

Development of an Integrated Information System for Flood Control and Water Management in Western Province

- A Prototype for IFI Demonstration project

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Ministry of Megapolis and Western Development

Outline

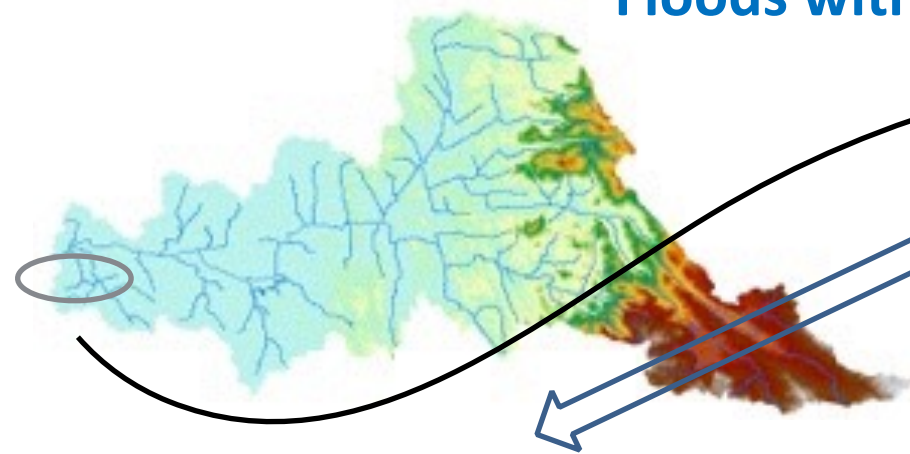
- Background:
 - Flood Risk for Metro Colombo
 - Metro Colombo Urban Drainage Project
 - Megapolis Development Plan
- Flood control and water management centre - interagency collaboration: Current status
- Challenges and Support sought

Cabinet Decision on cabinet paper no.
16/2143/724/085 (2016-10-25)

To Establish a State-of-the -Art-Centre for flood control and Water Management in Western Province of Sri Lanka through Inter-agency Collaboration

- To grant approval to establish a “Flood Control and Water Management Centre” for the Megapolis Region in the Western Province, as indicated in the proposal (a)
- A suitable mechanism, resources and the manpower required for the purpose to be determined jointly by the Secretaries to the Ministries of Disaster Management, Irrigation and Water management and Megapolis and Western Development in consultation with the secretary to the treasury considering (b), (c) and (d)

Floods within Colombo Metropolitan Area



River Flooding of Kelani River

- ☐ High Intensity rainfall at Upper Kelani Catchment
- ☐ Spilling of upstream reservoirs
- ☐ Reduction of the flood plain / Encroachments/ Human Settlements



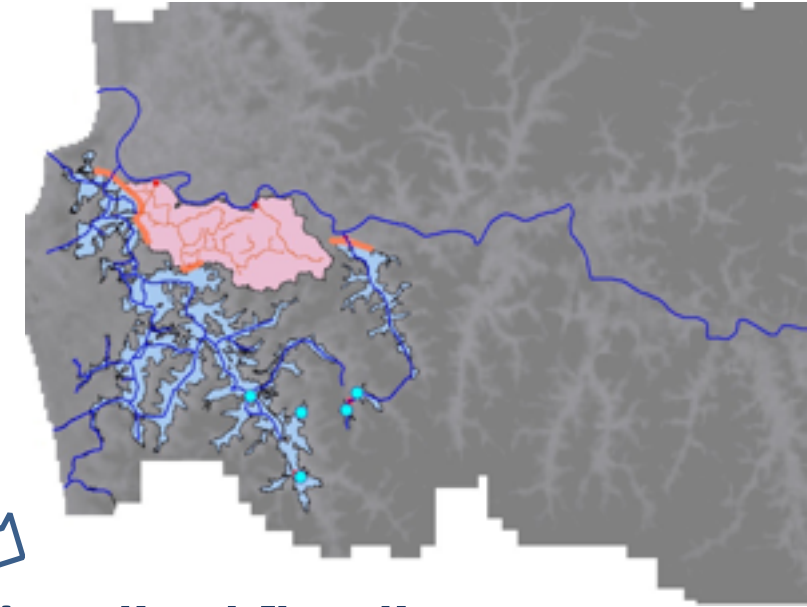
Department of Irrigation

Floods Due to Overtopping of canals of the basin

- ☐ High intensity localized rains.
- ☐ Inadequacy of Basin Outfall Capacity
- ☐ Inadequacy of Basin Storage Capacity



