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Sri Lanka

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

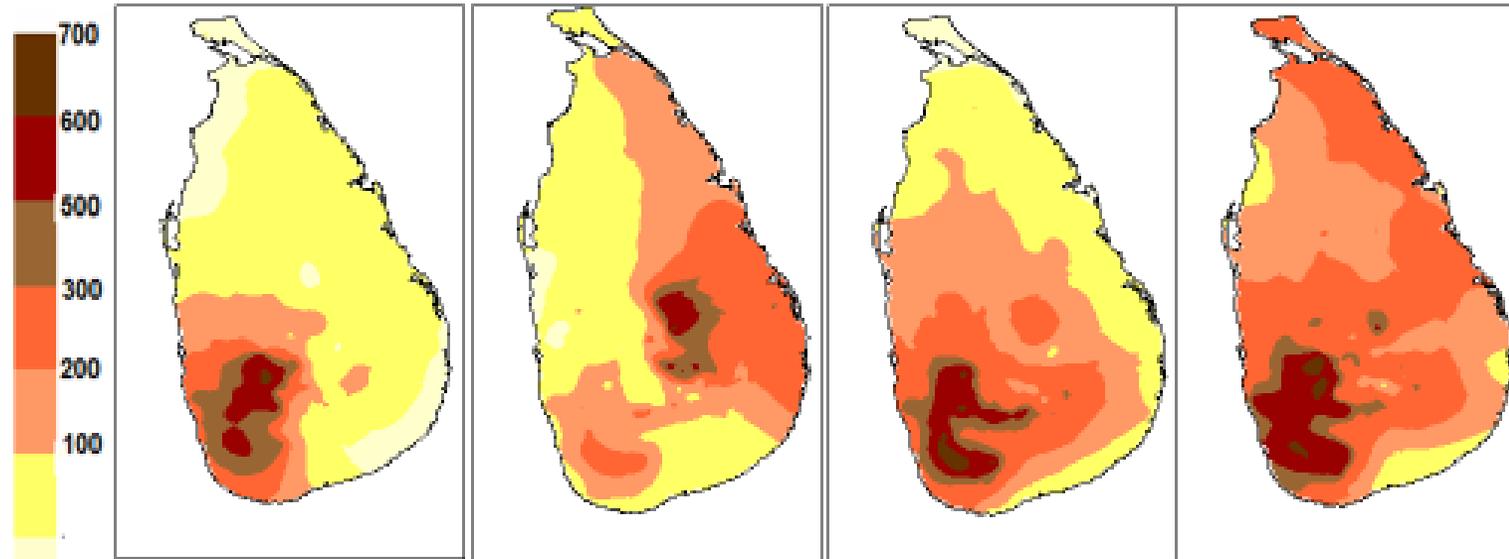
Pop. Density – 309 per Sq.km

Average Rainfall – 1,815 mm

(ranges between 900 and 5,000+)

Average Temperature (lowlands)–27.5C

Four Rain Seasons



SEASON	<i>Southwest Monsoon</i>	<i>Northeast Monsoon</i>	<i>First Intermonsoon</i>	<i>Second Intermonsoon</i>
PERIOD	May-Sep	Dec-Feb	Mar-Apr	Oct-Nov
RAINFALL	546 mm	459 mm	260 mm	548 mm

