

Summary

STY Mangkhut has made landfall in Luzon, and there are no upcoming TCs in the forecast. Generally quiet conditions over the next 24 h, with increasing chances of precipitation throughout the 48 h period. Significant wave heights are expected to be around 5-9 ft by 24 hr, decreasing only slightly to 5-7 ft by 48 h given the ship's more northern location.

Day One (24 hr) Outlook: GFS shows scattered convection near the area of operation towards the end of the 24-h forecast period while COAMPS remains more modest, favoring isolated convective activity. Both the GFS and COAMPS show winds near the area of operation shifting from the S to the N-NE between 10-20 knots towards the end of the 24 forecast period as the northwestern flank of a broad low-level (cyclonic) circulation tracks towards the region. Both COAMPS and FNMOC WW3 forecast significant wave heights between 5-9 ft near the end of the forecast period.

Day Two (48 hr) Outlook: GFS shows an increasing chance of scattered precipitation over the area of operation throughout the 24-48 h forecast period. Winds will remain from the E-NE between 10-20 knots throughout the forecast period as the northern portion of a broad low-level circulation continues to track over the area of operation. FNMOC WW3 forecasts significant wave heights at the area of operation between 5-7 ft near the end of the forecast period

Extended Outlook: GFS shows scattered convection over the area of operation throughout the 48-72 h forecast period as the broad low-level circulation lingers to the south. Winds will remain primarily from the E between 10-20 knots throughout the 48-72 h forecast period. FNMOC WW3 shows significant wave heights remaining between 5-7 ft near the area of operation throughout the 48-72 h forecast period. Similar conditions are expected over the area of operation throughout the 72-96 h forecast period, although significant wave heights will decrease to between 3-5 ft.

Discussion

TCs: A few members of the 12Z GEFS still spin up a potential TD around 36-48 h near the area of operation, but confidence in genesis actually occurring is extremely low since both the 12Z deterministic GFS and ECMWF keep that convection broad and disorganized. Thus, there are no upcoming TCs in the extended forecast.

Convection: The Himawari-8 IR satellite imagery shows a local region of organized convection north of the ship's location (~18 N, 135 E). Generally quiet conditions are expected over the next 24 h, with increasing chances of scattered precipitation throughout the 48-h forecast period as a broad low-level circulation lingers to the south of the area of operation.

MJO/BSISO: The MJO forecast provided by the ECMWF shows the two week period beginning on 14 September, and the BOM shows the two week period beginning on 09 September. The two models show a low-amplitude MJO signal persisting throughout their respective two week forecast periods. The BSISO forecasts have not been updated, with ECMWF showing the 10-29 September forecast period while the BOM shows the 09-28 September forecast period. Both models hint at a weak-amplitude BSISO1 signal in phase 3 and BSISO2 signal in phase 8 for the 0-4 day forecast period and then diverge in their representation thereafter. ECMWF favors a weak-amplitude BSISO1 signal in phase 4 and BOM favors a weak-amplitude BSISO1 signal in phase 2 for the 5-9 day forecast. The WPISO products pick up on a signal over the western Pacific that rapidly decays over the next couple of days, and then large-scale drying is expected throughout the end of September/ beginning of October.

SSTs: Sea surface temperatures are expected to be between 30-32 C.

Currents and Wave Heights: Significant wave heights near the area of operation are expected to be around 5-9 ft over the next 24 h, then decreasing to 5-7 ft by 48 h (due to the northward track of the ship).

FORECASTERS: MARTINEZ, CASAS (DELAP)

