

Summary

The region of organized convection has passed through the area of operation, and precipitation is expected to be minimal with significant wave heights of 3-5 ft until TY Mangkhut's approach. JTWC has upgraded Mangkhut to a typhoon (TY) at 75 kt, located at approximately 15N, 150E with a heading of 265 degrees at 15 kt. TY Mangkhut is expected to continuously intensify for the rest of the current JTWC forecast, with a maximum forecast intensity of 135 kt on 12Z 14 September. However, rapid intensification is possible within the next 24-48 h if TY Mangkhut's track remains slightly north of the official forecast track. TY Mangkhut's closest approach to Guam is still 0000-1200Z 10 September, and the closest approach to the area of operation is approximately 1200Z 12 September. Significant wave heights of 9-12 ft near Palau are possible by the end of the 48 h forecast, and may approach 12-15 ft within 60 h.

Day One (24 hr) Outlook: Quiet conditions with possible isolated convection is possible in the next 24 h. Winds from the SW transitioning to the S between 5-10 kt are expected, and significant wave heights of 3-5 ft are forecast for the next 24 hr.

Day Two (48 hr) Outlook: Scattered precipitation is expected to increase over the next 24-48 h as the outer rainbands of TY Mangkhut approach Palau. Winds from the S will transition to being from the W as TY Mangkhut approaches, and significant wave heights will increase up to 9-12 ft by the end of the 48 h.

Extended Outlook: JTWC is now forecasting Mangkhut to continue its westward track and pass north of Palau at ~0000 UTC 12 September. Mangkhut is forecasted to continue intensifying, reaching 135 knots at 1200 UTC 14 September. As Mangkhut makes its closest approach to Palau during the 3-5 day forecast, precipitation is forecasted to increase due to rainbands on the southern side of Mangkhut. Winds will shift to the W-SW between 15-25 knots, drawing in moisture from the S-SW during this time period. Significant wave heights near Palau are forecasted to reach anywhere between 9-15 ft between 0000 UTC 12 September and 0000 UTC 14 September as Mangkhut passes to the north and curves to the NW. We will continue to closely monitor Mangkhut's track as any slight shifts to the north or south can produce distinct conditions over Palau.

Discussion

TCs: JTWC has upgraded Mangkhut to a typhoon (TY) at 75 kt, located at approximately 15N, 150E with a heading of 265 degrees at 15 kt. TY Mangkhut is expected to continuously intensify for the rest of the current JTWC forecast, with a maximum forecast intensity of 135 kt on 12Z 14 September. Current 10.4 micron imagery shows that TY Mangkhut has yet to make its forecasted dip to the WSW, which both global models at 12Z had predicted should have begun by now. Therefore, TY Mangkhut is expected to have a slightly more northerly track than is

currently predicted. Since increased vertical wind shear to the south was predicted to moderate TY Mangkhut's intensity over the next 48 h, a more northerly track would allow TY Mangkhut to intensify more than predicted, and rapid intensification is possible within the next 24-48 h. Both the 12Z GFS and ECMWF show that the closest approach to Guam is still 0000-1200Z 10 September, and the closest approach to the area of operation is approximately 1200Z 12 September.

Convection: The area of organized convection discussed yesterday has passed through the area of operation, and precipitation is expected to be minimal until TY Mangkhut's approach. Convection associated with TY Mangkhut's outer rainbands are expected to start increasing over Palau after 24 h.

MJO/BSISO: The MJO forecast provided by the ECMWF shows the two week period beginning on 08 September, and the BOM was updated on 06 September. The phase 8 MJO signal is forecasted to decay with an overall weak-amplitude MJO signal during the next two weeks. The BSISO indices from ECMWF and BOM show forecasts for the 06-25 September time period. Both the BOM and ECMWF indicate a weak-amplitude signal for phases 3 & 4 in the BSISO1 index over the 0-4 day forecast period, indicative of enhanced convective activity near Eastern Asia and the maritime continent. Both models show a weak-amplitude signal for phase 6 in the BSISO2 index over the 0-4 day forecast period (enhanced convective activity over SE Asia).

SSTs: Sea surface temperatures are expected to be between 29-31 C.

Currents and Wave Heights: Significant wave heights are forecasted to be 3-5 ft in the next 24 h, but will increase up to 9-12 ft by 48 h near Palau according to the 12Z FNMOC. Maximum significant wave heights are expected to be up to 12-15 ft around 18Z 11 September. FNMOC also shows that significant wave heights may still be 7-9 ft at the updated approximate time of departure from Palau, which is approximately 00Z 14 September.

