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SRI LANKA

Land Area - 65,525 Sq.km

Length of coast line – 1, 760 km

Topography – Highland massif surrounded by vast area of lowlands

Population - 19.6 Million

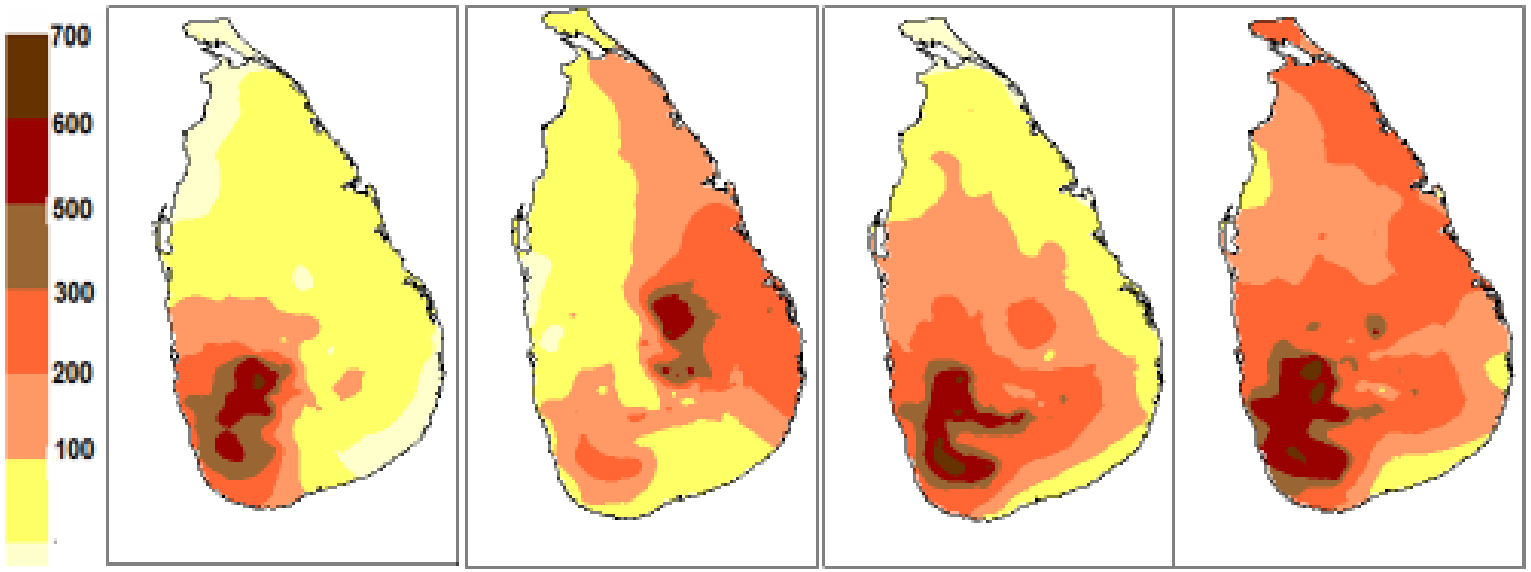
Pop. Density – 309 per Sq.km

Average Rainfall – 1,815 mm

(ranges between 900 and 5,000+)

