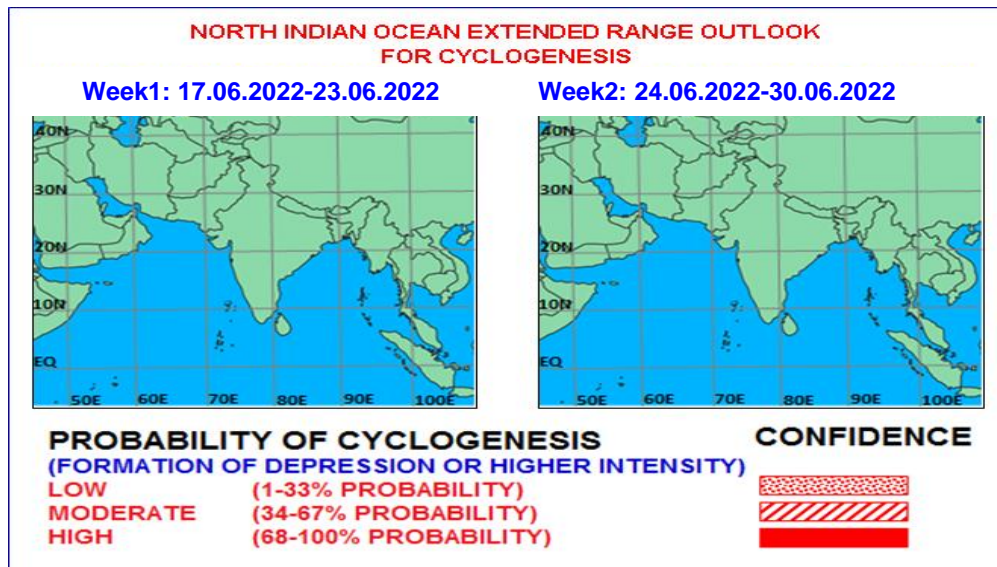




Issued on 16.06.2022



The Madden Julian Oscillation Index (MJO) currently lies in phase 1 with amplitude more than 1. It would continue in same phase during entire week with amplitude becoming less than 1 from the middle of the week. Thereafter, it will move across phase 2 and reach phase 5 during end of week 2 with amplitude remaining less than 1. Hence, MJO phase will support enhancement of convective activity and also cyclogenesis over the Bay of Bengal (BoB) from middle of week 1 onwards.

Based on CFS forecast, during first half of week 1, easterly winds (1-5 mps) over central & south BoB alongwith eastward propagating Kelvin Waves (KW) over south BoB and weak easterlies (1-3 mps) over southeast Arabian Sea (AS), strong westerlies (5-7 mps) over westcentral AS alongwith KW are likely to prevail. During later part of week 1, intrusion of westerlies (1-3 mps) into south BoB alongwith easterlies (1-3 mps) over eastcentral BoB and westerlies (3-5 mps) over the central & south AS are likely to prevail. Thus, equatorial waves are not likely to contribute towards cyclogenesis over the NIO region during week 1. However, the equatorial waves would support monsoonal flow over south & central AS and south & central BoB during week 1. Similarly during first half of week2, increased westerlies (5-7 mps) are likely to prevail over eastcentral AS leading to enhanced monsoon activity over eastcentral AS & adjoining coastal states of Maharashtra, Konkan & Goa during first half of week 2. However, during later part of week 2, weak westerlies (1-3 mps) are likely over central & south AS and very feeble easterlies over eastcentral BoB are likely. Thus, even during week 2, equatorial waves are not likely to contribute towards cyclogenesis over the NIO region. However, monsoonal flow over south and central AS and similarly over south & adjoining central BoB would be supported by equatorial waves during first half of week 2.

The sea surface temperature (SST) is around 30-31⁰C over entire BoB with higher values over eastcentral & adjoining northeastern parts of BoB. Over the AS, the SST is 31-32⁰C over central parts of AS and adjoining south AS. The ocean heat content (OHC) is >100 KJ/cm² over east BoB & south BoB. Over the AS, OHC is >100 KJ/cm² over eastcentral and a small pocket over southwest AS.