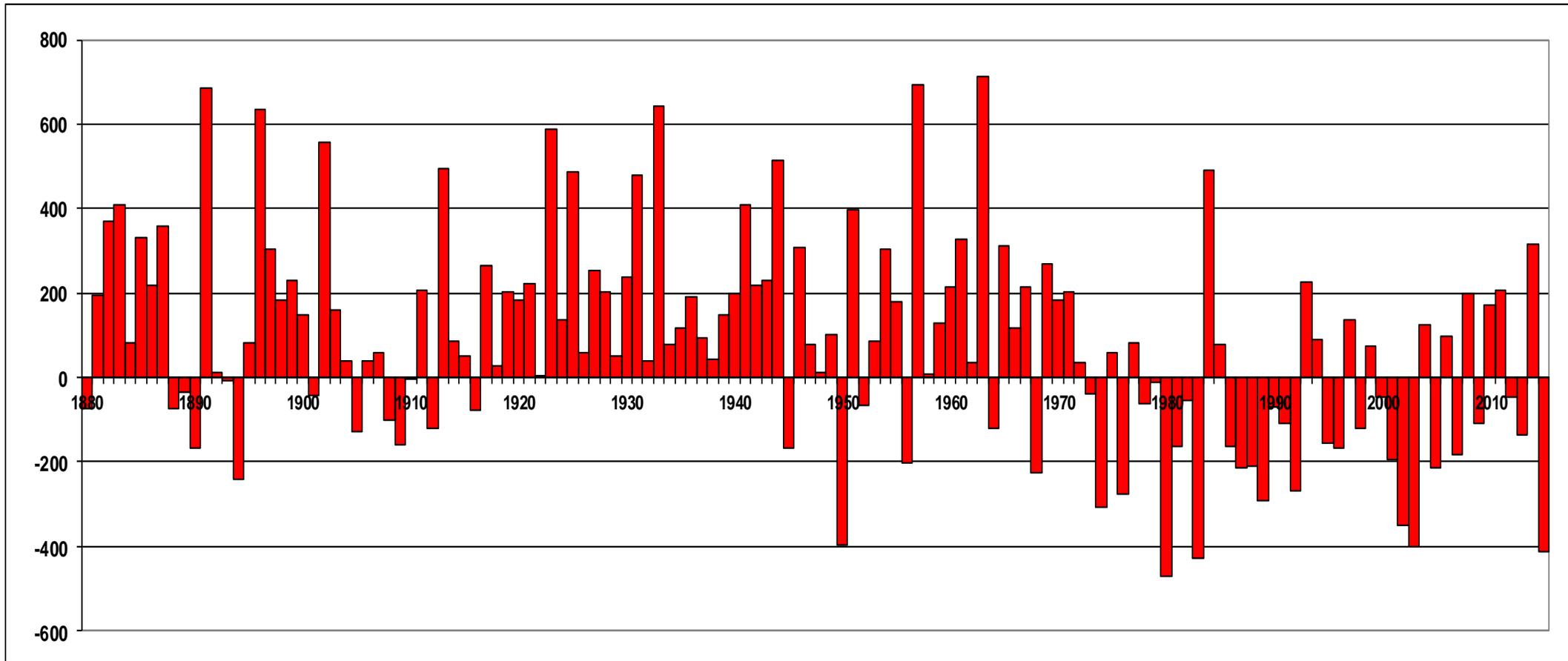
30 %

25 %

15 %

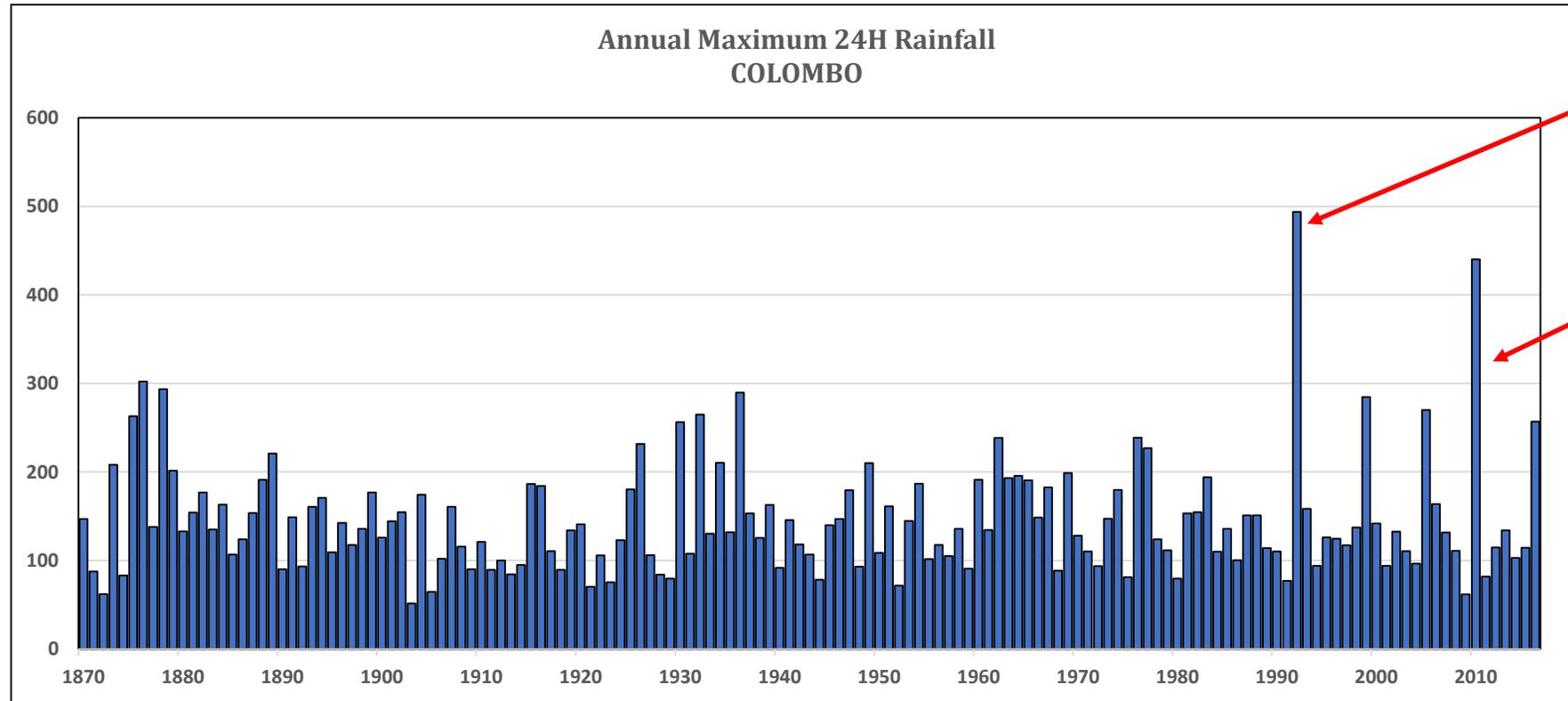
30 % ³

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!

