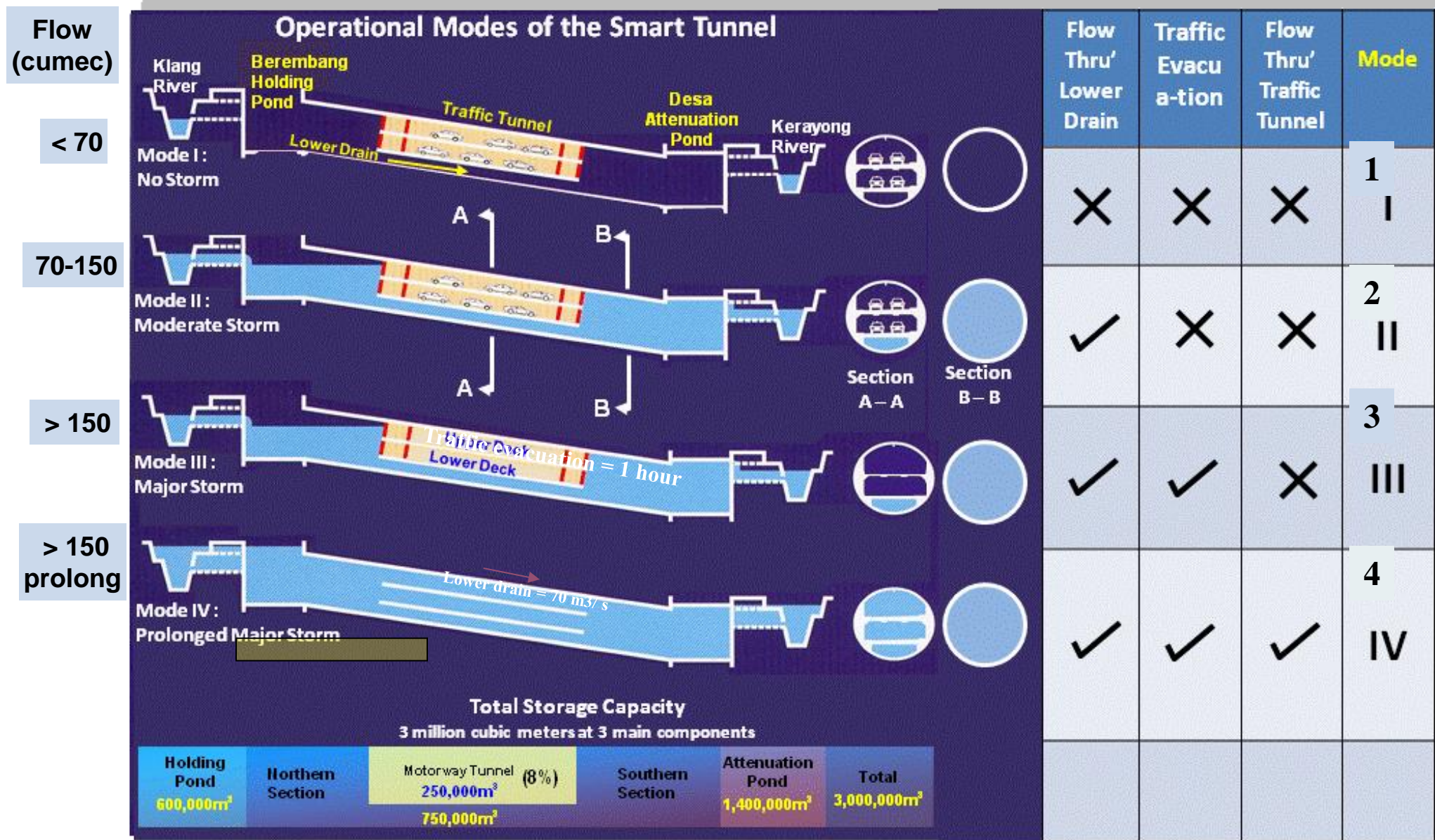
The geological conditions are a challenge for excavating a 13m diameter bored tunnel. From the existing geological information it was known that the main bedrock would be limestone. This limestone is typically made up of 90 to 100% calcite that has been metamorphosed into marble. The limestone was known to be affected by solutions and has a range of typical karstic features.