SLLRDC

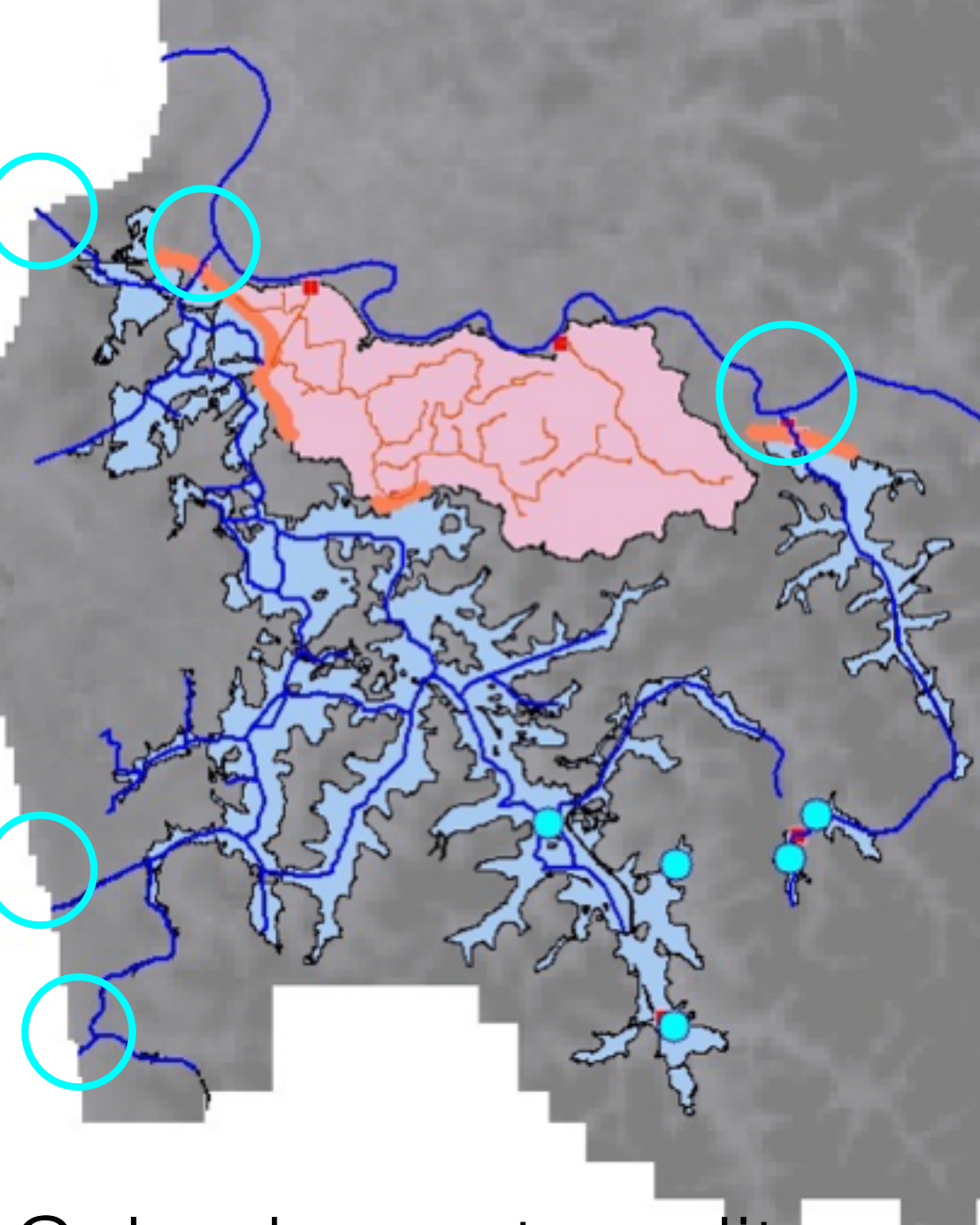


Localized flooding

- ☐ Inadequacy or non availability of an existing drainage pipe network
- ☐ Poor maintenance



