

## 0000 UTC 21 August 2017 Forecast Discussion

### Summary

Mid-to-upper-level high pressure is currently east of Taiwan. ECMWF forecasts this high to move east, while GFS has this high persisting in its current location. The movement of this high will determine the track of TS Hato, which will ultimately affect its intensity. Strong winds, increases in significant wave heights, and increases in precipitation are expected in the region of interest within the next 48 hours.

Day One (24 hr) Outlook: TS Hato will move WNW through the Luzon Strait. It is expected to remain as a tropical storm over the next 24 hours.

Day Two (48 hr) Outlook: SSTs and moisture remains favorable, but shear is forecast to increase. Thus, some models have Hato intensifying into a weak Category 1 storm.

Extended Outlook: GFS is indicating another tropical cyclogenesis later this week close to the east coast of Luzon. Models are not in agreement for now, and closer attention is warranted in future discussions.

### Discussion

TCs: TC genesis has occurred since the last forecast discussion. PAGASA named the storm Isang, while JTWC named it Hato, as listed in the WMO name convention. For consistency purposes, the storm will henceforth be called Hato. Hato is currently about to enter the Luzon Strait as a tropical storm (Fig. 1). Model diagnostics have it going WNW, with forecast intensification into a weak Category 1 storm within the next 48 hours despite a corresponding forecast increase in wind shear (up to 20 knots). Some models have it track closer to Taiwan, while others have it track further south in the open sea. A more northern track would result in a weaker intensity as the storm interacts with the Taiwan landmass, while a more southern track would result in a stronger intensity as the storm remains in the open ocean. Either way, we can expect impacts in the form of precipitation, stronger winds, and increase in significant wave heights over the area of interest. JTWC forecast graphic is shown in Fig. 2.

Convection: The rainband associated TS Hato is expected to reach our area of interest in 24 hrs. The current radar image from Philippines is attached (Fig. 3). There is local mesoscale convection around Manila Bay currently, which is expected to get weaker during next 24 hours according to WRF simulation results (Fig. 4). The convective system currently southeast of Hato is expected to develop into a closed low by 18z Thursday north of Luzon according to GFS. ECMWF has a broad area of vorticity at around the same time, intensifying only as it tracks westward closer to Hainan.

MJO/BSISO: BSISO index shows a trend towards propagation into the South China Sea within the next week. MJO signal remains weak.

SSTs: SSTs over the larger area of interest remain warm above 30 degrees Celsius. Current scientific interest would be to see the change in the local SSTs as a result from winds, precipitation, and surface runoff from Luzon associated with Hato.

Surface Currents: Regular COAMPS output is not available for today. However, COAMPS output from FNMOC showed increasing significant wave heights associated with the broader-scale circulation of TS Hato. As of now, expect significant wave heights to increase up to between 6 and 9 ft. in the area of interest by 12Z on the 22nd.

FORECASTERS: NAM, RAZIN, TRABING

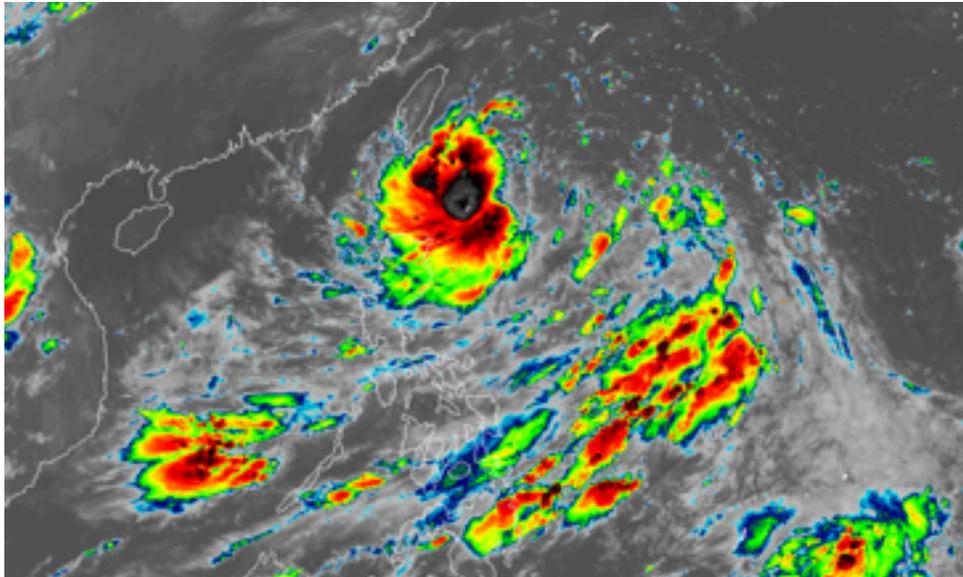


Fig. 1. IR imagery from Himawari-8 showing TS Hato north of Luzon [1]