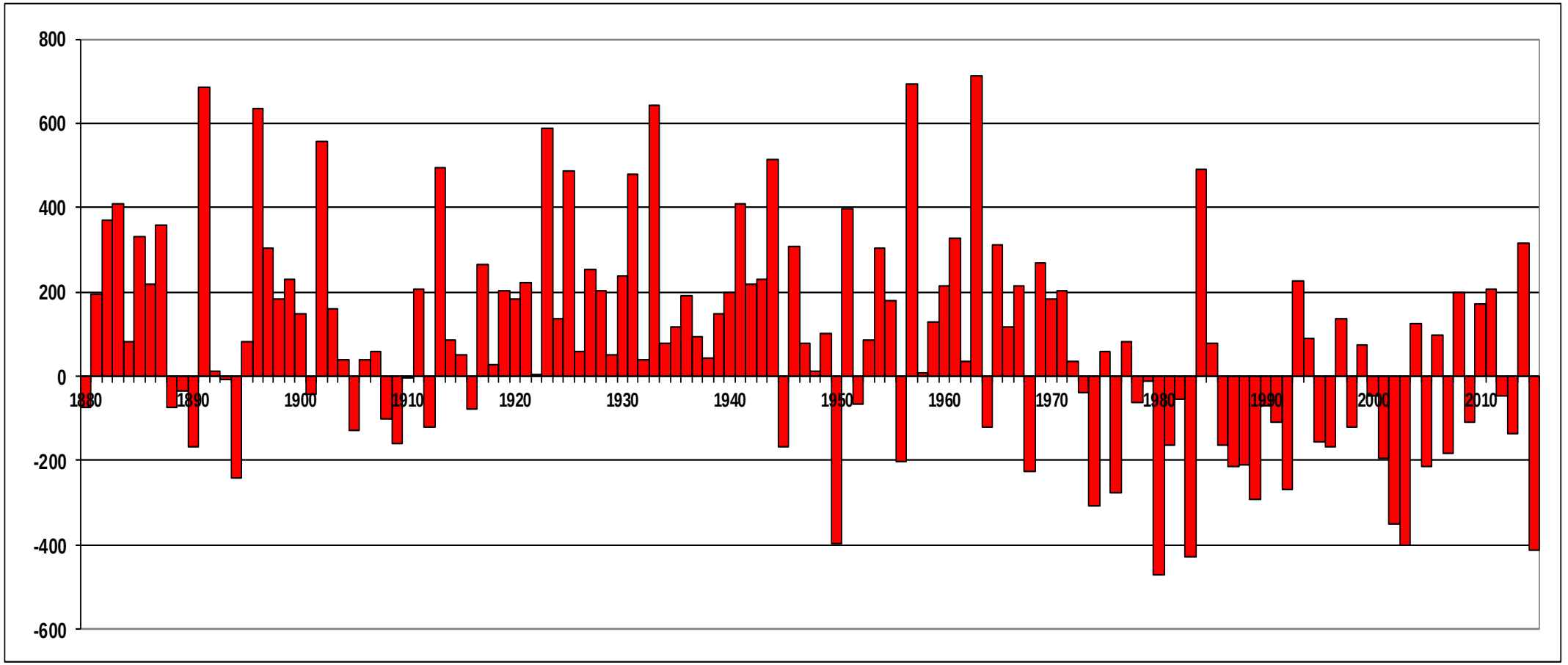
Average Temperature (lowlands)–27.5C

Four Rain Seasons



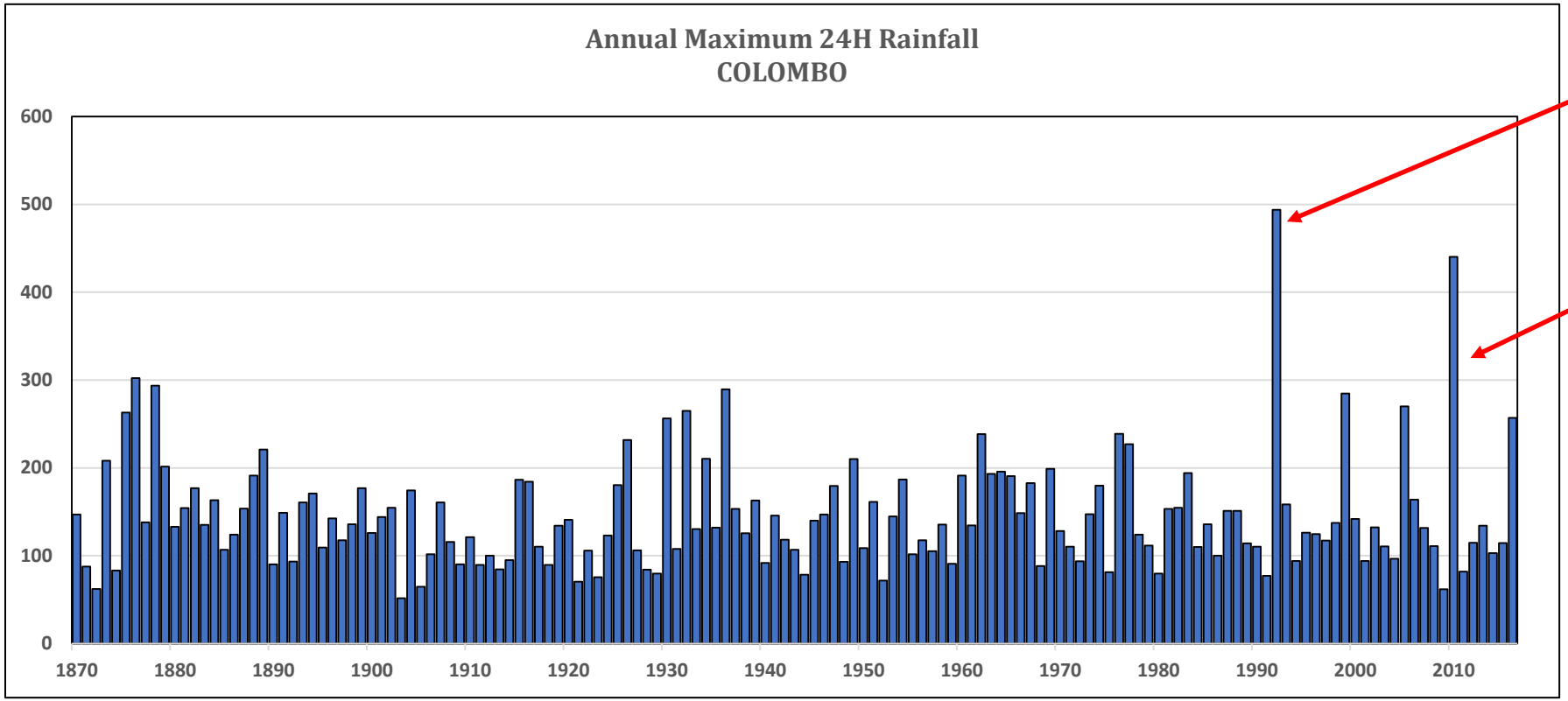
SEASON	*Southwest Monsoon*	*Northeast Monsoon*	*First Intermonsoon*	*Second Intermonsoon*
PERIOD	May-Sep	Dec-Feb	Mar-Apr	Oct-Nov
RAINFALL	546 mm	459 mm	260 mm	548 mm
	30 %	25 %	15 %	30 %

Variability of Annual Rainfall of Sri Lanka (1880-2016)



YEAR TO YEAR VARIABILITY OF RAINFALL IS HIGH

EXTREME RAINFALL EVENTS ARE BECOMING MORE AND MORE FREQUENT!