CMC and other local authorities



Date	Rainfall (mm)
17th May 1981	194
4th June 1992	494
20th April 1999	285
21st November 2005	270
17th November 2009	267
12th to 18th of May 2010	515
10th November 2010	415
16th May 2016	265

Date	Kelani Water Level at Northlock (m.MSL)
15th July 1984	1.60
6th July 1989	2.80
4th November 1990	1.52
1st June 1991	1.50
5th June 1992	1.55
15th October 1992	1.61
17th September 1997	1.70
22nd November 2005	1.72
1st June 2008	1.80
17th May 2010	1.60
19th May 2016	2.24

Colombo metropolitan area is protected from flood waters of Kelani by flood bunds and gates. However, when the water level in Kelani river is high, the city water cannot be discharged by gravity flow

50 Year Design Rainfall (Low Kelani / Dry Soil)



476mm Daily Rain

Infiltrated = 219 mm

Runoff = 257mm

Flood

Storage

Outflow

35%

39%

1%

4%

13%

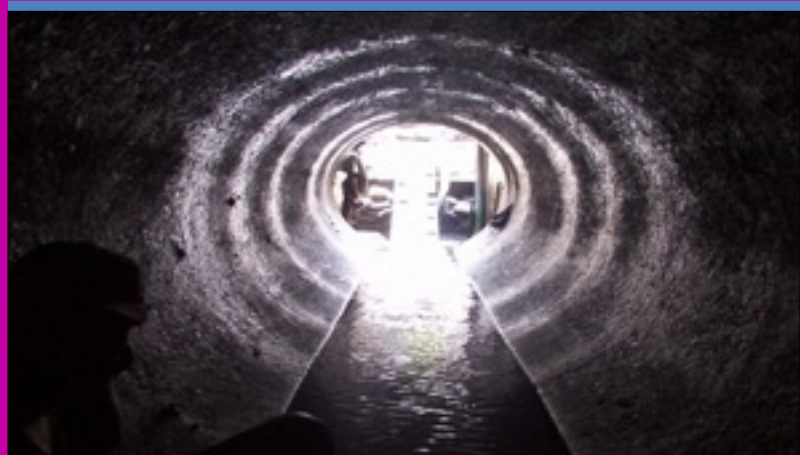
8%

Mutwal

Dehiwala

Wellawatta

Northlock



Due to Colombo Rainfall



PARLIAMENT UNDER
WATER IN 2010
FLOODS



MCUDP
Metro Colombo Urban Development Project



**THE
WORLD
BANK**
Sri Lanka



METRO COLOMBO URBAN DEVELOPMENT PROJECT

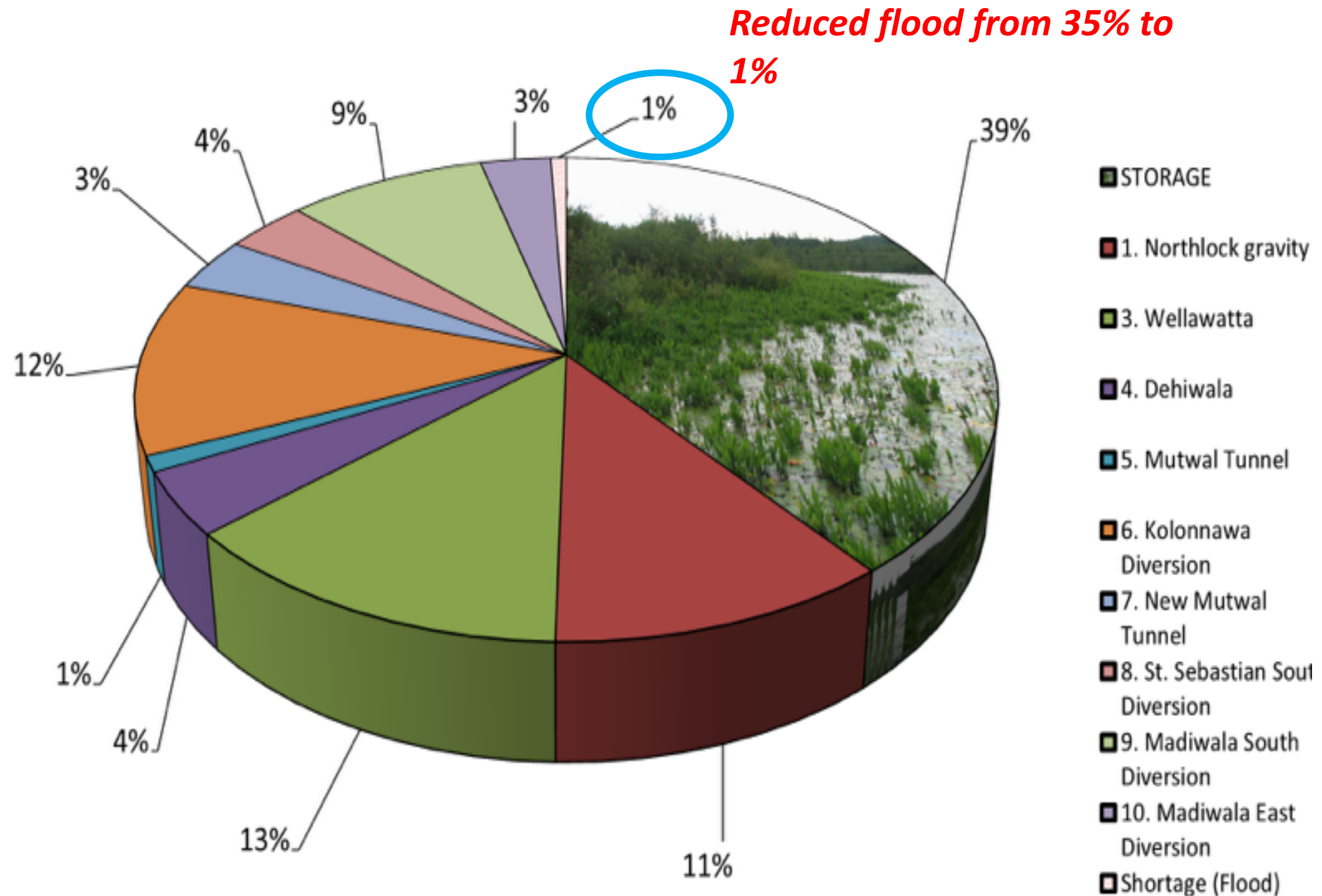
Ministry of Megapolis and Western Development

List of interventions

1. Improvements to Madiwela East Diversion Scheme
2. Madiwela South Scheme
3. St. Sebastian South Diversion
4. St. Sebastian North Lock widening & Pumping Station
5. Kolonnawa Canal diversion
6. New Mutwal Tunnel
7. Provide guide walls at Wellawatta Bridge
8. Torrington Tunnel