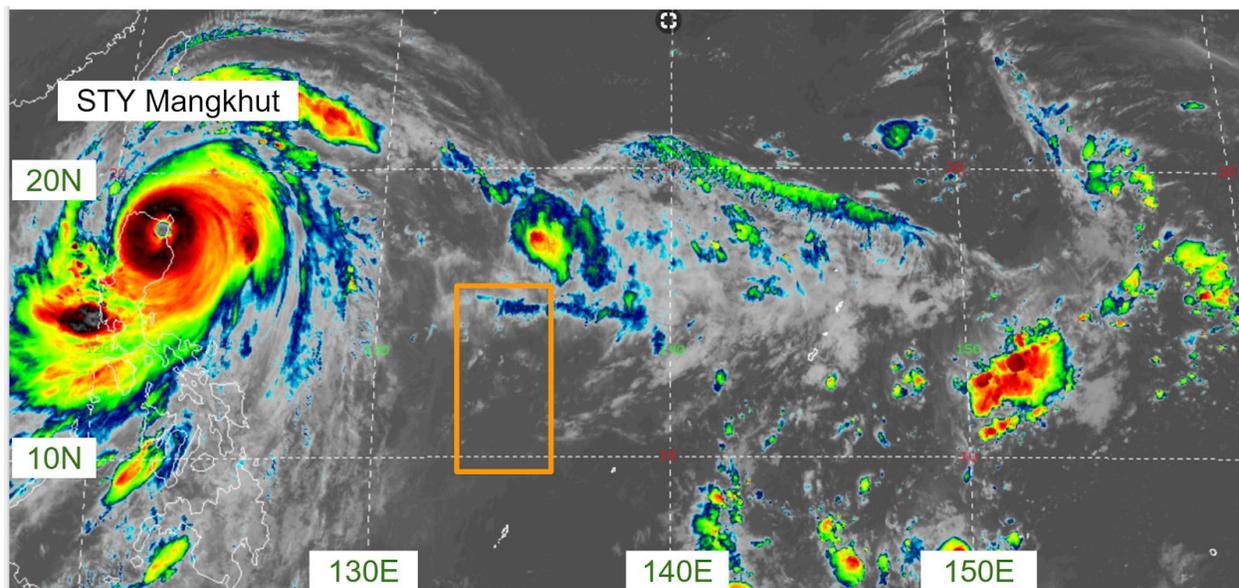


Fig. 1. Himawari IR imagery (10.4 microns) valid at 1830 UTC 14 September 2018. [1]

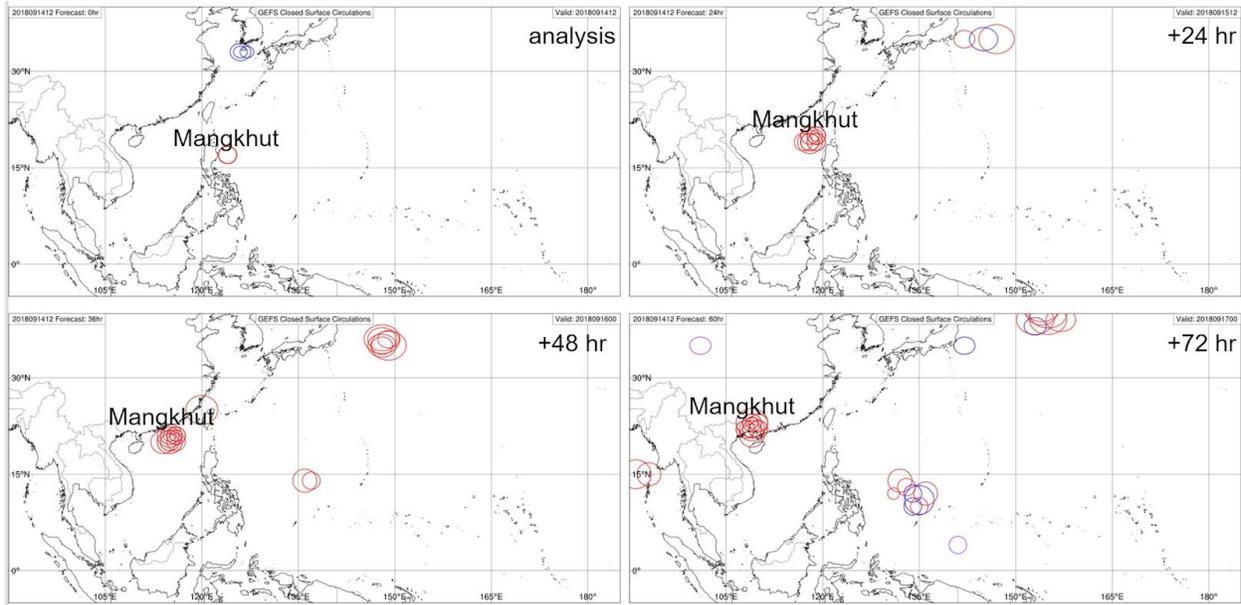


Fig. 2. GEFS ensemble 10-m circulation forecast initiated at 1200 UTC 14 September 2018. [2]

