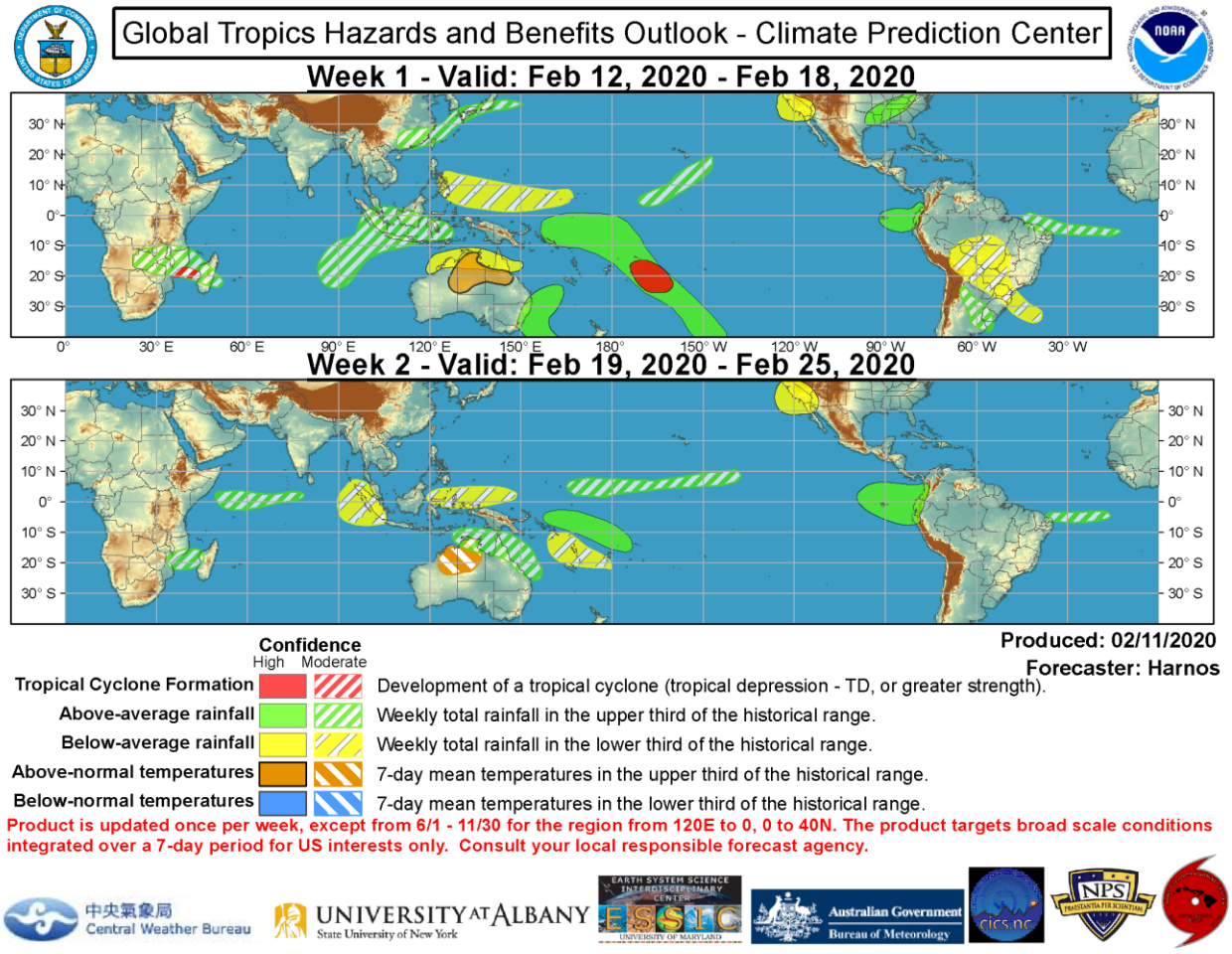

Investigating the current global tropical circulation reveals a complex perspective that may have lasting implications. Of interest are two eastward-propagating convective envelopes with the first currently over the eastern Indian Ocean and the second near the Date Line. In evaluating 200-hPa velocity potential fields, the latter region can be traced back in time through at least late 2019 with several periods of robust projections onto the RMM index during that interval. The former envelope may be shorter-lived, as it has to deal with the relatively hostile environmental conditions in the wake of the leading envelope to its east. Nevertheless, models differ on their handling of these two centers of action, and how dominant the easternmost feature will be, with the GEFS focusing on the eastern feature while the ECMWF allows the Indian Ocean convective center to linger and slowly drift eastward. Unanimous among the models though, is the forecast of a robust westerly wind burst during the second half of February that is likely to trigger a downwelling oceanic Kelvin wave that reinforces anomalous warm water volume near the Date Line. This bears monitoring for any longer-term implications and any potential El Nino event over the coming months.

During the past seven days two tropical cyclones (TC) developed. The first was Tropical Cyclone Damien off the Kimberley Coast of Australia on the 6th, with the system tracking south-southwest before

dissipating on the 10th. The second system was TC Uesi which formed in the Coral Sea on the 9th of February. Uesi has slowly tracked southward and is forecast to approach the east coast of Australia late this week before turning toward New Zealand. Areas being monitored for TC potential during the next two weeks include within the South Pacific convergence zone just south of American Samoa (high confidence during Week-1), the Mozambique channel (moderate confidence during Week-1, with development also possible in very early Week-2), or the central portion of the South Indian Ocean (low confidence during Week-1, with no TC shape forecast and instead a moderate confidence of above-normal rains area).

The precipitation outlooks during the next two weeks take on somewhat of a character that features a West Pacific MJO (Phase 6 during Week-1, Phase 7 during Week-2) with increased uncertainty over the Indian Ocean with the second eastward moving envelope of enhanced convection and what role it may play amidst what would be conditions that are typically hostile to convective development. Highest confidence for enhanced rains are east of New Guinea with some extension into the South Pacific during both weeks. Confidence is high for anomalous dryness from the Timor Sea through Coral Sea during Week-1, which is replaced by a wetter pattern during Week-2. High confidence also exists for above-normal precipitation for portions of the west coast of South America, tied to sea surface temperature anomalies of 1-2 degrees above-normal combined with onshore flow oriented perpendicular to the Andes. Anomalous ridging over the Northeast Pacific leads to high confidence for continued below-normal precipitation across parts of the western U.S. throughout the outlook, while a tropical moisture feed across Mexico and the Gulf of Mexico into the Lower Mississippi, Tennessee, and Ohio Valleys results in high confidence for above-normal rains during Week-1. Remaining precipitation forecasts are in line with either forecast TC tracks or a consensus of dynamical model guidance between the ECMWF and CFS ensembles.

Above-normal temperature areas across Australia are in line with the latest Bureau of Meteorology heat wave outlook during Week-1 and CPC's GEFS and ECMWF probabilistic extremes guidance during Week-2. For the most up to date guidance relating to ongoing heat and fire-related concerns across Australia please seek guidance directly from the Bureau of Meteorology.

Forecasts over Africa are made in consultation with CPC's international desk, and can represent local-scale conditions in addition to global-scale variability.