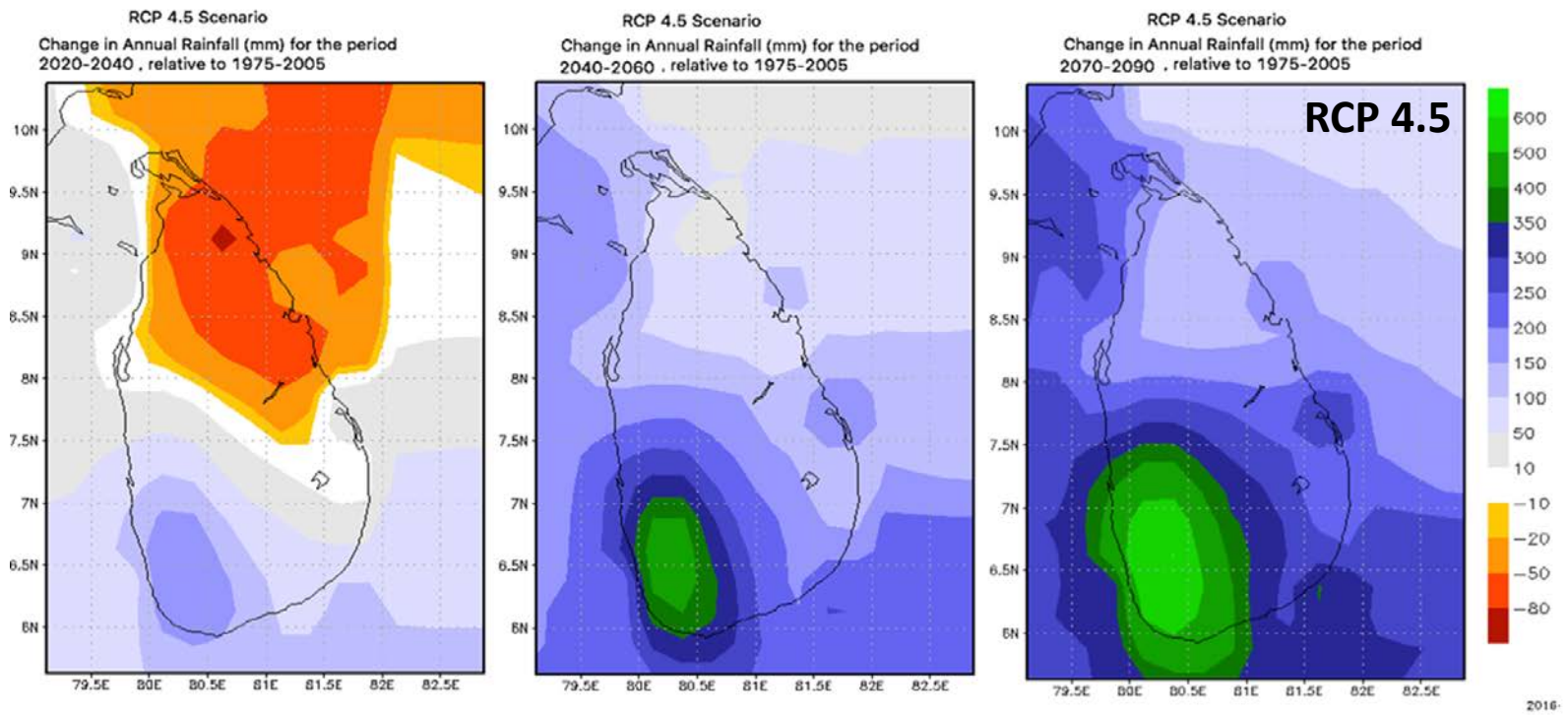


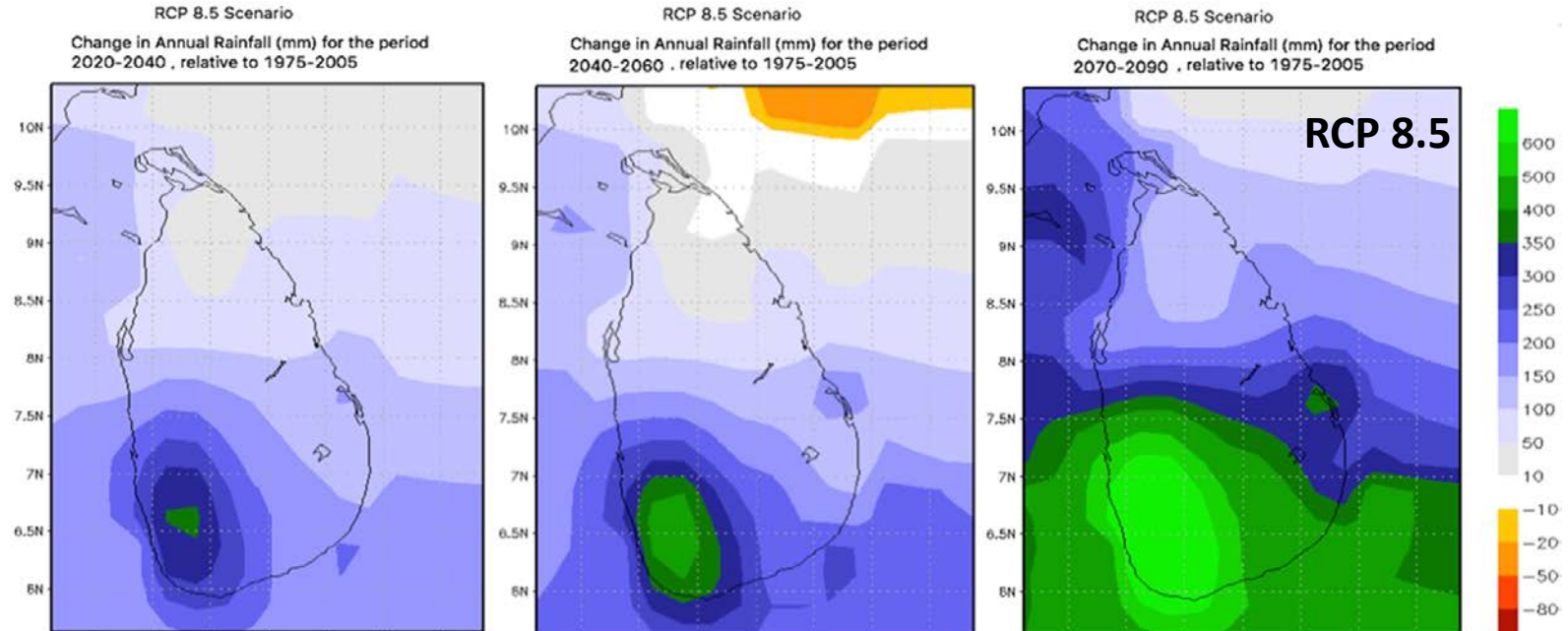
493.7 mm
4th June 1992

440.2 mm