FORECASTERS: CASAS (DELAP)

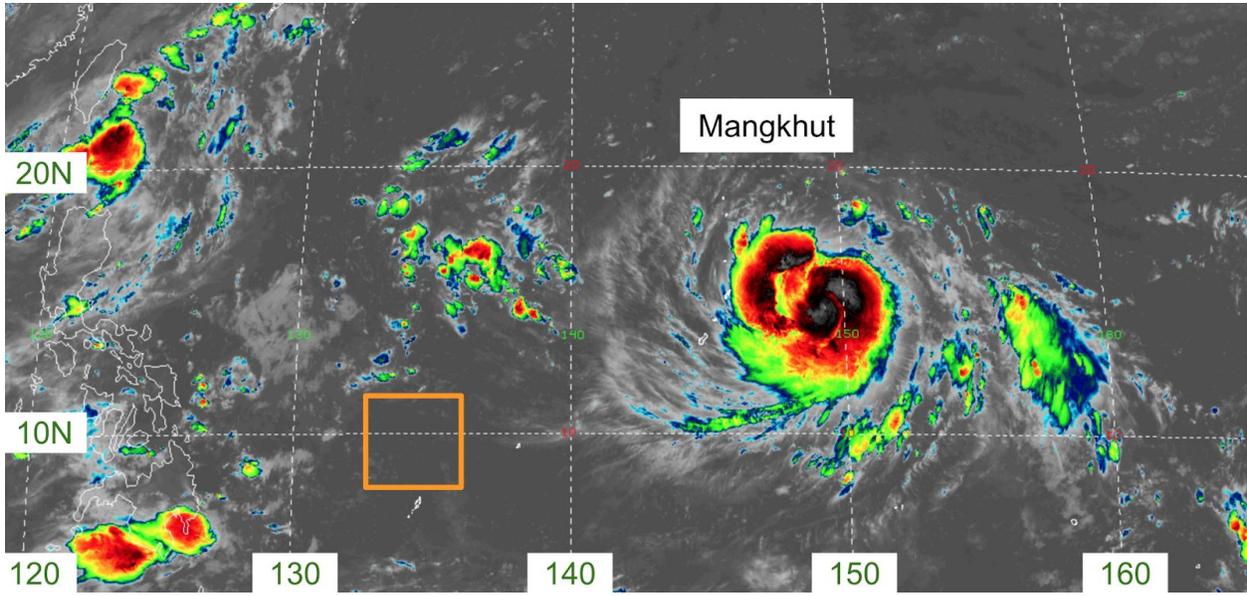


Fig. 1. Himawari IR imagery (10.4 microns) valid at 1800 UTC 09 September 2018. [1]