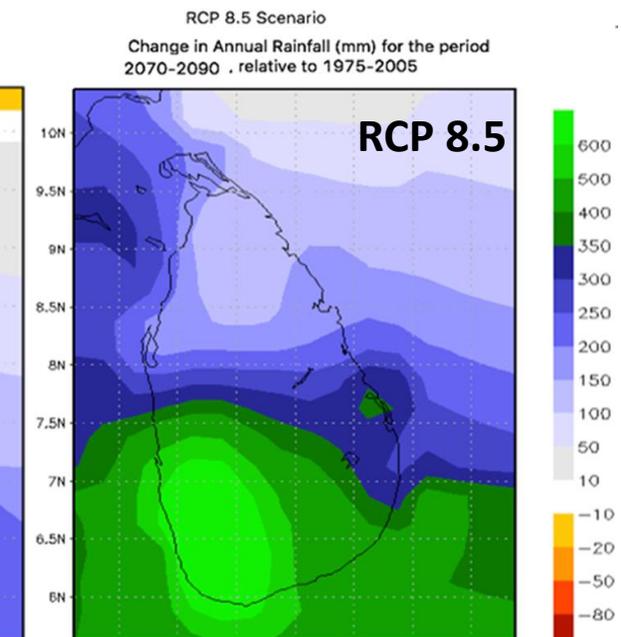
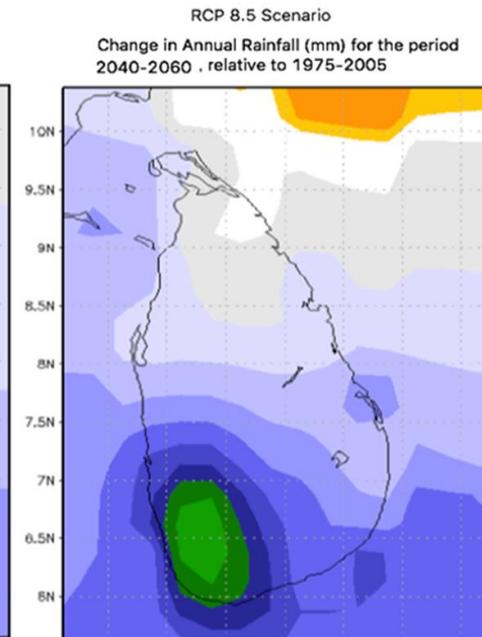
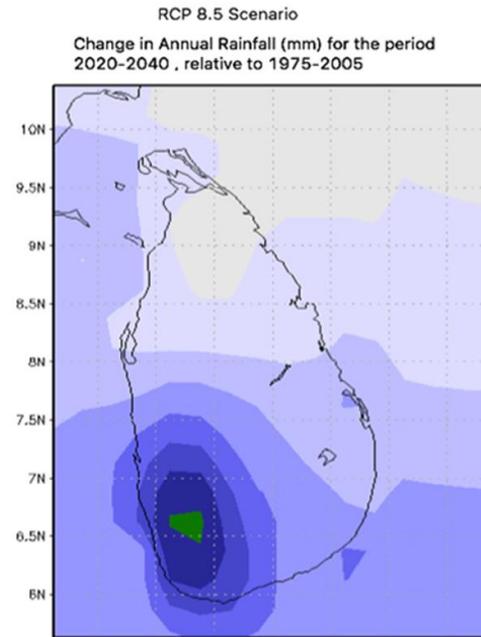
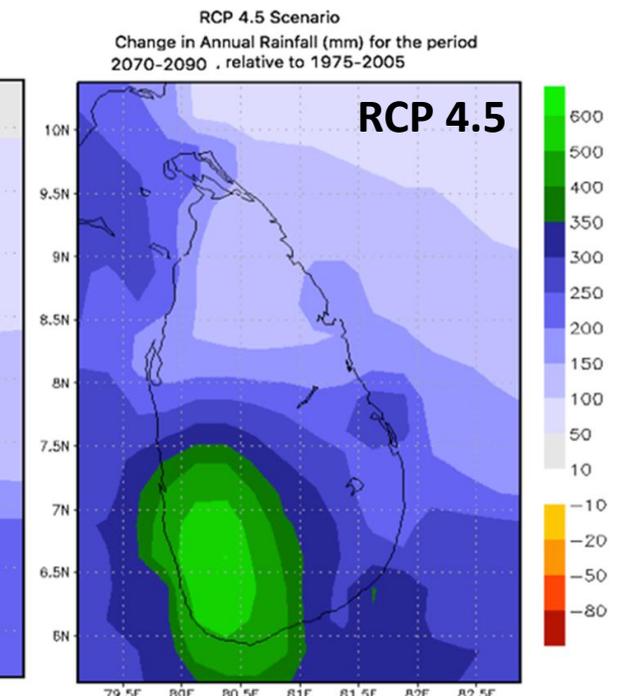
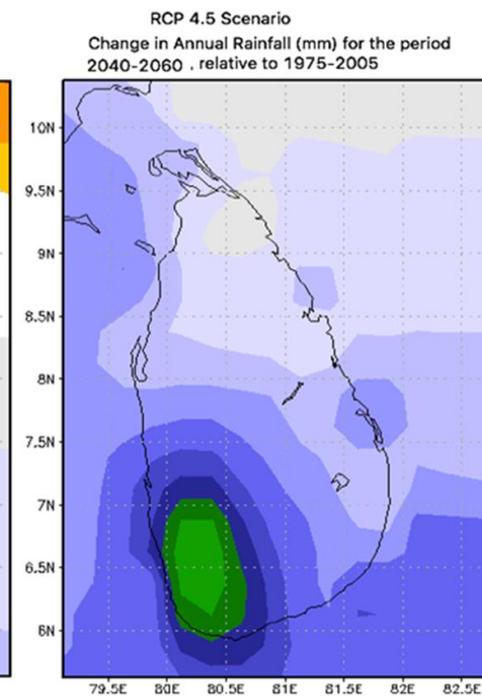
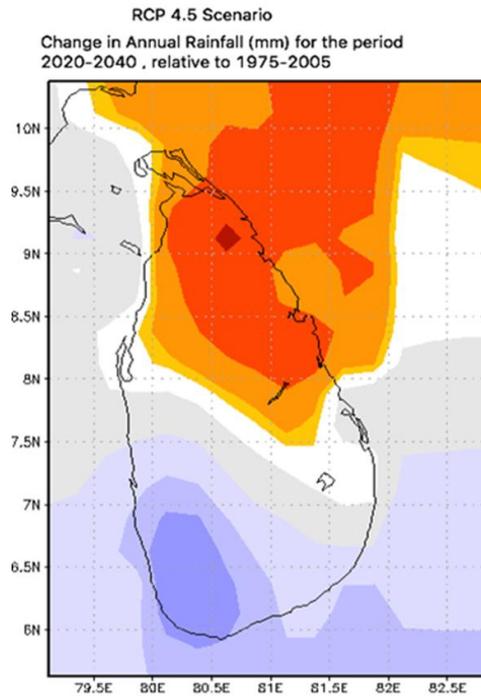