10th November 2010

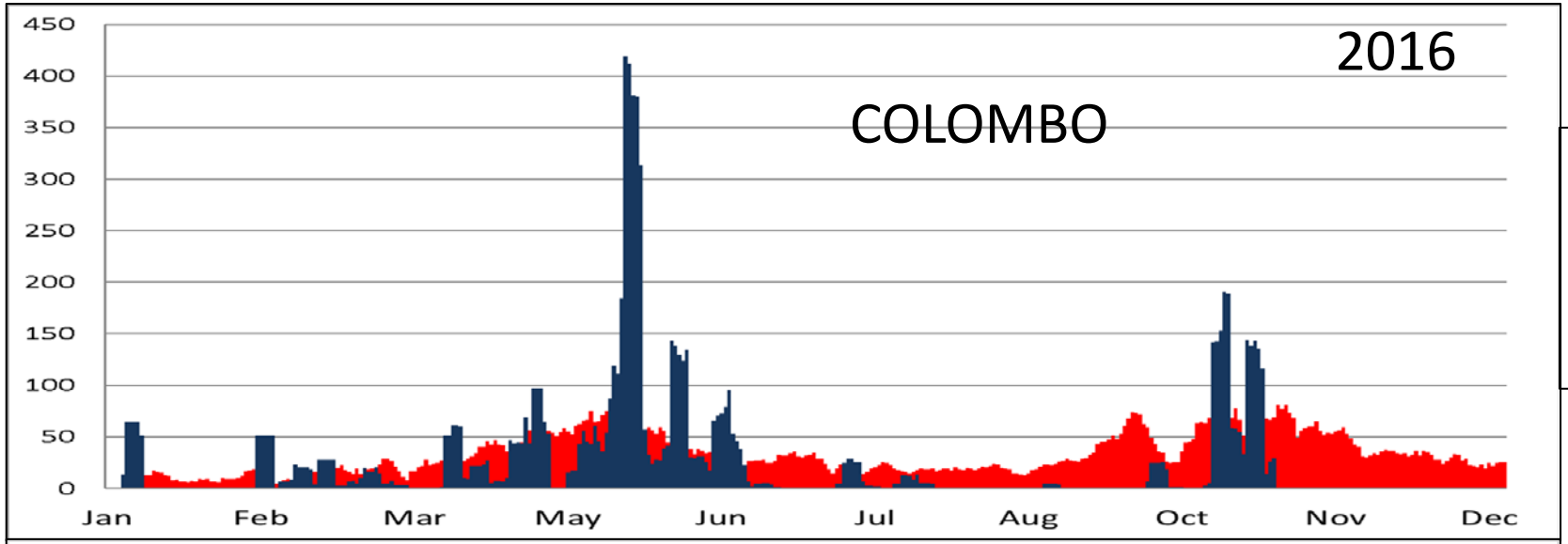
ANNUAL MAXIMUM 24H RAINFALL SERIES SHOW HIGHER MAXIMA IN THE RECENT PERIOD

