

## 2000 UTC 28 August 2018 Forecast Discussion

### Summary

Enhanced convective activity associated with a weak surface low is expected to diminish as the surface low tracks westward and away from the area of operation (area of operation = 12.3N 135.4E at 0828 1902 UTC). Surface winds are expected to increase to 10-15 knots from the southwest associated with the westward-moving surface low. TD 25W is now TS Jebi. Jebi is now forecast to track more westward compared to the more northwestward track mentioned in the previous forecast discussion, and is expected to intensify to at least a Category 2 storm on the Saffir-Simpson scale by 12Z on the 31st. Increased chances of precipitation is expected beyond 72 hours, associated with an area of precipitation extending south from Jebi's rainbands. Swells from a stronger Jebi is also expected to impact the area of operation around 12 UTC on 20180831.

**Day One (24 hr) Outlook:** Enhanced convective activity is expected to diminish as a weak surface low moves out of the area of operation. Behind this surface low, winds will pick up to 10-15 knots from the southwest. Significant wave heights are expected to be 2-4 feet. No impacts from TCs expected in the operation area.

**Day Two (48 hr) Outlook:** Widespread deep convective activity is not expected since no other low system is approaching to the operation area after the weak surface low moves out. Winds will be 10-15 knots from the southwest. Significant wave heights are expected to be 2-4 feet. No impacts from TCs expected in the operation area.

**Extended Outlook:** Wave heights are expected to increase over the operation area as swells from Jebi approach from the northeast. Wave heights are expected to be at least 7 fts beyond 48 hours. Increased likelihood of precipitation is expected with Jebi's rainbands beyond 72 hours.

### Discussion

**TCs:** TD 25W is now named Tropical Storm Jebi, according to JTWC. Its initial intensity is at 40 knots, with its center as of 12Z on the 28th located at 16.6N 155.3E moving towards 305 degrees relative to true north, at 9 knots. Environmental conditions are expected to be favorable over the next 72 hours, with low to moderate vertical wind shear, ample tropospheric relative humidity, and warm sea surface temperatures. Intensification of up to at least Category 2 on the Saffir-Simpson Hurricane Wind Scale by 00 UTC on the 31st is likely. Jebi is forecast to track more westward compared to the more northwestward track discussed in the previous forecast discussions, as it is riding along the southern edge of a subtropical high. Jebi's track is expected to take a more northward turn by 12 UTC on the 31st as an upper-level trough coming off of the Asian continent is expected to weaken the subtropical ridge, altering the steering flow. Jebi currently has a rainband spiraling inward from the south of its center to the northeast. 12 UTC 20180828 GFS run seems to indicate increased likelihood of precipitation to the south of this

rainband, close to the area of operation, beyond 72 hours (12 UTC on the 31st). With more model agreement on the intensification of Jebi, swells generated from Jebi's winds are expected to impact the area of operation around 12 UTC on the 31st, with significant wave heights of around 7 feet forecast from the global wave watch 3 model. However, direct impact from Jebi's wind field are not expected in the area of operation at this moment.

**Convection:** Convection associated with the surface low with its circulation center currently located around 10N 138E will decrease as the system is propagating to the west. The low is expected to intensify with stronger wind speed over the next 36 hours. Then, the low system will dissipate as it approaches the Philippines beyond 48 hours. However, the convection and precipitation will be to the west from our operation area. After this low system moves away from the operation area, there is no closed low system or widespread deep convection anticipated from global models for the next 72 hours, although scattered/isolated convection is possible. According to COAMPS, CAPE hovers between 500-1000 J/kg with CIN < 10 J/kg from now to 0000 UTC 30 Aug 2018.

**MJO/BSISO:** Updated BSISO forecast from BOM (initial date: 0826) is consistent with previous forecasts from BOM and EC's latest forecast (initial date: 0823) in that predicting a decrease in amplitude to a low signal for the next two weeks for both BSISO 1 and 2 indices. MJO forecasts from Aug 28 to Sep 11 from EC and NCEP show a phase shift into Western Hemisphere and Africa (Phase 1 and 8) in next week, but the amplitude is variable depending on the models.

