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GUJARAT INSTITUTE OF DISASTER MANAGEMENT
BUILDING RESILIENCE

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UNITED NATIONS Office for Outer Space Affairs

Regional Workshop

on

Assessing Drought Risks using Earth Observation Data

&

Launch of South Asia Drought Management System (SADMS)

Utility of SADMS tool for operational drought decision support across South Asia

Date: 31st August to 2nd September, 2022

Gandhinagar, Gujarat, India

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Session – II Country presentation (Earth Observation data for Drought Monitoring)

Maldives

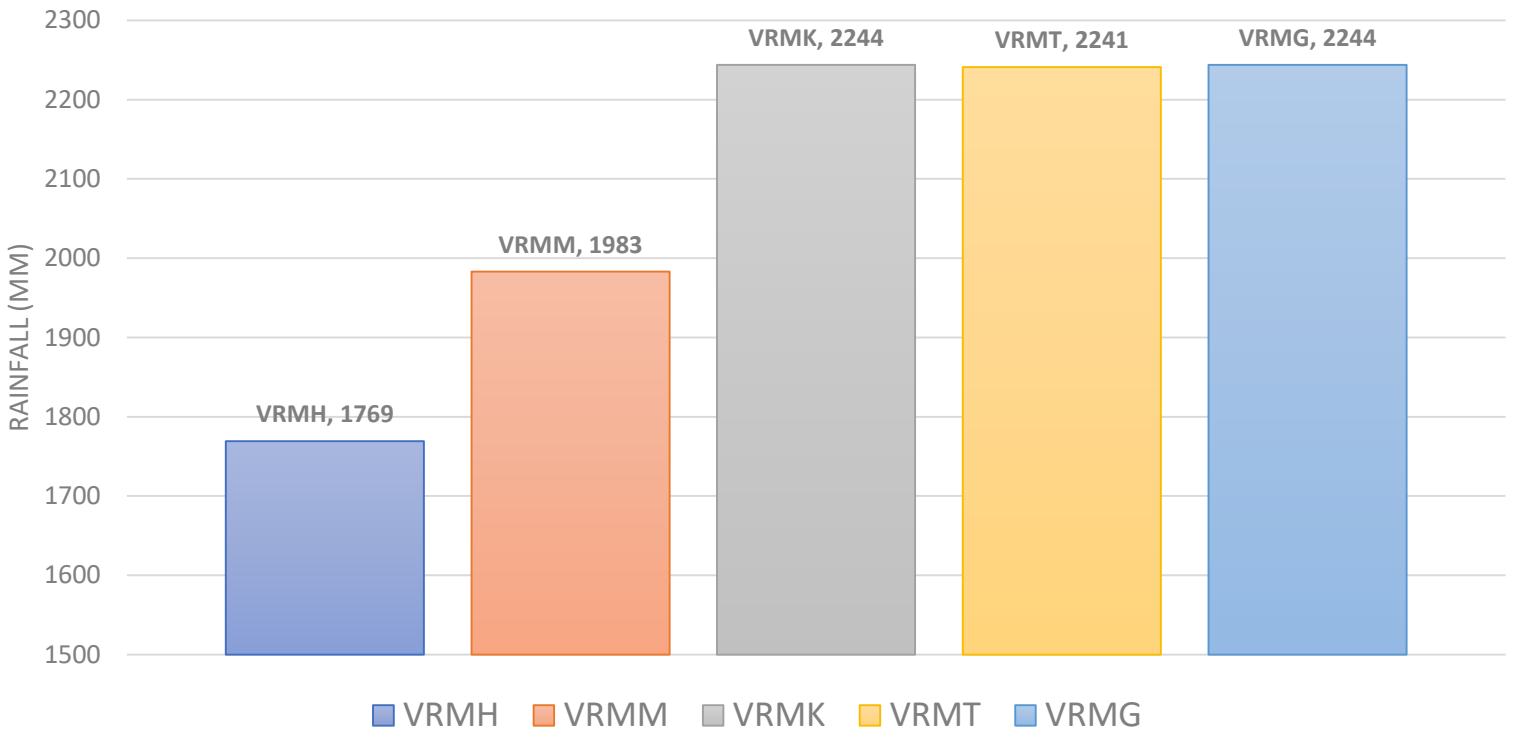
Earth Observation data for Drought Monitoring

