India Meteorological Department
Ministry of Earth Sciences
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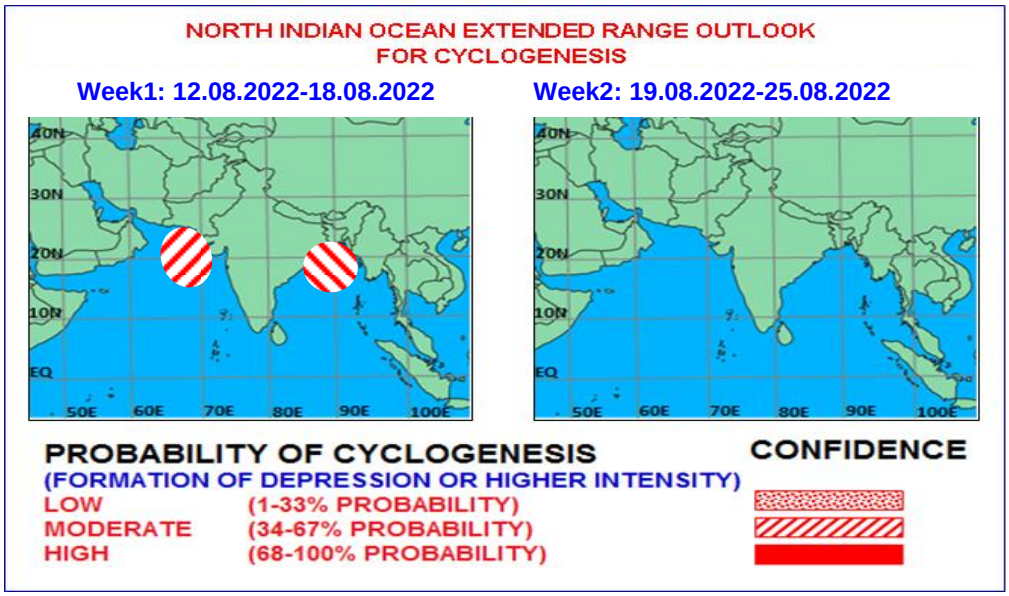

Based on CFS forecast, during first half of week 1, easterlies (3-5 mps) are likely to prevail over north AS, north BoB and intervening Indian mainland. Westerlies (1-3 mps) would prevail over central AS, north BoB and intervening Indian mainland. In addition Kelvin waves (KW) and Equatorial Rossby waves (ERW)are also very likely over these regions during the same period. The simultaneous existence of these waves indicate a favourable environment for cyclogenesis over the AS and BoB first half of week 1.From later part of week 1 to middle of week 2, decrease in westerlies is indicated.During this period week easterlies would prevail over north AS and south BoB. ERW is seen over South China Sea. However, during later part of week 2, easterlies (3-5 mps) over south AS and south BoB, ERW over central parts of BoB, intervening India and eastcentral AS are likely to prevail. Strong westerlies (5-7 mps) are likely over Equatorial Indian Ocean & adjoining south BoB.

Current environmental conditions are also indicating favourable environment for genesis over northeast AS and north BoB with low wind shear, positive vorticity, positive convergence at lower levels and positive divergence at upper levels.

The guidance from various deterministic & ensemble numerical models including ECMWF deterministic & ensemble, NCUM and NEPS etc. indicate that the existing well marked low pressure area over Saurashtra and adjoining northeast AS is very likely to develop into a depression during beginning of week 1. GEFS is also indicating about 50% probability of development of depression over the AS. However, IMD GFS, NCEP GFS and NEPS are indicating the system to maintain the intensity of low pressure area only. Models like ECMWF, NCUM, NEPS and ECMWF ensemble are also indicating likely formation of an LPA over north BoB around 13th with intensification into a depression on 14th over northwest BoB and west-northwestwards movement. However, GFS group is not indicating significant intensification of this system. IMD GPP is also indicating potential zone for cyclogenesis over north AS and over north BoB during 11th-14th

Hence, considering the model guidance and environmental features, it is inferred that:

(i) The well marked low pressure area over Saurashtra and adjoining northeast Arabian Sea is likely to intensify into a depression during next 48 hours over northeast Arabian Sea off Saurashtra and adjoining Pakistan.

(ii) Another low pressure area is likely to form over north Bay of Bengal around 13th August. It is also likely to intensify into a depression over north Bay of Bengal during middle of week 1.

(iii) MJO, KW and ERW are also likely to favour genesis over the Arabian Sea and Bay of Bengal during the above periods.

