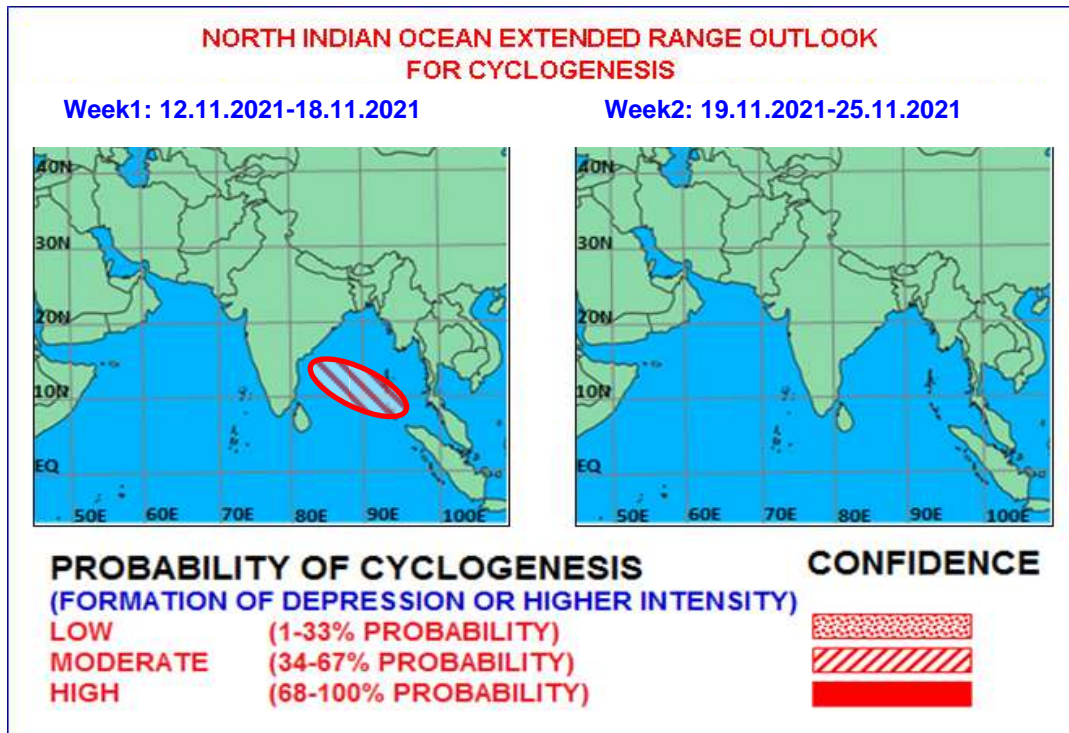




Issued on 11.11.2021



The Madden Julian Oscillation (MJO) index currently lies in Phase 4 with amplitude close to 1. It will continue in same phase during the entire forecast period with amplitude gradually decreasing during week 1 and then increasing during week 2. Thus, MJO phase is conducive for enhancement of convective activity and hence cyclogenesis over the Bay of Bengal (BoB) during entire forecast period.

The depression over southwest and adjoining westcentral BoB is likely to move west-northwestwards and weaken gradually. Its remnant cyclonic circulation is likely to emerge into eastcentral AS during next 72 hours.

Most of the numerical models including IMD GFS, NCEP GFS, GEFS and IMD GPP are indicating formation of depression over Andaman Sea and adjoining southeast BoB during beginning of week 1. NCUM and NEPS are also showing cyclogenesis over Andaman Sea but during later part of week 1. Most of the models are also indicating its intensification into a cyclonic storm and northwestwards movement towards Andhra Pradesh coast. ECMWF probabilistic model is indicating 30-60% probability of cyclogenesis over the region. MME CFS (V2) is showing 60-70% probability of cyclogenesis over Andaman Sea during first half of week 1. However, ECMWF deterministic model is not indicating any cyclogenesis during the forecast period.

Models (NCUM, NEPS) are indicating emergence of remnant cyclonic circulation (of depression over BoB) into eastcentral Arabian Sea (AS) during middle part of week 1. ECMWF probabilistic model is indicating 10-30% probability of cyclogenesis over eastcentral AS during beginning of week 1. MME CFS (V2) is showing 40-50% probability of cyclogenesis over eastcentral AS during week 1.

MME CFS (V2) is also showing 40-50% probability of cyclogenesis over south Andaman Sea during week 2.

In view of all the above, there is **(a)** moderate probability of cyclogenesis over Andaman Sea and adjoining southeast BoB during first half of week 1 and **(b)** possibility of formation of a low pressure area (LPA) over eastcentral Arabian Sea from the remnant of depression over BoB during middle of week 1.

**Verification of forecast issued during last two weeks:**

The forecast issued on 28<sup>th</sup> October for week 2 (05.11.2021-11.11.2021) indicated no cyclogenesis over North Indian Ocean. However, it was indicated that the LPA over southwest BoB off Sri Lanka would emerge into southeast AS around 2nd November and move westwards. It was also indicated that a LPA would form over southeast BoB and move westwards during 6<sup>th</sup> – 11<sup>th</sup> November 2021. The forecast issued on 4<sup>th</sup> November for week 1 (05.11.2021-11.11.2021) indicated

Low probability for cyclogenesis over eastcentral Arabian Sea during Week-1. It was also indicated that an LPA would form over southeast BoB and move west-northwestwards with marginal intensification during 9th – 12th November 2021.

Accordingly, the LPA that emerged into southeast AS, intensified into a depression over eastcentral AS on 7<sup>th</sup> November and weakened into a well marked low pressure area on 9<sup>th</sup> morning (0000 UTC) over central parts of AS. The LPA also formed over southeast BoB on 9<sup>th</sup> November. It intensified into a depression over southwest BoB on 10<sup>th</sup> evening (1200 UTC).

Thus, cyclogenesis over Arabian Sea was predicted correctly in week 1 forecast. The formation of LPA over southeast BoB around 9<sup>th</sup> was also predicted correctly 2 weeks in advance and it's marginal intensification was indicated 1 week in advance.

**Next update: 18.11.2021**