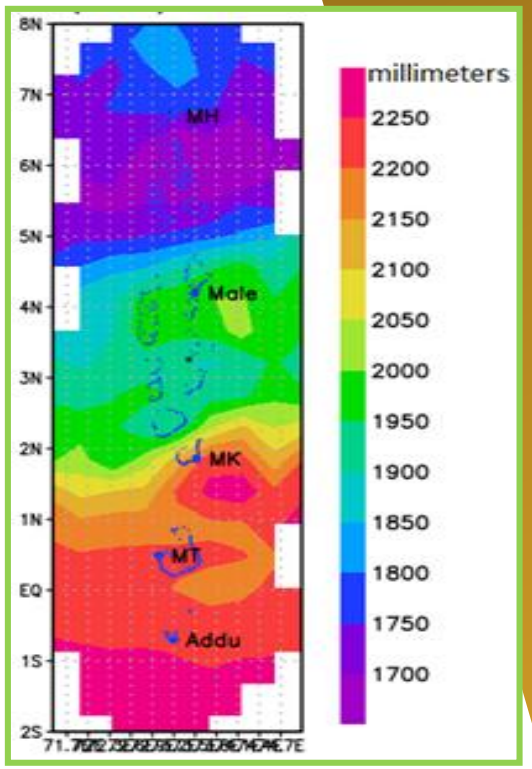
Introduction

Maldives experiences tropical warm & humid climate

The fact that the Maldives is located over the equator, it receives plentiful of sunshine and rain throughout the year.

2 distinct Seasons South-West Monsoon (***mid-May to November***)
North-East Monsoon (***January to March***)