Verification of forecast issued during last two weeks:

The forecast issued on 28th July for week 2 (05.08.2022 - 12.08.2022) indicated no probability of cyclogenesis over the North Indian Ocean region during week 2. The forecast issued on 4th August for

week 1 (05.08.2022 - 12.08.2022) indicated likely formation of a low pressure area over northwest BoB around 7th August and its likely intensification into depression around 9th August. Actually, a low pressure area formed over northwest BoB on 7th August. It intensified into a depression over coastal Odisha on 9th August. It moved west-northwestwards and weakened into a well marked low pressure area over Chattisgarh and adjoining east Madhya Pradesh (Central India region) on 10th August. Hence Cyclogenesis was correctly predicted in week 1 forecast (about 5 days in advance).

The realised rainfall during 4th August, 2022 to 10th August 2022 from satellite-gauge merged data is presented in Fig.1.

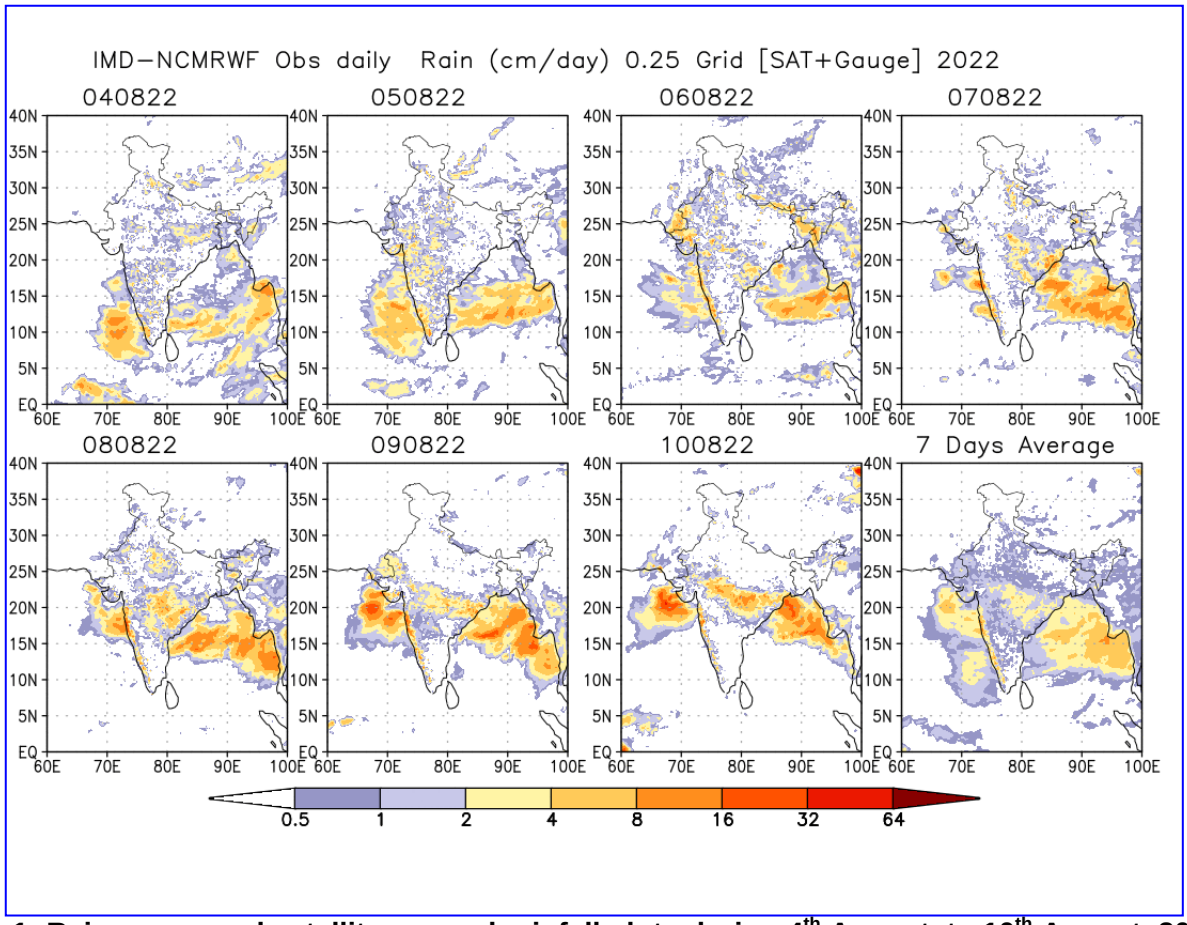

Fig.1: Rain gauge and satellite merged rainfall plots during 4th August to 10th August, 2022

Next update: 18.08.2022