

E1-02: Sea surface temperature (SST). convective activity in the Indian Ocean and rainfall in Sri Lanka

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Objectives:

- (a) To investigate how SST influences connectivity measured by Out Going Long Wave radiation (OLR).
- (b) How SST in Indian Ocean affects monsoon rainfall in Sri Lanka

Two international data sets of SST; OLR and 20 years of rainfall data of 2 coastal stations in Sri Lanka were analysed.

- (a) SST and OLR were found to relate in such a way that below and above certain critical temperatures there was no correlation while between those temperatures there was a negative correlation.
- (b) A reliable positive correlation was found between SST at location in Arabian Sea and monsoon rainfall (S-W) in Sri Lanka below 0.1% significant level.
- (c) South-West monsoon rainfall showed a 5 year cycle.

- (a) There exists a negative correlation between SST and OLR under certain conditions.
- (b) A region in Arabian Sea affects Southwest monsoon in Sri Lanka.
- (c) Southwest monsoon rainfall in Sri Lanka has a 5 year cycle.