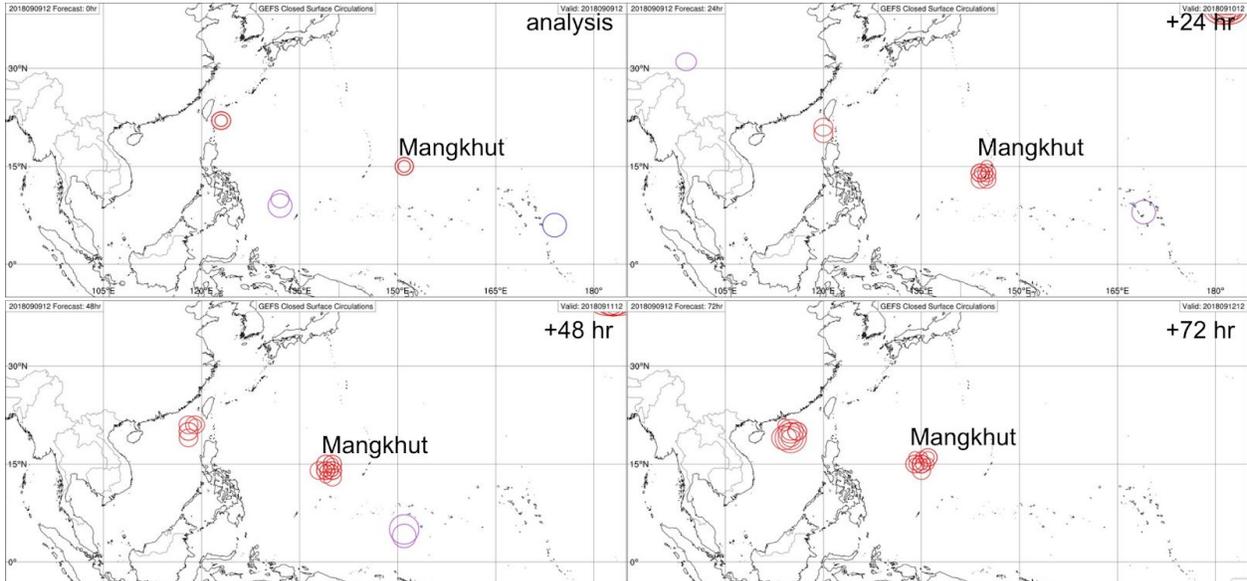


Fig. 2. GEFS ensemble 10m circulation forecast initiated at 1200 UTC 09 September 2018. [2]

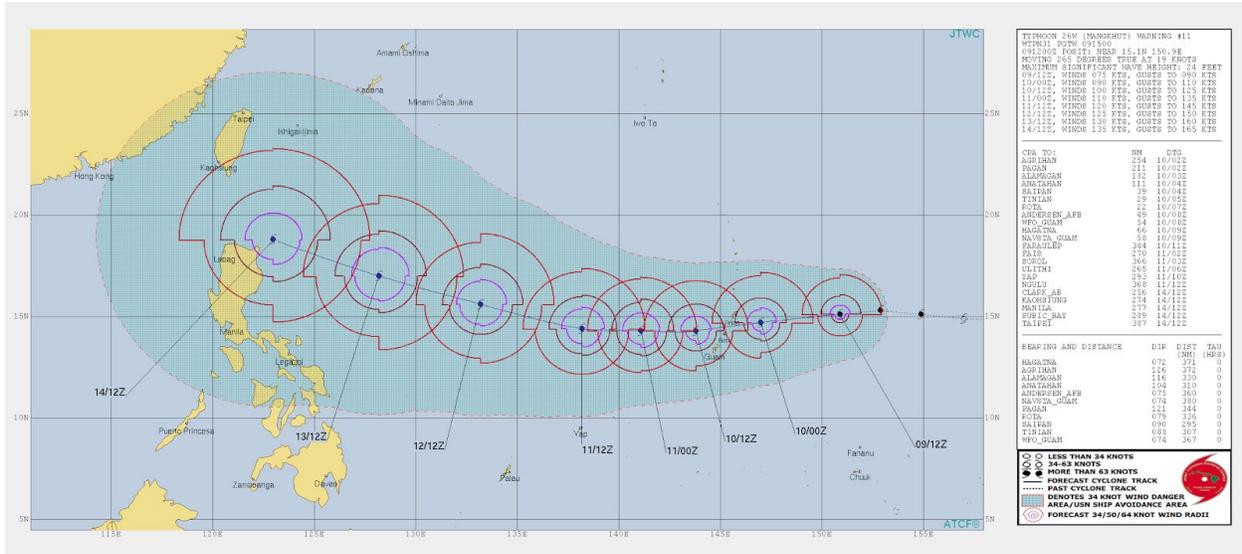


Fig 3. JTWC forecasted track/intensity for TS Mangkhut at 1200 UTC 09 September 2018. [3]