50 Year Design Rainfall (Low Kelani / Dry Soil) with Proposals



Three pumping stations, managing lakes and wetlands

THE MEGAPOLIS

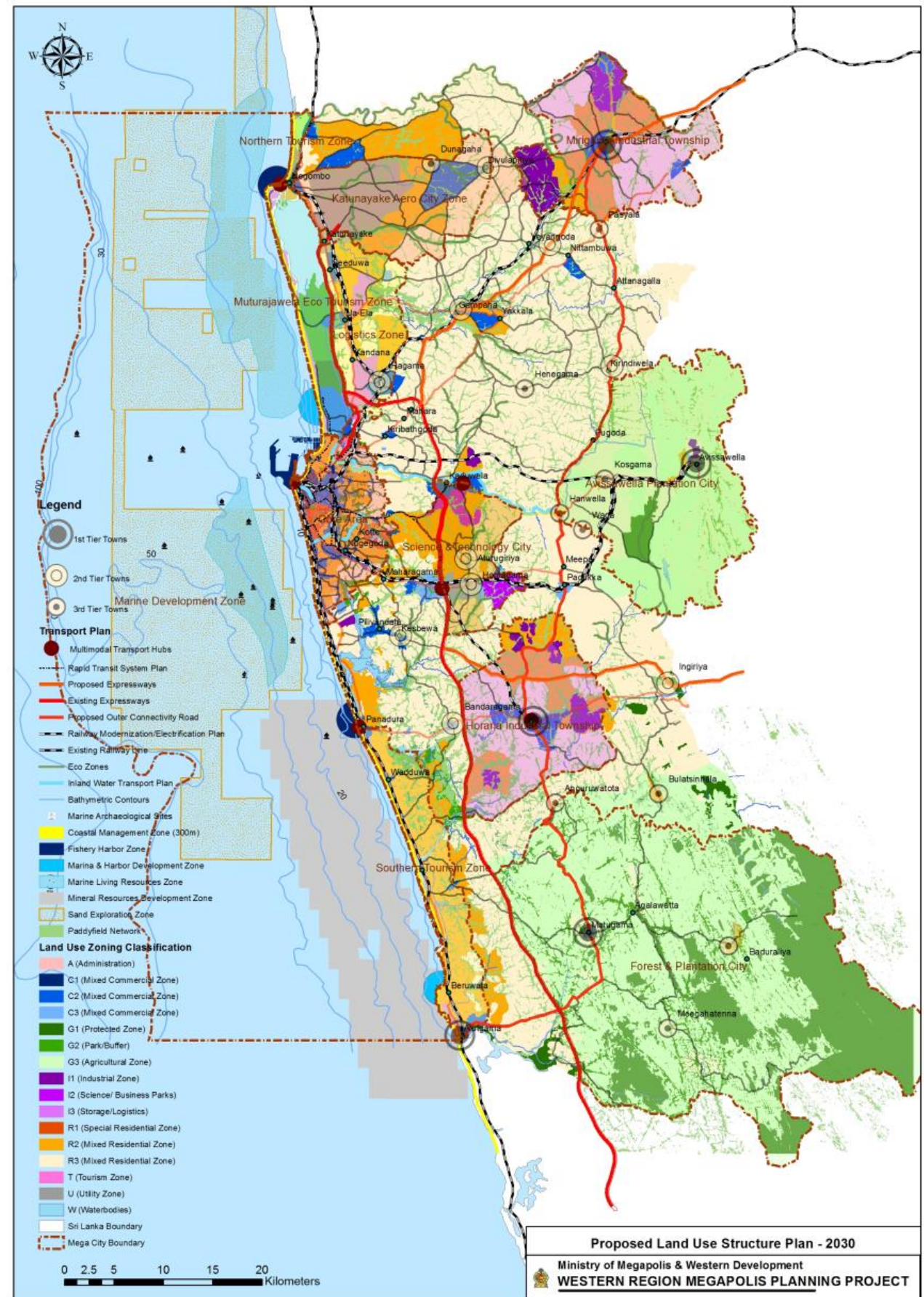
WESTERN REGION MASTER PLAN - 2030

SRI LANKA

From Island to Continent



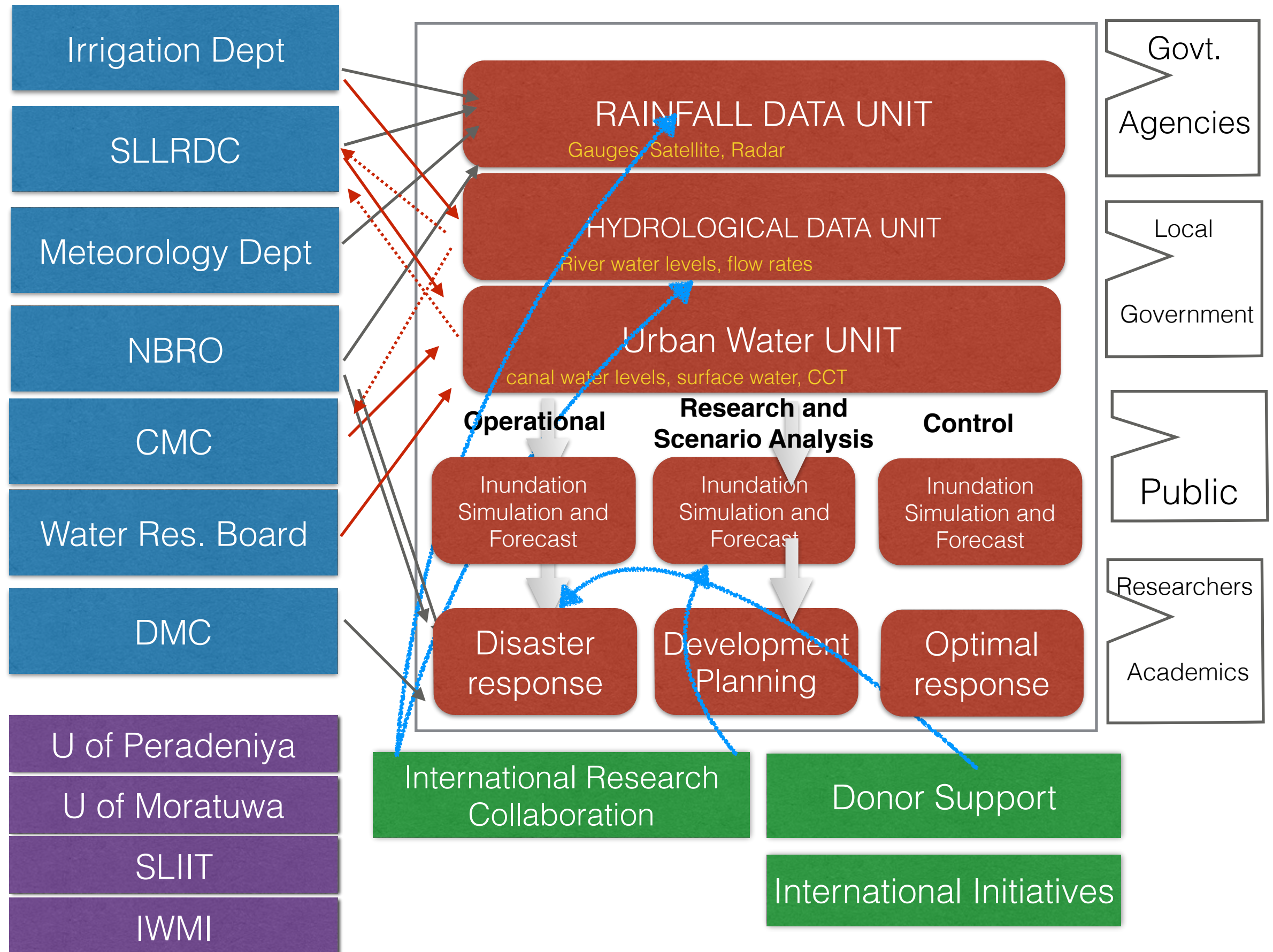
Western Region Megapolis Planning Project
MINISTRY OF MEGAPOLIS AND WESTERN DEVELOPMENT



Current Status

- First Inter-agency meeting held on August 30, 2016 at irrigation ministry. Second on September 22nd at Meteorology Dept.
- Discussed and agreed on the background papers
 - Set up a steering committee of senior management that would meet once in 2 months (10 agencies at present):
 - Set up a working group with nominations from concerned agencies (20 nominated at present).
- Identified agencies and major resource institutions for developing each of the major components of the system
- Identified and calibrated available models and systems to start setting up the information system

System Implementation



Expectations from IFI and International community

- Collaboration on:
 - System for integrated information management
 - DIAS
 - Enhancing Research and Development
 - developing local capacity; training, postgraduate education
 - Exposure to global experiences and methodologies

Thank You!