493.7 mm
4th June 1992

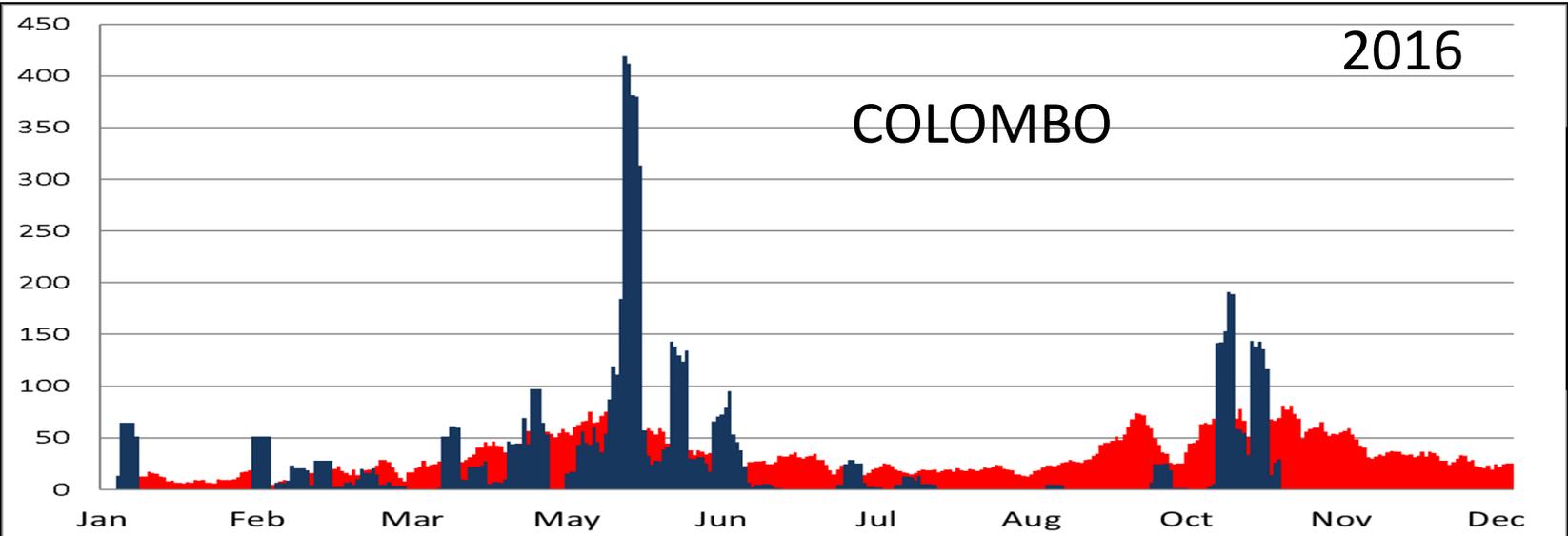
440.2 mm
10th November 2010

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

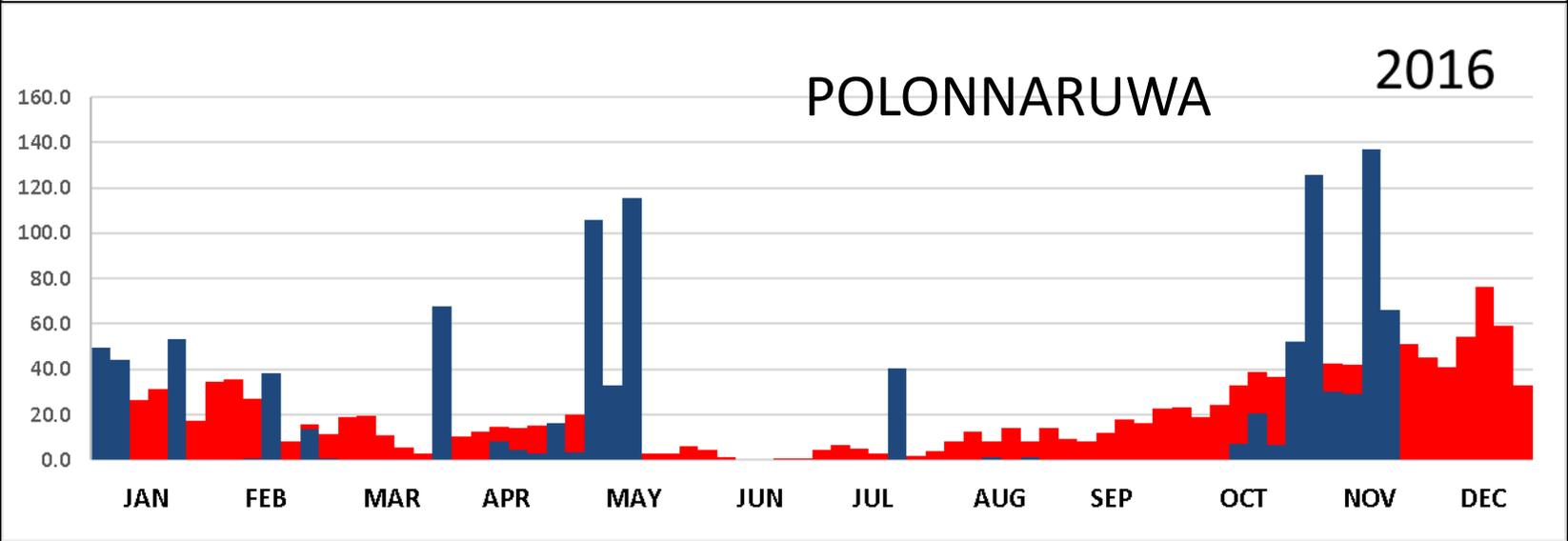
**CLIMATE CHANGE
SCENARIOS FOR SRI
LANKA USING CMIP5
DATA SHOW
A SIGNIFICANT
INCREASE OF RAINFALL
IN THE WET ZONE OF SRI
LANKA.**