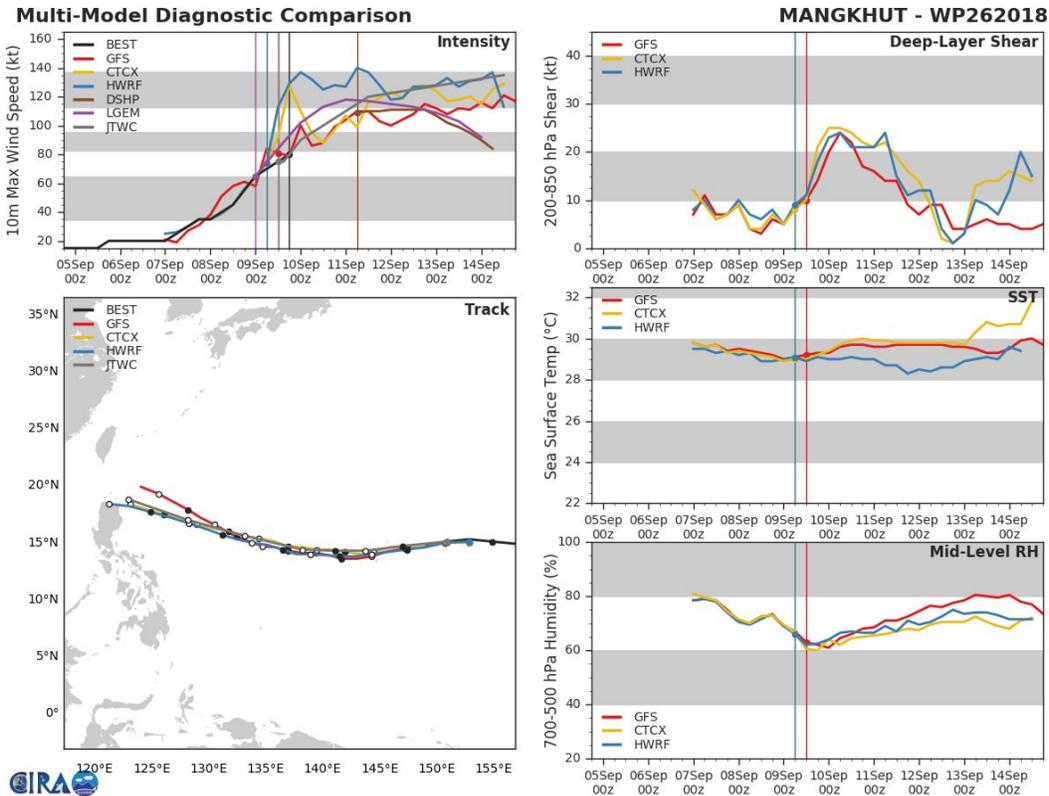


Fig 4. RAMMB TC Real-Time Multi-Model Diagnostic Comparison for TY Mangkhut, showing comparisons of track, intensity, deep-layer shear, SST, and mid-level RH between models. [4]

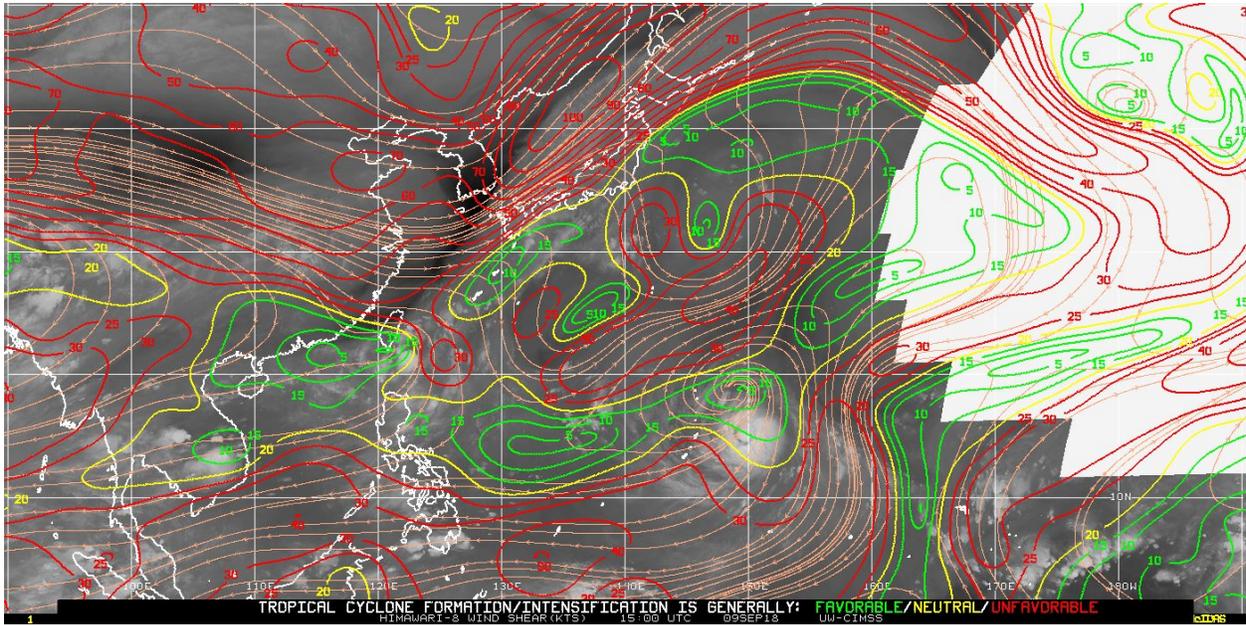


Fig. 5. CIMSS deep-layer wind shear, valid at 1500 UTC 9 September. [5]