Annual average rainfall distribution in the Maldives

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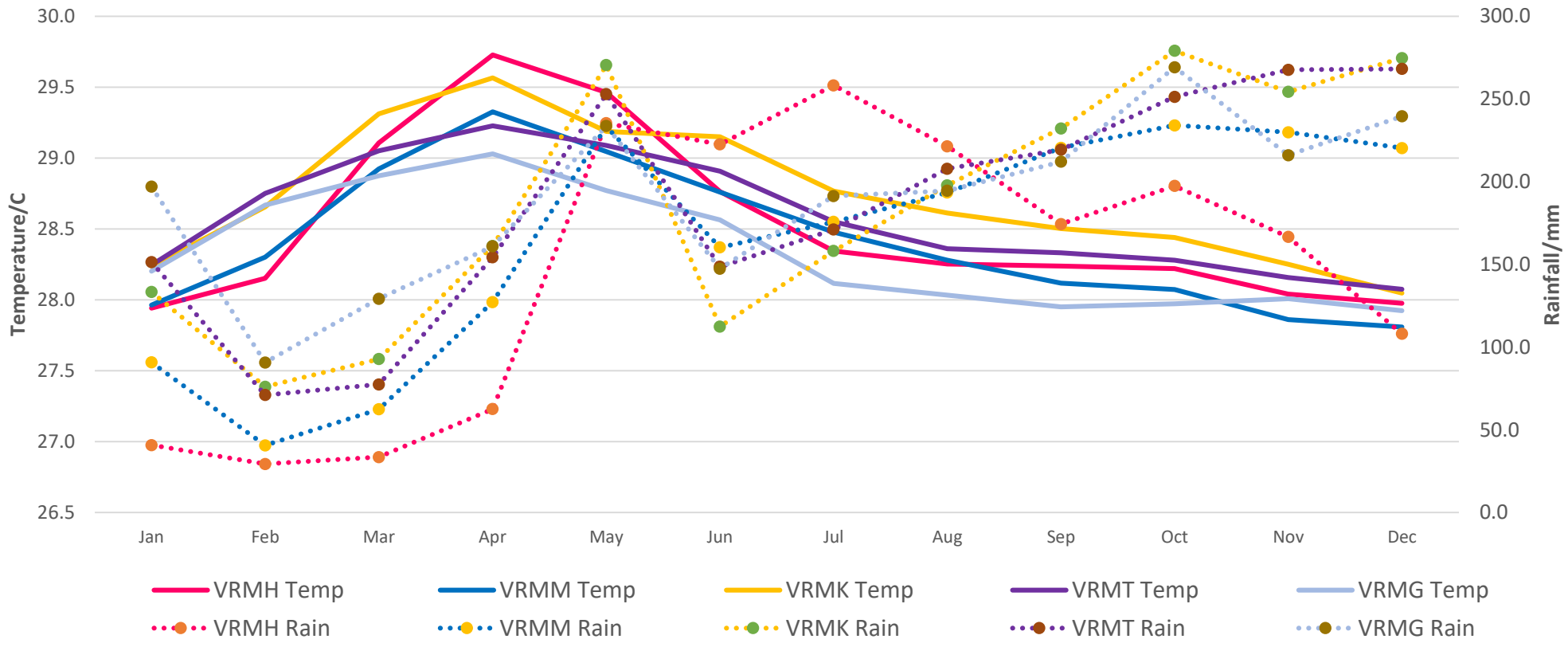
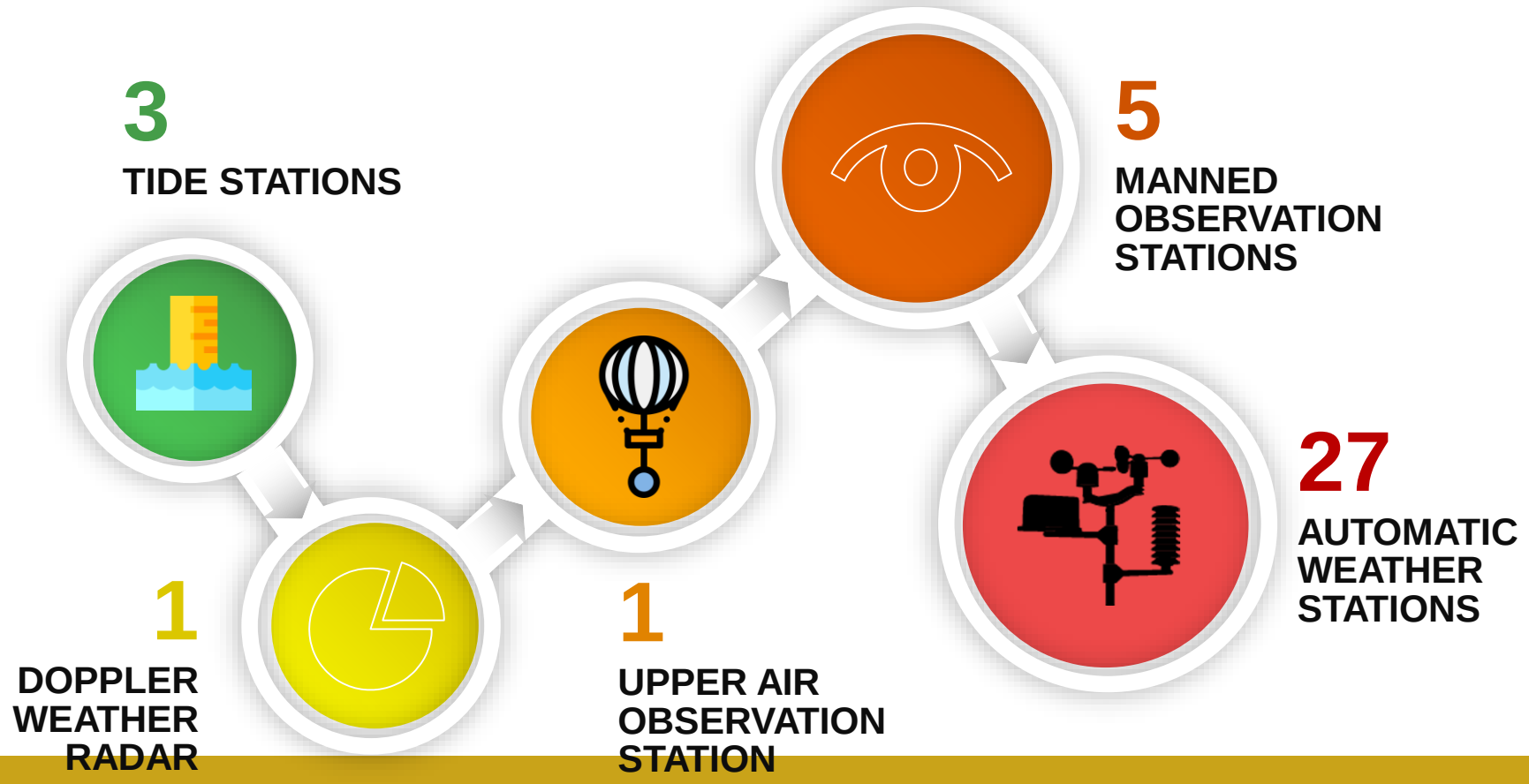
AVERAGE RAINFALL vs TEMP 1992-2020



Drought History and its Impact

- Over the years, the small island state's freshwater resources have faced increasing pressures from overuse and pollution.
- Since Majority of the island populations rely on intermittent collection of rainwater, Each year Drinking water shortages have become a regular occurrence on the outer islands during the dry season, with significant impacts on people's health, food security and productivity.
- Fishing and agriculture are the most important economic activities in almost all the inhabited islands. Both sectors are dominant water users and the demands have continuously increased over the years.

Current capabilities of drought monitoring using earth observation data



- Climate data of 48 years available/ (31 years newest manned station).

Additional information

2012

Started issuing seasonal forecast/Outlook

2021

Started Monthly Forecast/outlook

2022

Probable area of rainfall harvest notification through mobile app

Future needs

- Identifying the types of impacts to which a region is vulnerable and selecting a appropriate drought indicators.
- Since Maldives is covered by mostly ocean there is limited in-situ data, so we need a effective, innovative and efficient drought monitoring solutions utilizing **remote sensing technology.**

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Thank you