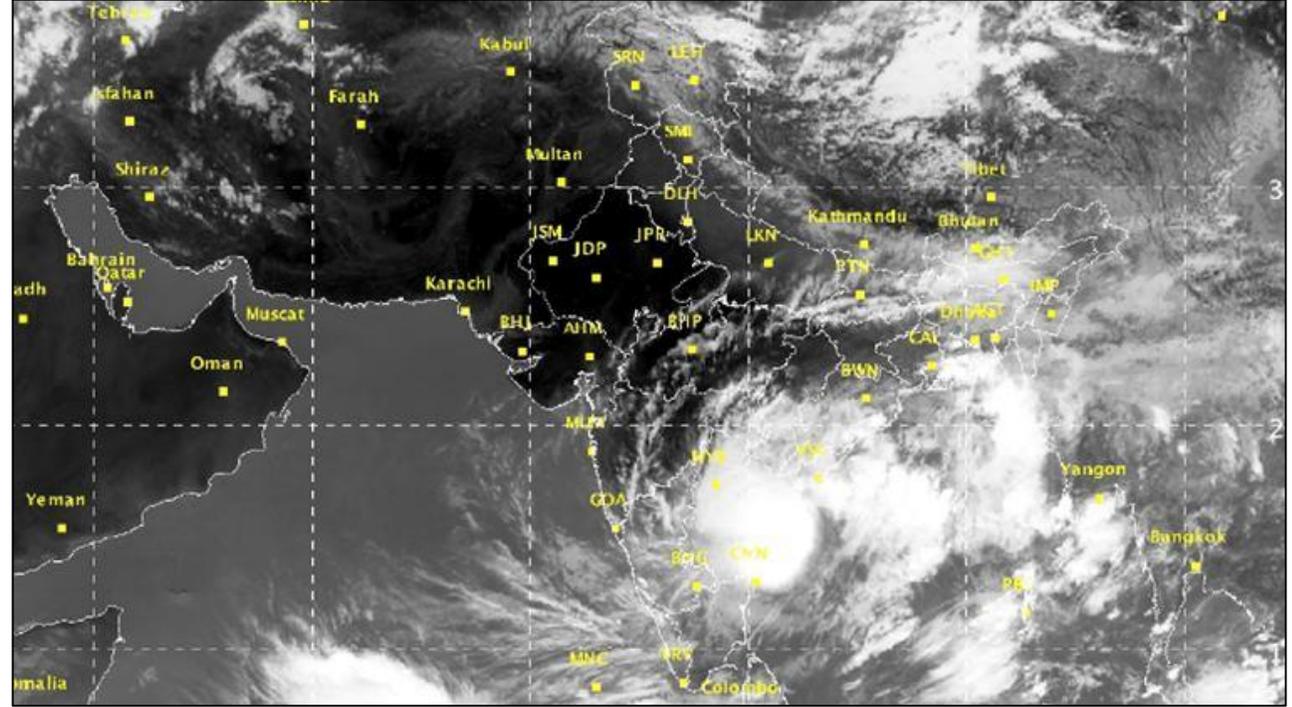
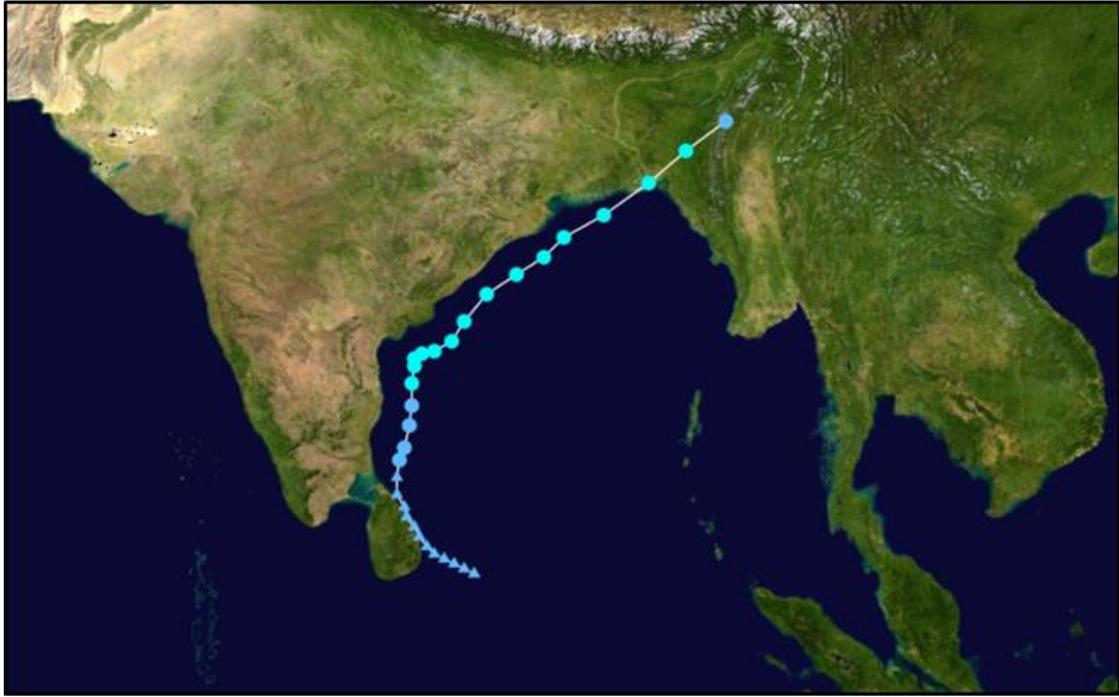
RAINFALL IN SRI LANKA DURING THE YEAR 2016 WAS HIGHLY ERRATIC!