Fig. 2. TC warning graphics from JTWC [2]

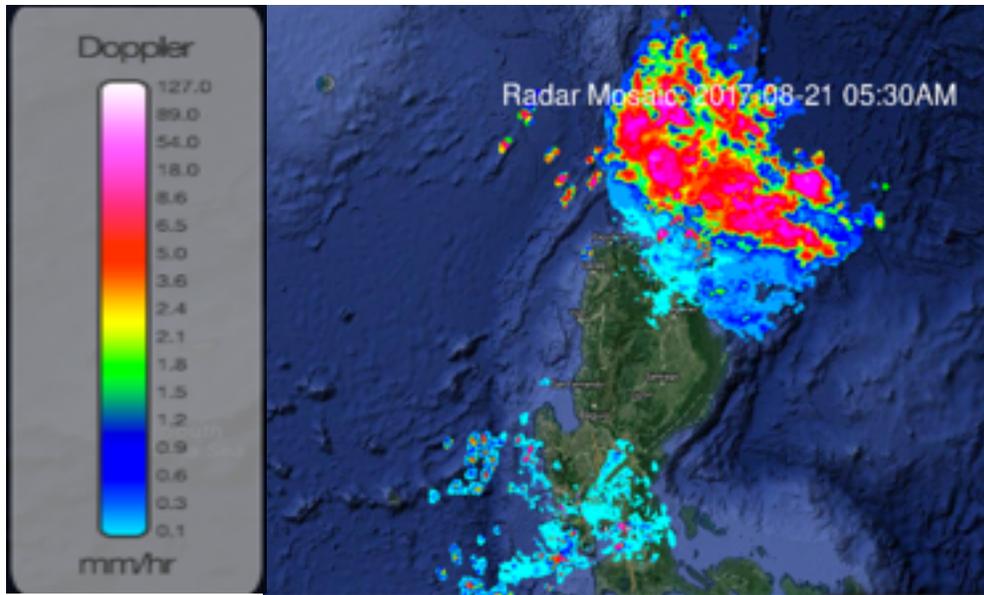


Fig. 3. Radar image from the Philippines [3]

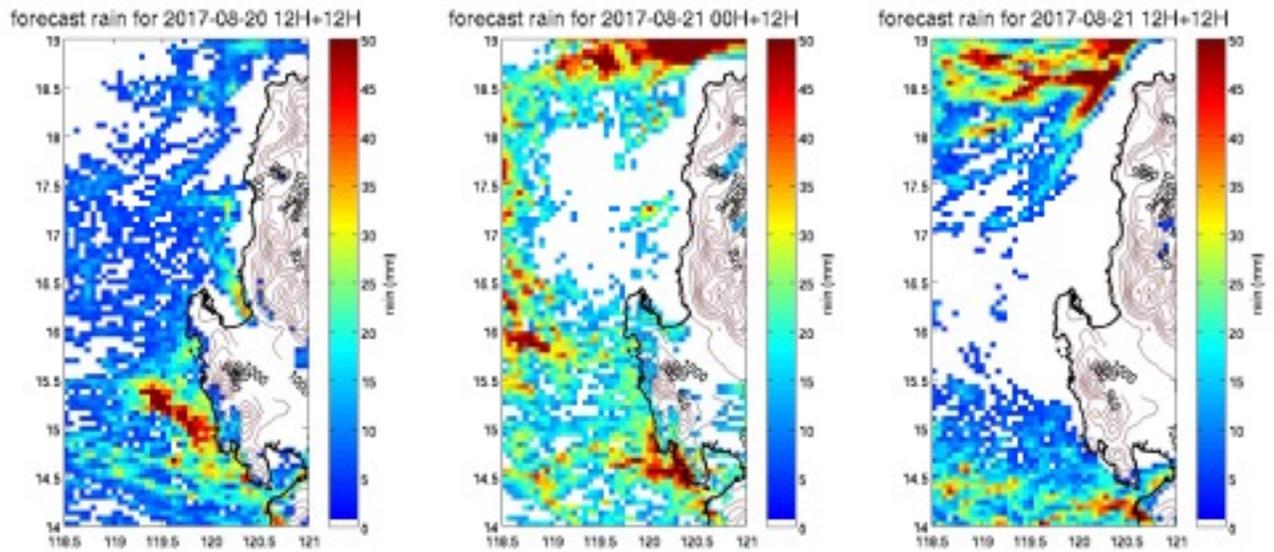


Fig. 4. WRF rain forecast, courtesy of Gerry Batas