**SSTs:** Sea surface temperatures should remain between 28-29 C.

**Currents and Wave Heights:** Surface currents are expected to be slow ~0.5 m/s and wave heights are expected to be 2-4 fts for the next 36 hours. The wave height seems to be increased by the surface low, that is currently located at 10N 138E. Note that COAMPS predicts this system to move northwest locating it to be 14N 130E at 0829 1200 UTC, whereas GFS and EC forecasts simulate its location to be 10N 135E at 0829 1200 UTC. Therefore, significant wave height forecast beyond 48 hours associated with the winds from this surface low will depend on which of these two models will verify.

FORECASTERS: RAZIN and NAM

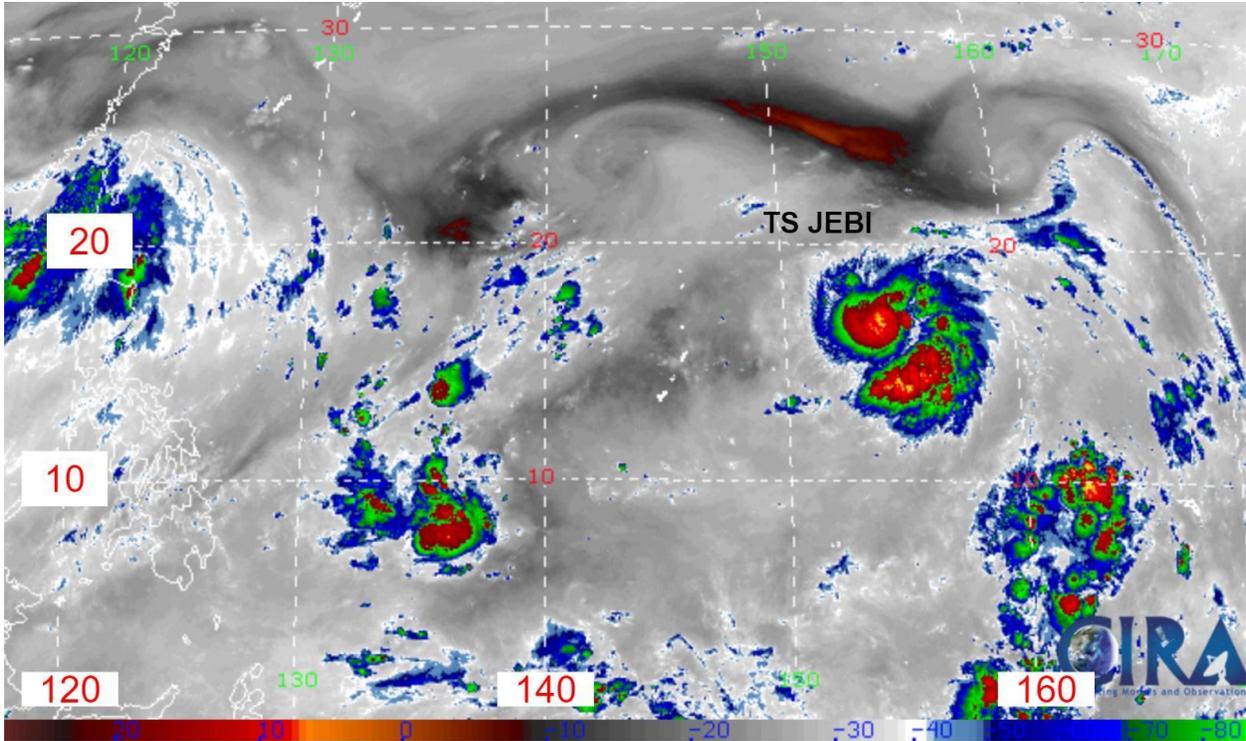


Fig. 1. Himawari WV channel (6.2 microns) at 1810 UTC on 20180828. [1]