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 ROANU

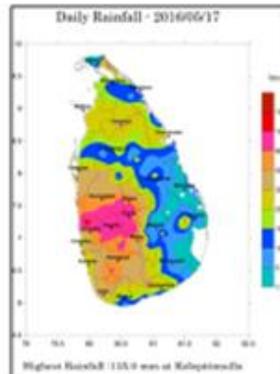
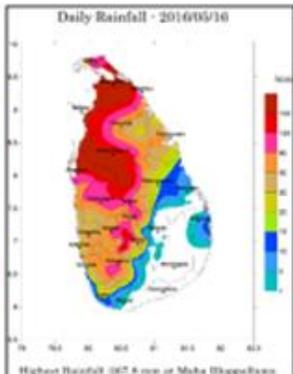
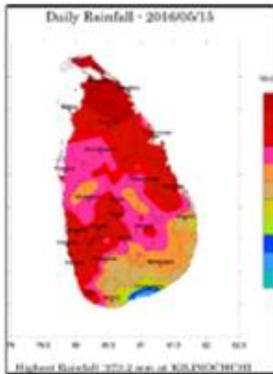
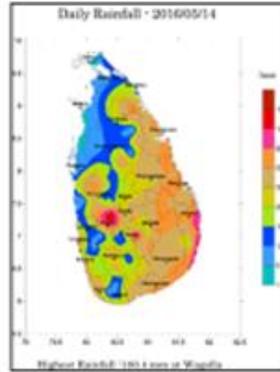
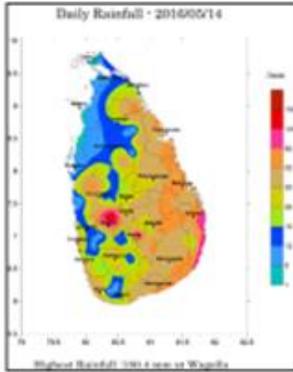
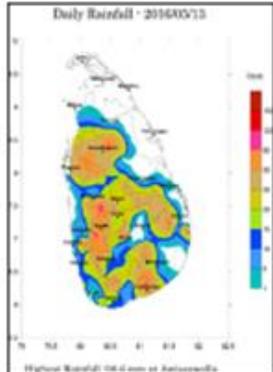