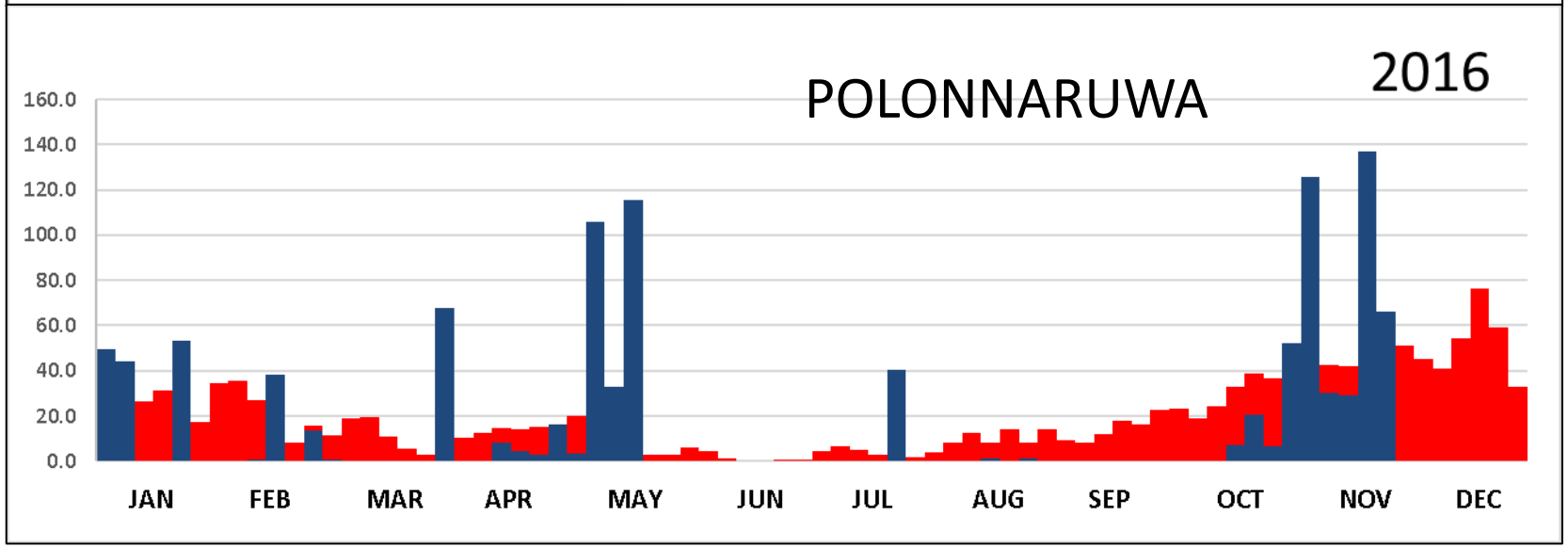
CLIMATE CHANGE SCENARIOS FOR SRI LANKA USING CMIP5 DATA SHOW A SIGNIFICANT INCREASE OF RAINFALL IN THE WET ZONE OF SRI LANKA.





RAINFALL IN SRI LANKA DURING THE YEAR 2016 WAS HIGHLY ERRATIC!