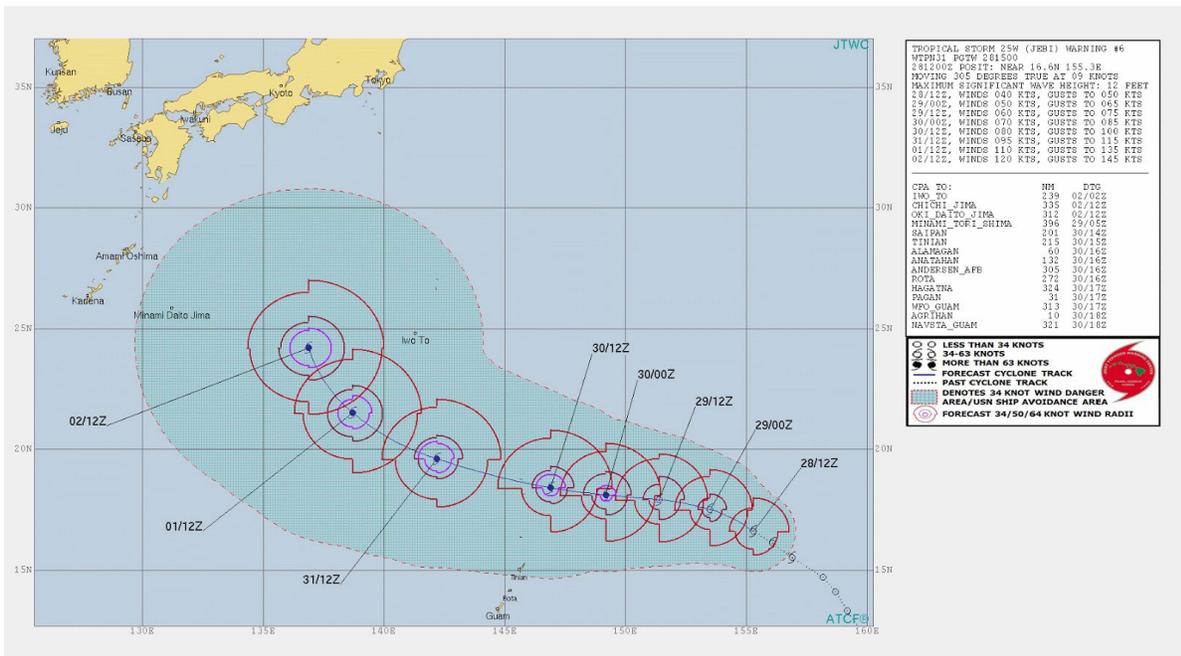


Fig. 2. JTWC forecast graphic for TS Jebi [2]