13-05-2016

14-05-2016

15-05-2016

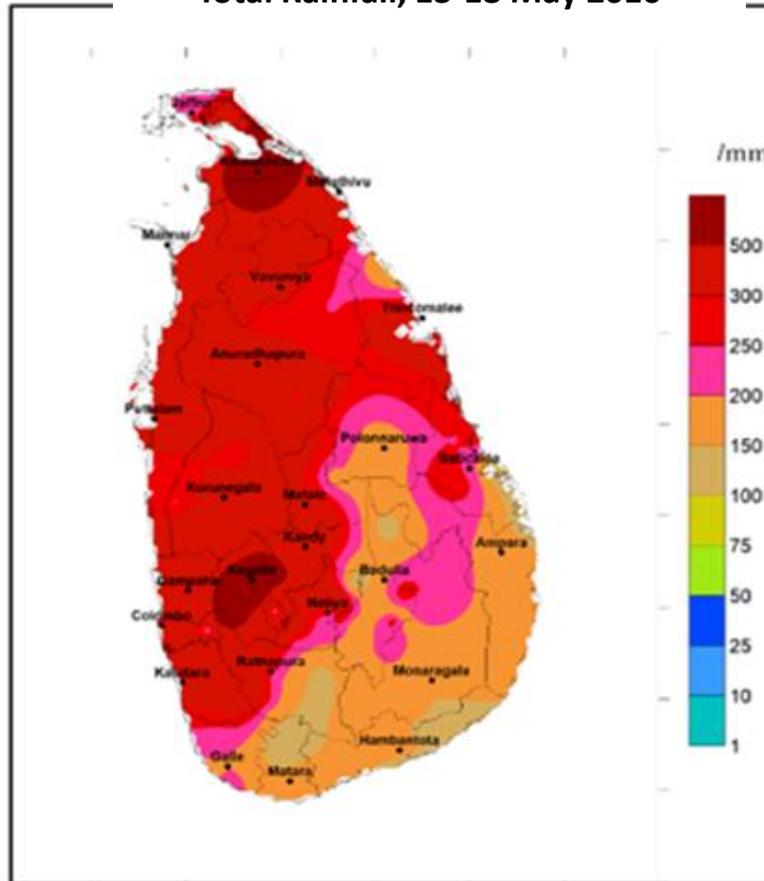
Total Rainfall, 13-18 May 2016



16-05-2016

17-05-2016

18-05-2016

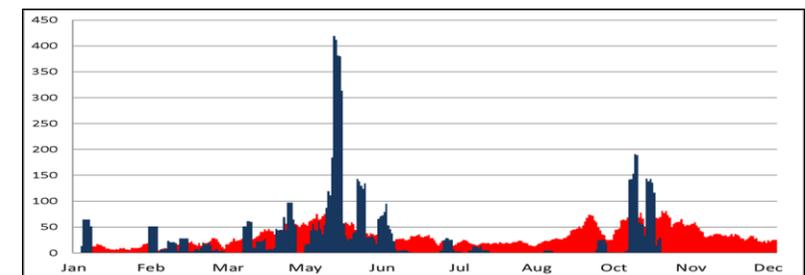


AS PER THE POST DISASTER NEEDS ASSESSMENT (PDNA) CONDUCTED BY GOSL WITH UN AND THE WB, TOTAL DAMAGES AND LOSSES IN EXCESS OF US \$ 570 million.



FLOODS

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



- ❑ 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

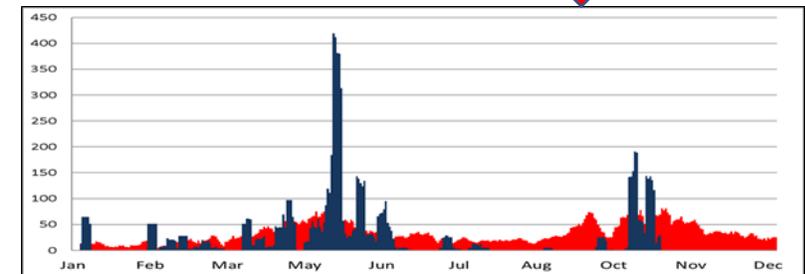