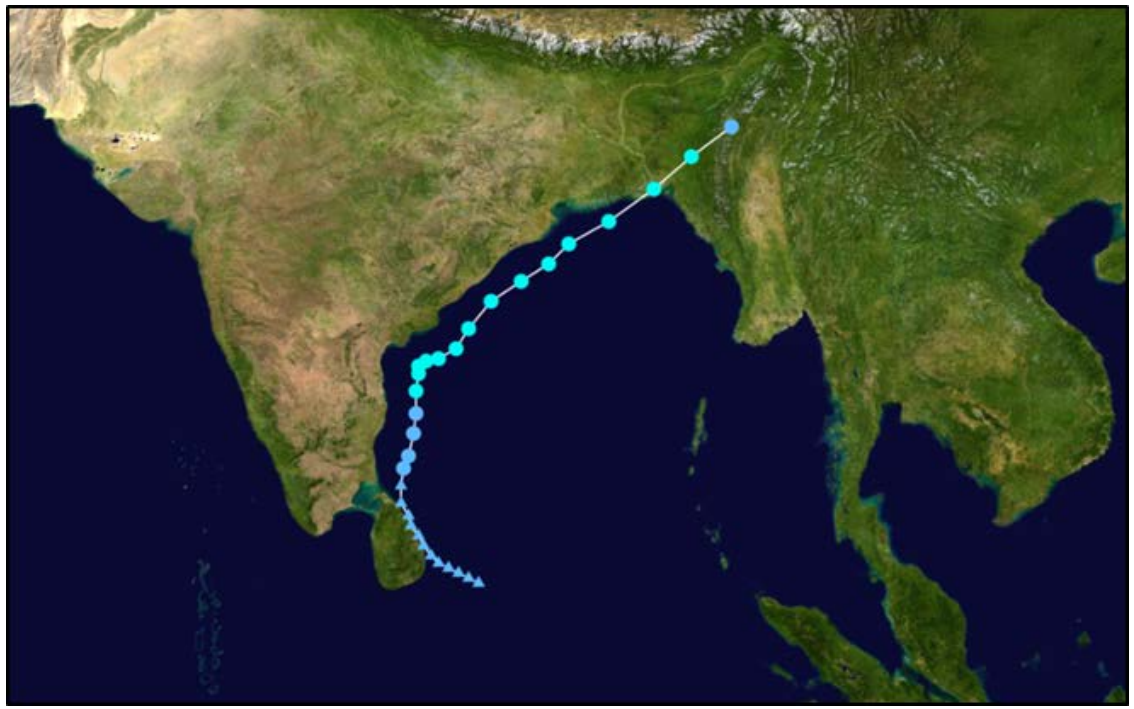


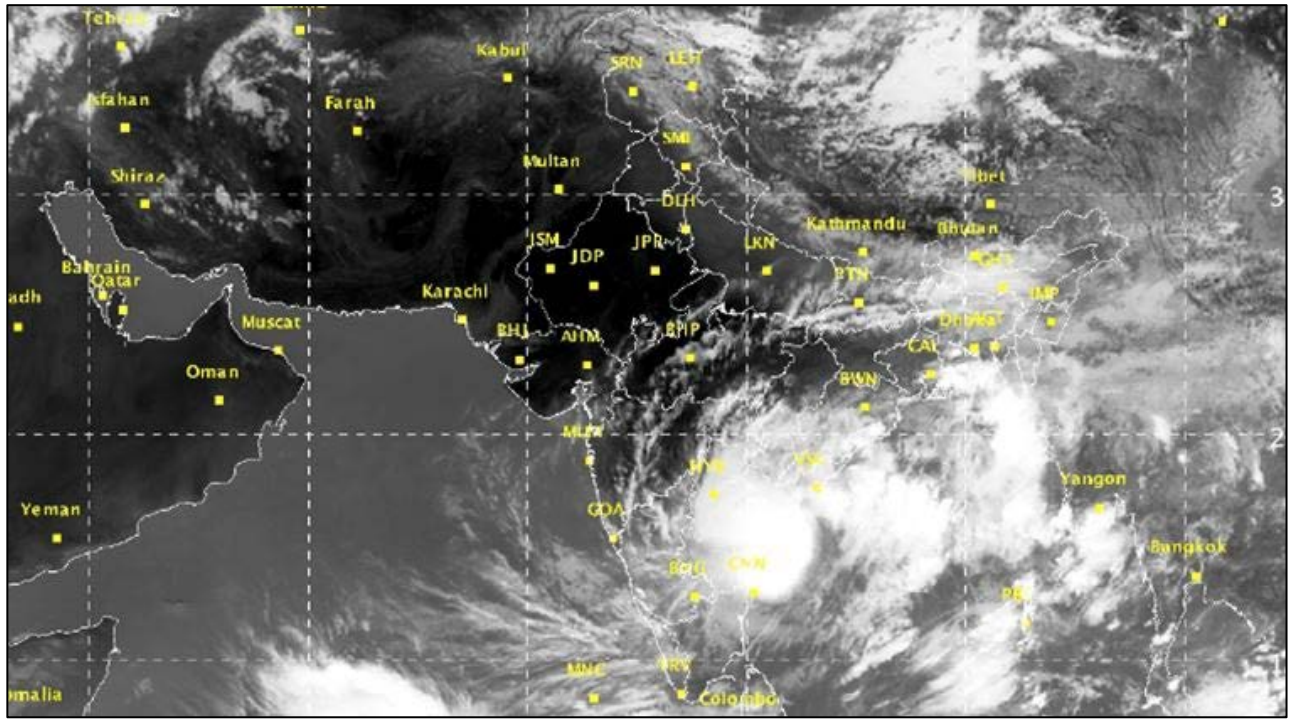


SPELL OF EXTREMELY HEAVY RAIN IN MID-MAY FOLLOWED BY 5-MONTH LONG DRY SPELL UNTIL LATE OCTOBER

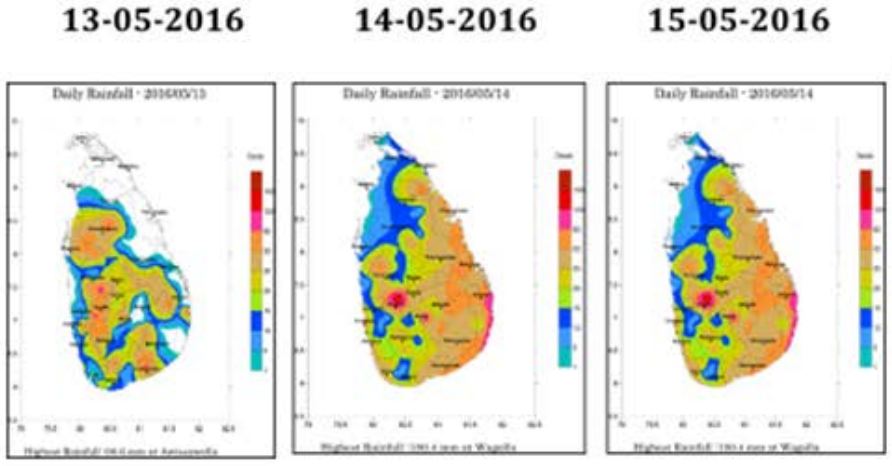
RAINFALL IN 2016

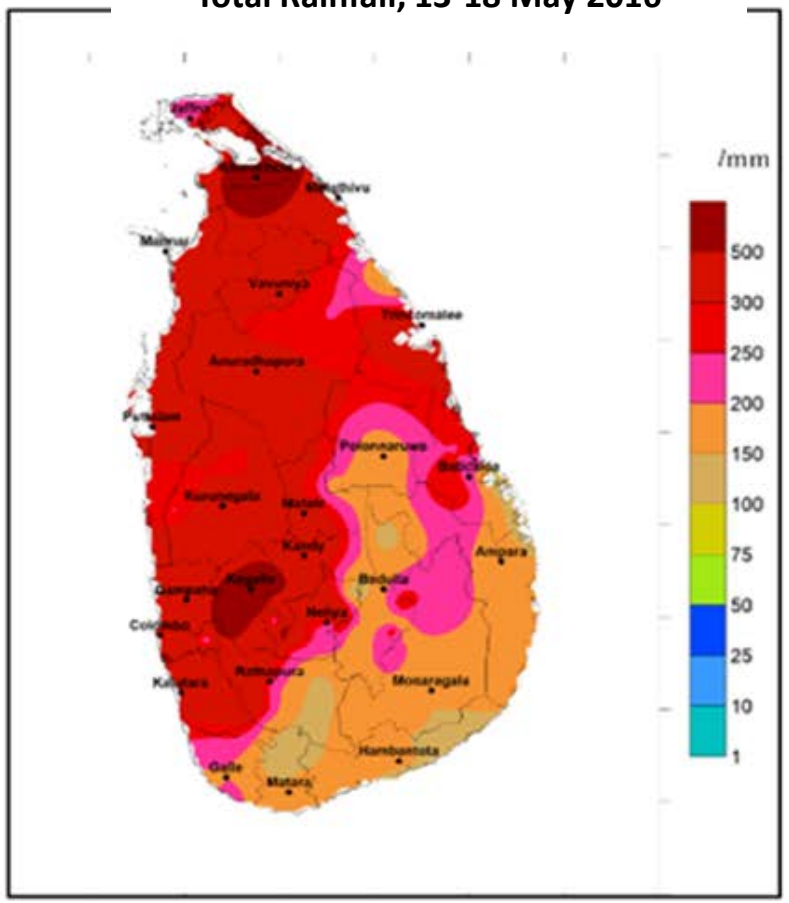
NORMAL RAINFALL (81-10)





Movement of the weather system, which later developed into tropical cyclone <u>ROANU</u>

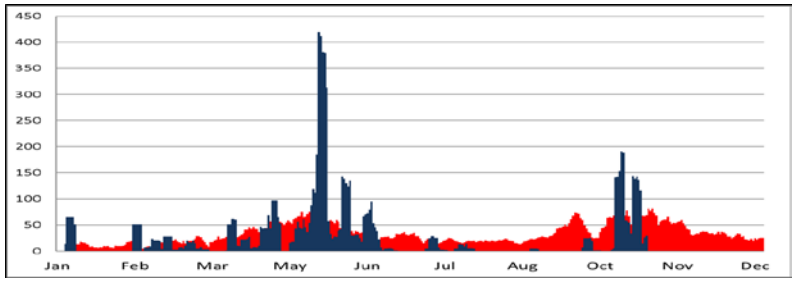




SPELL OF EXTREMELY HEAVY RAIN LASTING 6 DAYS
SOME REGIONS RECEIVING OVER 900 MM

AS PER THE POST DISASTER NEEDS ASSESSMENT (PDNA) CONDUCTED BY GOSL WITH UN AND THE WB, TOTAL DAMAGES AND LOSSES IN EXCESS OF US $ 570 million.