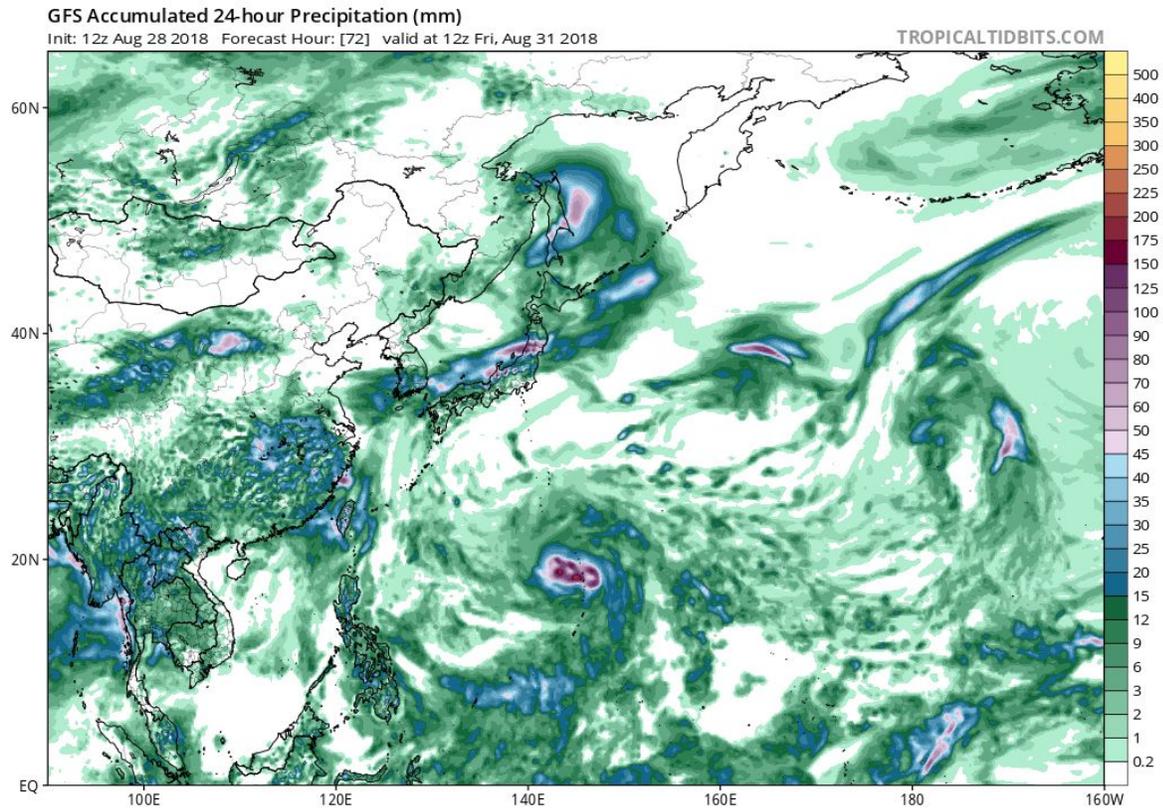


Fig 3. 24-hour rainfall accumulation forecast from GFS valid 12Z on 20180831.

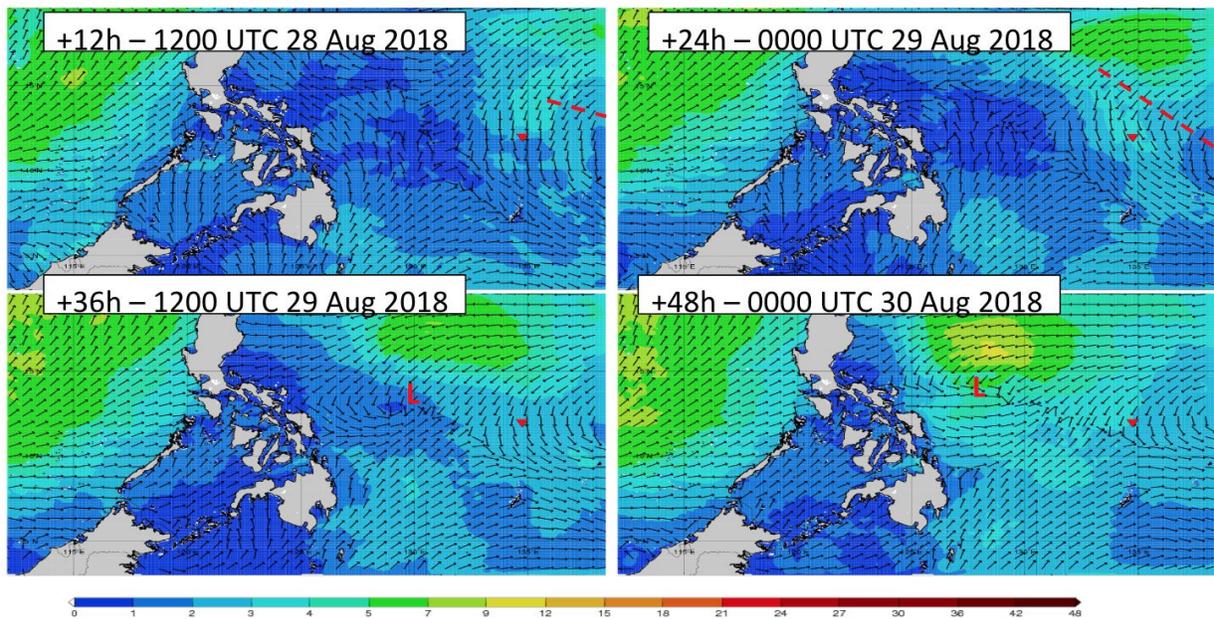


Fig. 4. COAMPS Significant Wave Height (shading, ft), and Direction (vectors)