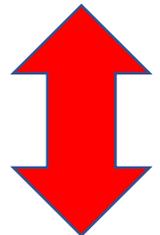
DROUGHT IN 2016

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

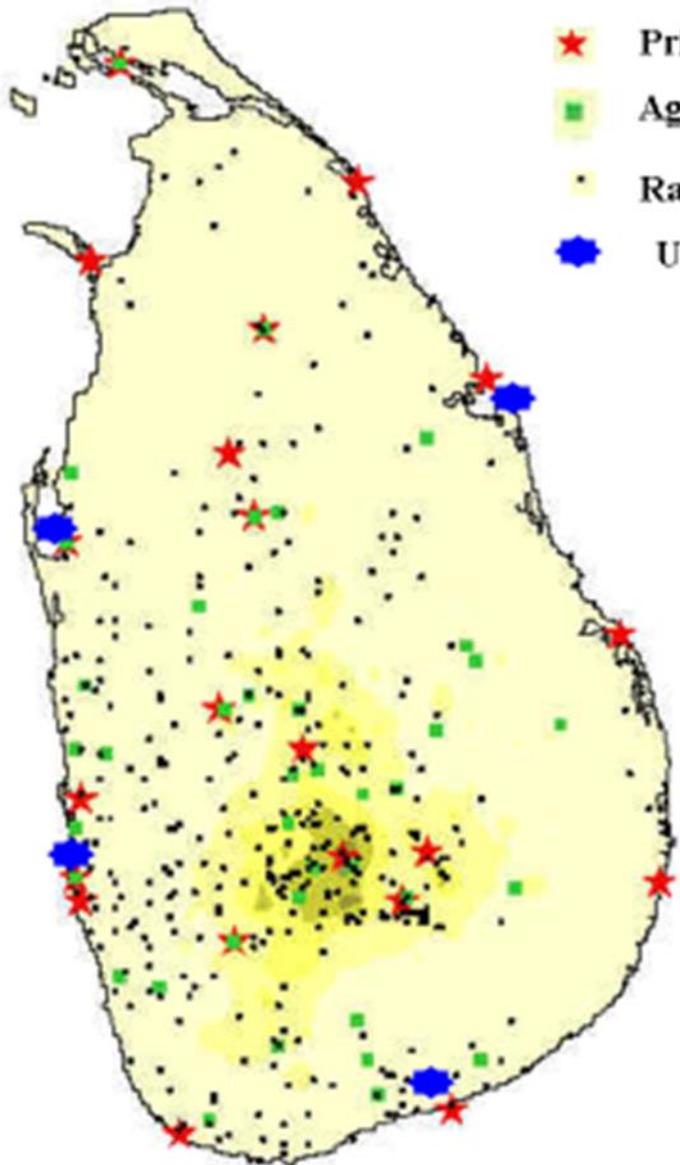
Drinking Water had to be provided by the GOSL. Over 50 % of the Paddy crop was damaged.



DROUGHT



METEOROLOGICAL OBSERVATION NETWORK



- ★ Principal Meteorological Stations
- Agrometeorological Stations
- Rain-gauge Stations
- ★ Upper Air Stations

- 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