FLOODS



- This severe catastrophe was poorly managed.

- However, the failure resulted in identifying the need for an **Integrated Flood Management System** for Sri Lanka

- Work underway to develop a **Prototype Integrated Flood and Water Management System** for the Kelani river basin by an inter-agency working group.

- Agencies involved are,

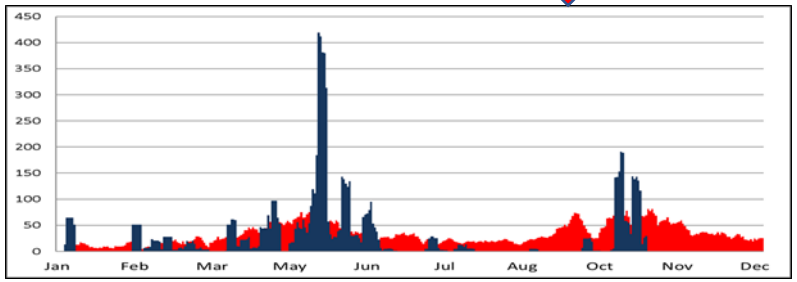
  Irrigation Department , Sri Lanka Land Reclamation and Dev. Corp (SLLRDC), Department of Meteorology, Disaster Management Centre, National Water Supply & Drainage Board, Water Resources Board, Colombo Municipal Council