The guidance from various deterministic & ensemble numerical models including IMD GFS, NCEP GFS, ECMWF, NCUM, NEPS, GEFS and IMD MME CFS (V2) etc. indicate no cyclogenesis over the region during next 2 weeks.

Hence, considering the model guidance and environmental features, no cyclogenesis is likely over the region during next two weeks.

Verification of forecast issued during last two weeks:

The forecast issued on 2nd June for week 2 (10.06.2022-16.06.2022) indicated no probability of cyclogenesis over the NIO region during week 2. The forecast issued on 9th June for week 1 (10.06.2022-16.06.2022) also indicated no probability of cyclogenesis over the region during week 1. Hence non occurrence of cyclogenesis was correctly predicted 2 weeks in advance.

The realised rainfall during 9th June, 2022 to 15th June 2022 from satellite-gauge merged data is presented in Fig.1.

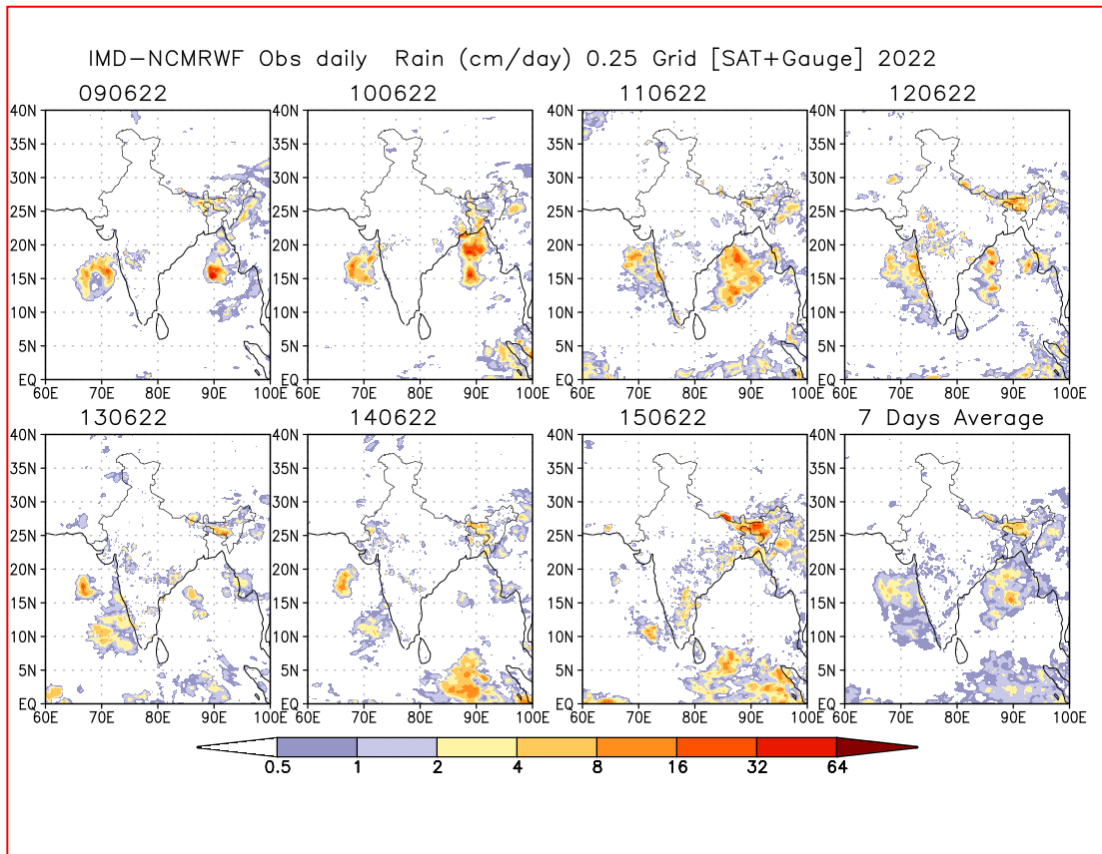


Fig.1: Rain gauge and satellite merged rainfall plots during 2nd June, 2022 to 8th June 2022

Next update: 23.06.2022