GFS 850mb Geopotential Height (dam), Cyclonic Vorticity (10^{-5} s^{-1} , shaded), and Wind (kt)

Init: 12z Sep 14 2018 Forecast Hour: [48] valid at 12z Sun, Sep 16 2018

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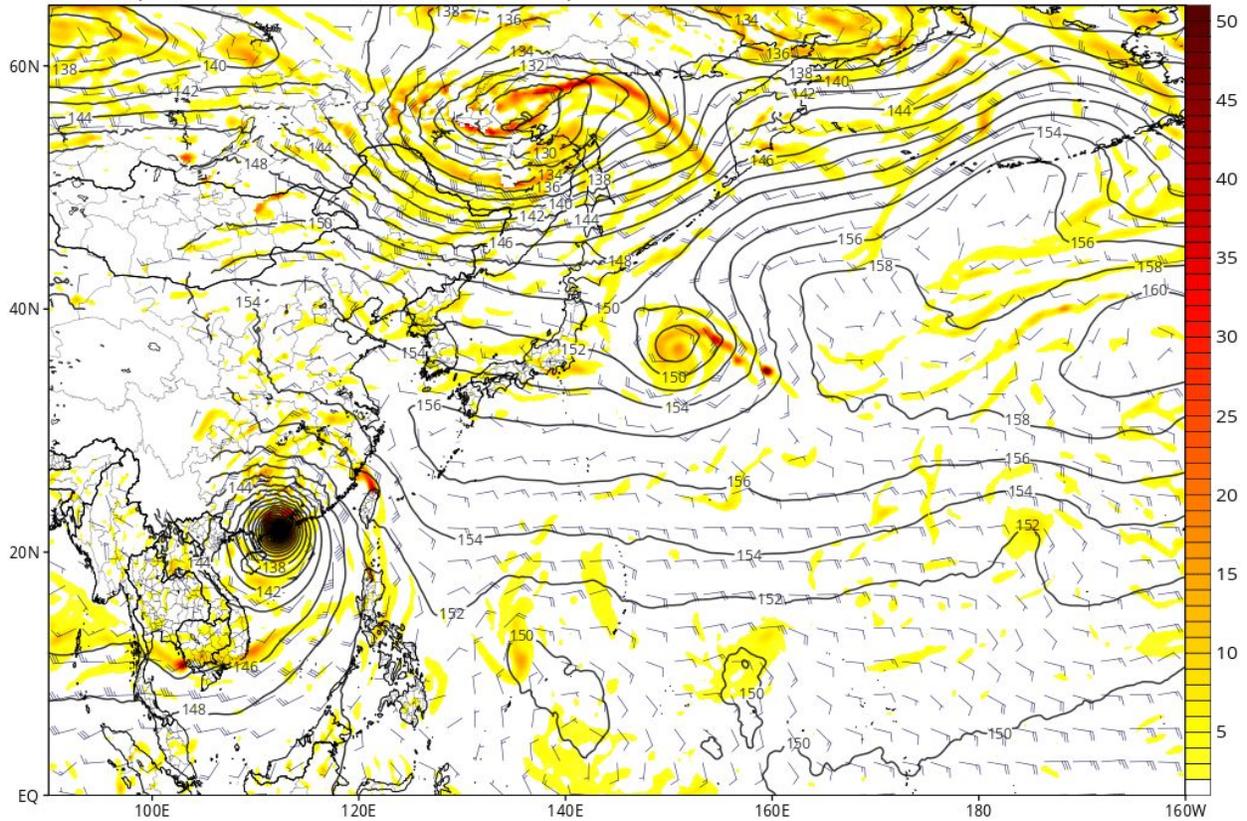