DROUGHT IN 2016

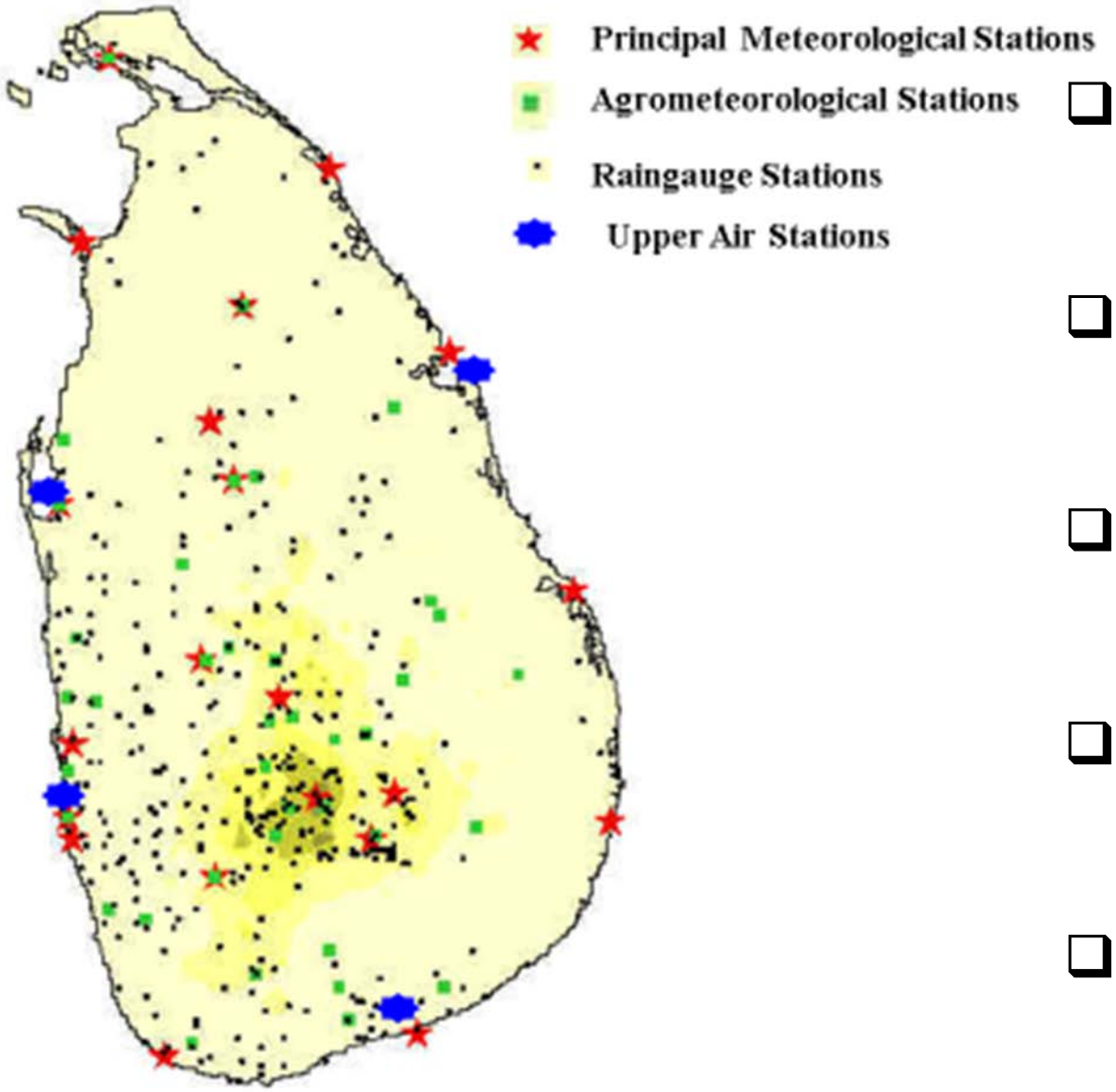
Over 208,000 persons from 51,561 families, mainly in the dry zone of Sri Lanka were affected.

Drinking Water had to be provided by the GOSL. Over 50 % of the Paddy crop was damaged.

DROUGHT



METEOROLOGICAL OBSERVATION NETWORK



- Synoptic Meteorological Stations -22 nos.
  3 Hourly Manual Observations
- Agrometeorological Stations – 35 nos.
  Twice daily Manual Observations
- Rain-gauge Stations – 400 nos.
  Once daily Manual Observations
- Automatic Weather Stations – 38 nos.
  10 Minute automatic observations
- 02 nos. Doppler Weather Radars (by 2019/20) – JICA assistance

Already the World Bank has undertaken a project to strengthen the capacity of the Department of Meteorology, the Department of Irrigation, and the Disaster Management Centre to meet their shared obligations to minimize loss of life, livelihoods, and property due to hydro-meteorological hazards in Sri Lanka.

The first phase of the project is presently underway and the major focus of the Second phase due to start in late 2017 is on improving the services of the Department of Meteorology and the Hydrology Division of the Irrigation Department.

Major Components in Meteorological Upgrading

- Improvement of Observation Networks, Forecasting Systems, Communication and IT Infrastructure
- A "DATA RESCUE" Initiative
- Real-Time Data and Information Access to relevant stakeholders
- Nowcasting and Short-Range Forecasting with availability of gridded products