



The Madden Julian Oscillation (MJO) index currently lies in Phase 5 with amplitude more than 1. It will continue in same phase during first half of week 1. Thereafter, it will move eastwards and propagate across phases 6,7 & 8 during the remaining part of forecast period (later part of week 1 to end of week 2). Thus, MJO phase will support convective activity over the Bay of Bengal (BoB) during first half of week 1.

Most of the numerical models including IMD GFS, NCEP-GFS, GEFS, NCUM, NEPS, ECMWF are indicating development of a low pressure area over north Andaman Sea during middle of week 1 (around 10th October). However, GFS group of models is indicating development of depression over east-central BoB during end of week 1 (around 14th) with west-northwestwards movement towards south Odisha and adjoining north Andhra Pradesh coasts of India during first half of week 2. These models are also indicating intensification of this system upto severe category of cyclonic storm. However, models like ECMWF, NCUM and NEPS are not indicating any significant development of this system. The Genesis Potential Parameter based on IMD GFS is indicating potential zone of cyclogenesis over east-central BoB on 12th with subsequent west-northwestwards movement till 14th. ECMWF Ensemble guidance is indicating 30-60 % probability of formation of depression during middle of week 1 over south BoB.

Further, CFSV₂ ensemble runs are indicating likely formation of a Low Pressure Area (LPA) over east central Arabian Sea off south Maharashtra – Goa coasts around 11th, becoming more marked and moving west-northwestwards towards Oman coasts, where it is shown to be getting dissipated over the Sea by 18th October. There is also an indication by a few models that another LPA could form over north Andaman Sea and adjoining Myanmar coast towards the middle part of week 2 without much intensification.

Considering all the above, a Low Pressure Area is very likely to form over north Andaman Sea during middle of week 1 (around 10th October). There is moderate to high probability of its intensification into a depression during second half of week 1. It is likely to intensify further and move west-northwestwards towards south Odisha & north Coastal Andhra Pradesh coast during first half of week 2. Also another Low / well marked Low pressure area is likely to form over east-central Arabian Sea and move west-northwestwards towards Oman coast followed by in-situ weakening over west-central Arabian Sea during 11th – 17th October. Yet another Low Pressure area is likely to form over north Andaman Sea & adjoining Myanmar coast towards the middle of week-2 which may not intensify further.

Verification of forecast issued during last two weeks:

The forecast issued on 23rd September for week 2 (01.10.2021-07.10.2021) indicated NIL probability of cyclogenesis over the region during the forecast period. The forecast issued on 30th September for week 1 (01.10.2021-07.10.2021) indicated high probability of intensification of depression (remnant of cyclone Gulab) into a cyclonic storm over northeast Arabian Sea and west-northwestwards movement towards Oman coast skirting Pakistan & Makran coasts. Actually, the remnant of cyclonic storm “Gulab” emerged into Gulf of Khambat on 29th September. It intensified into a depression on 30th Sept. and into the Cyclonic Storm “Shaheen” on 1st October, 2021. It crossed Oman coast in the night of 3rd October (1900-2000 UTC) and weakened into a well marked low pressure area over north Oman and adjoining United Arab Emirates (UAE) in the evening of 4th October. Thus, the intensification and movement of cyclone Shaheen was well captured in the week 1 forecast.