Fig 3. GFS vorticity (shaded) and wind barbs at 850 mb, and MSLP (contoured) initiated at 1200 UTC 14 September 2018 and valid at 1200 UTC 16 September 2018. [3]

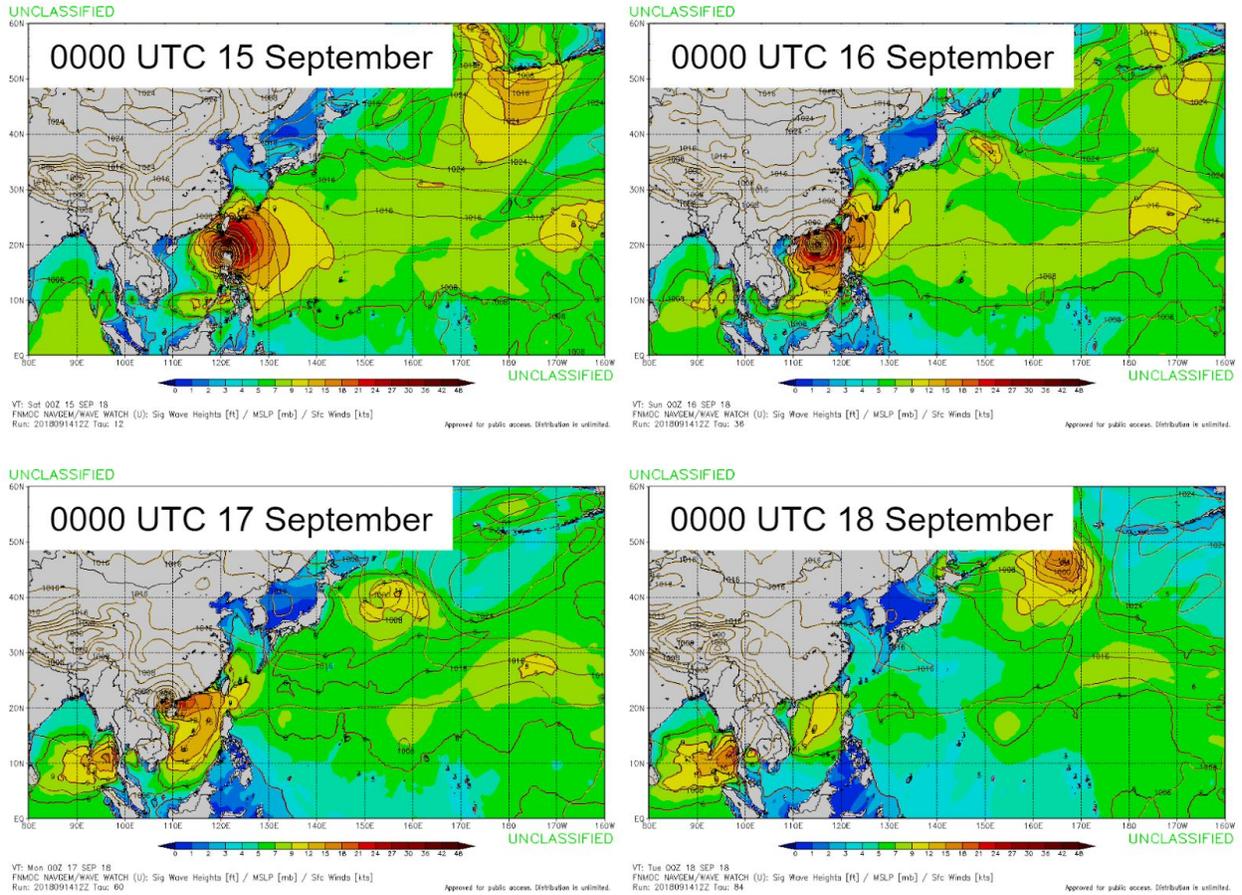


Fig. 4. FNMOC WW3 significant wave height forecast initiated at 1200 UTC 14 September and valid at (top left) 0000 UTC 15 September, (top right) 0000 UTC 16 September, (bottom left) 0000 UTC 17 September, and (bottom right) 0000 UTC 18 September. [5]