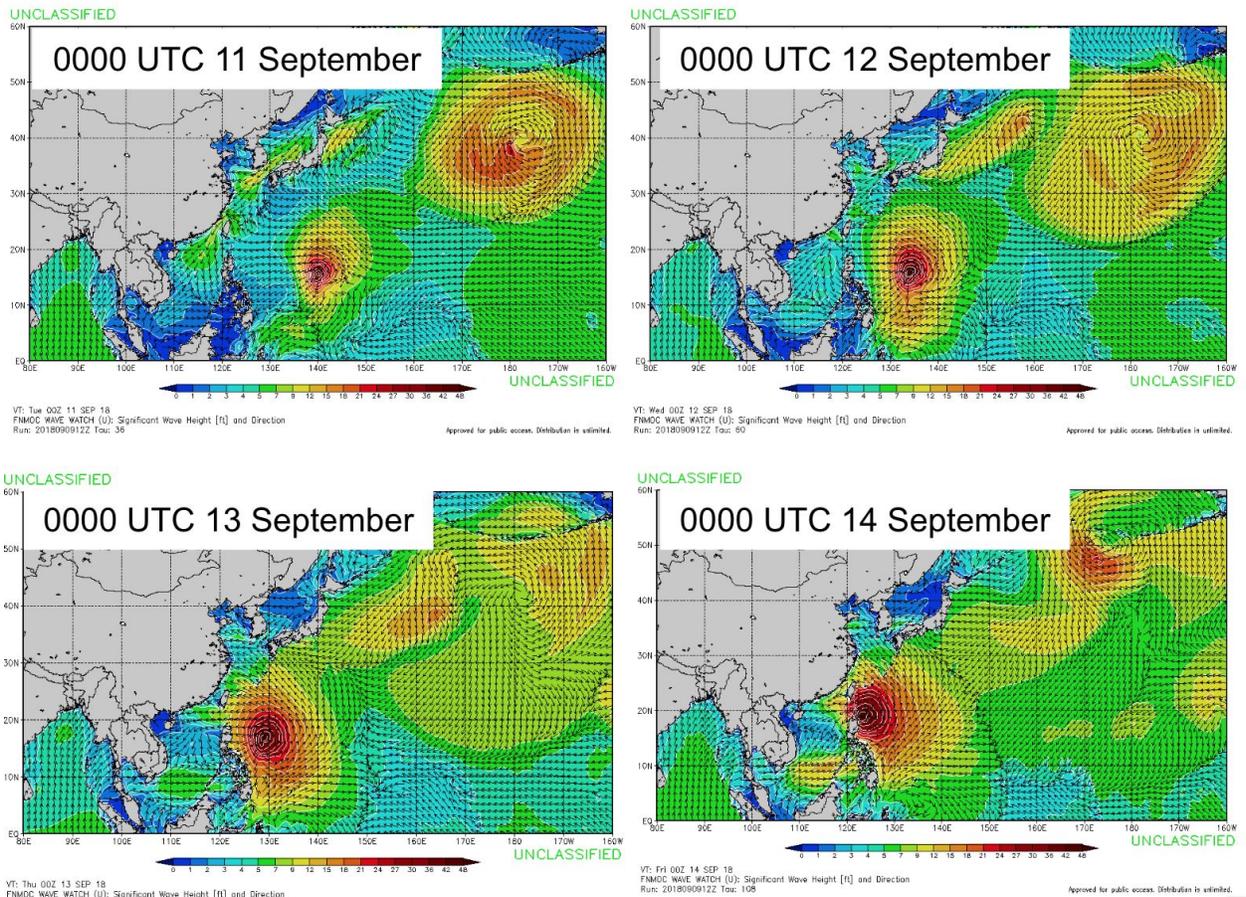


Fig. 6. FNMOC WW3 significant wave height forecast initiated at 1200 UTC 09 September and valid at (top left) 0000 UTC 11 September, (top right) 0000 UTC 12 September, (bottom left) 0000 UTC 13 September, and (bottom right) 0000 UTC 14 September. [6]