

The MJO is currently weak and incoherent. The recent uptick in tropical storm activity this past week across this region has aliased into the MJO band. This makes it difficult to separate out the convective contributions from tropical cyclones and from the MJO itself. Dynamical model guidance generally suggests a westward shift in the tropical convection from the western North Pacific towards the Maritime Continent during the next two weeks, with some weakening possible.

The global tropics have been very active this past week with tropical cyclone activity. In the western North Pacific, severe tropical storm Chanthu (August 11-17) developed out of a depression located about 430 miles west-northwest of Guam, eventually making landfall in Hokkaido, Japan at peak intensity with maximum sustained winds of 65 mph. Tropical storm Dianmu (August 15-19)started its life cycle as a tropical depression about 120 miles east-southeast of Hong Kong. Dianmu then tracked westward, bringing heavy rains and peak winds of 45 mph to the province of Hainan. Ongoing severe tropical storm Lionrock began as a depression about 430 miles northwest of Wake Island on August 16th. The Joint Typhoon Warning Center (JTWC) in Honolulu forecasts Lionrock to slowly work its way northward towards southern Japan, but then recurve northeastward well off the coast of Honshu, reaching a peak intensity near 85 mph (gusts to 100 mph) on August 26-27. Typhoon Mindulle began as a tropical depression northwest of Guam on August 17th, and moved generally northward towards Japan. Tokyo received heavy rain, flooding, and strong winds from this system on August 21-22. Unofficial peak wind estimates of 78 mph (gusts to 100 mph) were reported. Tropical Storm Kompasu (August 17-21) started as a tropical depression east of the northern Mariana Islands, and eventually passed just east of Misawa Air Base in northern Honshu, making landfall in Hokkaido. Peak winds of 40 mph were observed with this system.

On the opposite side of the Pacific basin, Kay began as a tropical depression about 570 miles west of the southern tip of Baja California. As of today, August 23rd, peak winds with Tropical Storm Kay have been about 40 mph, with gusts to 50 mph. Kay continues to move northwestward and westward, well away from any land masses. In the Atlantic basin, 2 tropical systems formed in the past week, and one remains a significant tropical wave. Fiona became a tropical depression on August 17th some 500 miles north-northeast of the northern Leeward Islands. Only modest strengthening occurred during the ensuing four days, resulting in a brief period of one-minute sustained winds of 50 mph, before weakening back to a depression. Tropical storm Gaston began as a low pressure area west of Cape Verde, which developed a closed circulation on August 22nd and became a tropical depression. As of this writing (August 23rd), maximum winds are 50 mph, with gusts to 65 mph. The National Hurricane Center in Miami forecasts Gaston to strengthen today (August 23rd) and reach hurricane intensity on August 24th as it continues to move in the general direction of Bermuda. Finally, yet another tropical system (unnamed at the present time), is located several hundred miles east of the Leeward Islands. This tropical wave, with its large region of disorganized showers and thunderstorms, is expected to move into a more favorable environment over the next few days, especially once it reaches the area encompassing Hispaniola and the Bahamas. Regardless of whether or not this tropical wave becomes a named system, heavy rains, gusty winds, and possibly flash floods and mudslides, are a good bet across the northern Leeward Islands, and the eastern Greater Antilles over the next several days.

Predicted tropical cyclone activity during the Week-1 period includes the eastern Pacific (high confidence) and from several hundred miles east of the Leeward Islands northwestward towards the Bahamas (moderate confidence). During Week 2, tropical cyclone development is favored across the western North Pacific south of Japan (related to the anticipated upper-level divergence and convective signal in this region), and also across the low latitude Atlantic. Both areas are assigned moderate confidence. The following links provide additional tropical cyclone information:

National Hurricane Center: http://www.nhc.noaa.gov/

Joint Typhoon Warning Center: https://metoc.ndbc.noaa.gov/en/JTWC/

Central Pacific Hurricane Center: http://www.prh.noaa.gov/cphc/

The Week 1 precipitation forecast favors below average rainfall (moderate confidence) in the low latitude South Indian Ocean and in the vicinity of the Philippines. These are locations where the CFS and ECMWF dynamical precipitation guidance are in agreement. Below average rainfall is also favored (high confidence) near the coast of Central America and southern Mexico, in the subsidence wake of expected East Pacific tropical cyclone activity. Odds favor above average rainfall over the western North Pacific (primary region of expected convection), and over the tropical eastern Pacific due to tropical cyclone activity (high confidence).

The Week 2 precipitation forecast favors below average rainfall (moderate confidence) over the equatorial Indian Ocean, and over the central North Pacific south and southwest of the Hawaiian archipelago. These areas are predicted by both the CFS and ECMWF precipitation guidance. Above average rainfall is favored over the western North Pacific, which is due to expected tropical cyclone activity and the presence of the monsoon trough.

Forecasts over Africa are made in consultation with CPCs international desk, and can represent localscale conditions in addition to global-scale variability.