SMART TUNNEL : CONSTRUCTION



SMART : COMPONENTS

Operation System



SMART Tunnel : FDS Operations

Flood Detection System (FDS)

An integration of :

- SCADA Information Management and SMART Interface/Operation System
- Flood Forecast Modeling System
- Communication System

Main functions

- Monitoring Catchment Condition
- Forecast Mode 2, 3 & 4 storms
- Monitoring the status of all components (eg. gates, pumps, cctv, warning stations etc)
- Ensure the control of gates automation working all the time

Types of communications

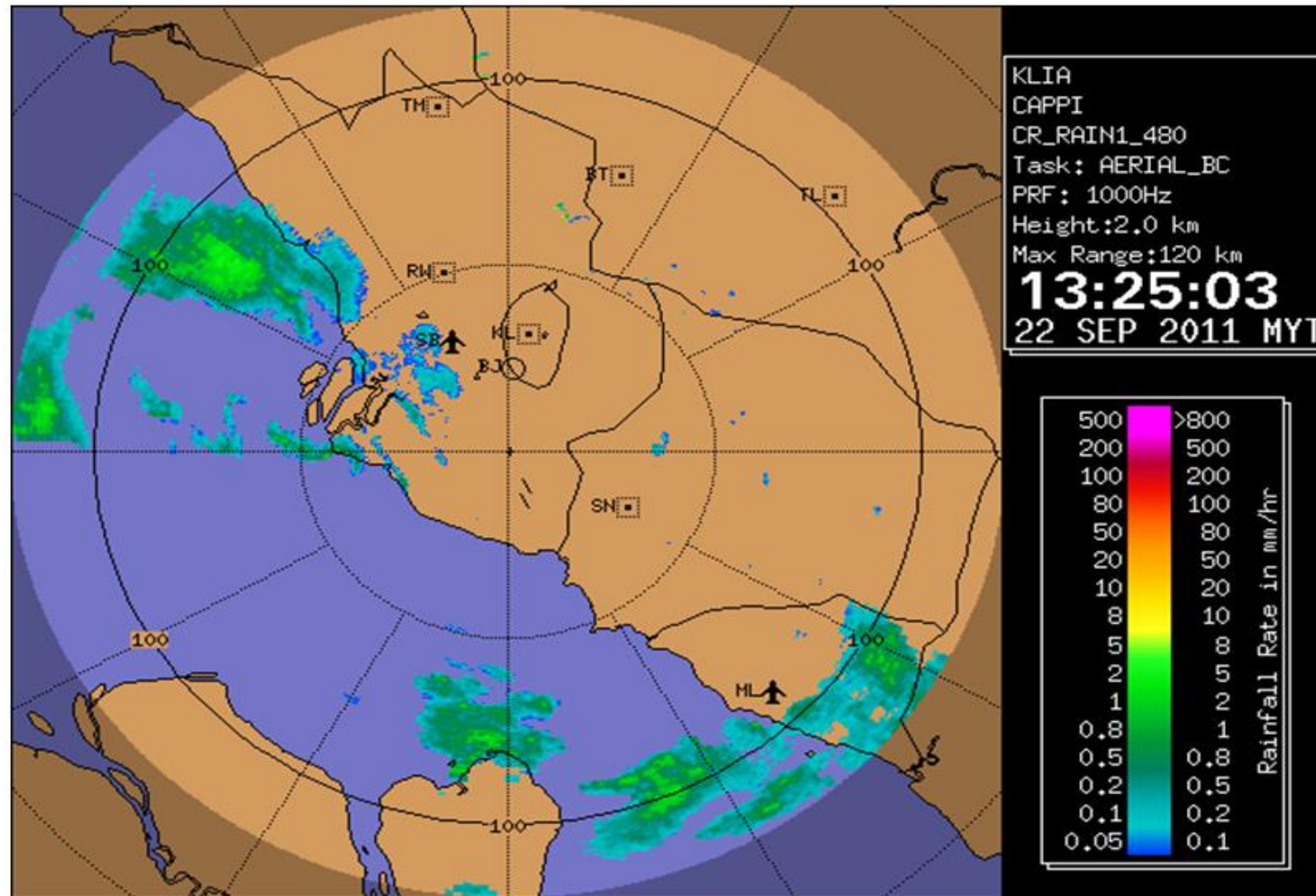
Fiber optic, Radio GSM, Wi Fi (4.8GHz), normal telephone lines

SMART Control Room

SMART : FDS OPERATION

Early Storm Detection by MMD Ground Radar

Radar Loop from Doppler radar for cappi
Last updated: Thursday, 22 September, 2011 at 13:30 (MYT)



Catchment Monitoring System

