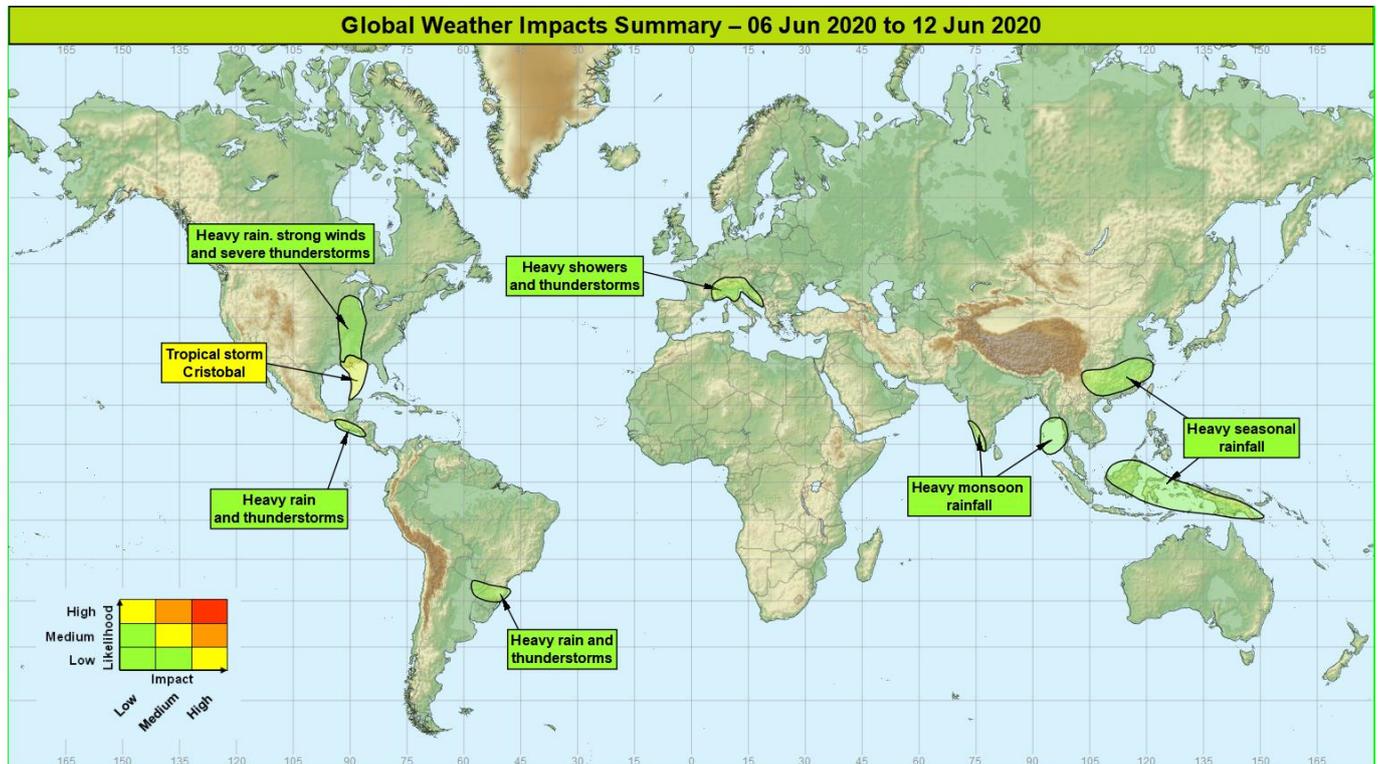


Global Weather Impacts – Saturday 6th to Friday 12th June 2020

Issued on Saturday 6th June 2020

HEADLINES

- Tropical depression Cristobal expected to make landfall across the Gulf Coast of the US late Sunday night/early Monday morning having re-strengthened to a tropical storm.



DISCUSSION

Tropical Cyclones

Tropical storm Cristobal - Gulf of Mexico (southeast Mexico and southern USA)

Weather

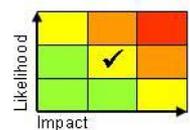
Cristobal has been producing copious amounts of rainfall across parts Mexico, and was regraded to a tropical storm again on Friday evening. Local event totals of over 800mm have been reported in Campeche, Quintana Roo, Tabasco, and Yucatan.

Cristobal is expected to track north into the Gulf of Mexico through early Saturday, strengthening further as it does so. The storm is expected to make landfall across south-east Louisiana late Sunday or early Monday UK time. Cristobal is expected to have sustained winds of 60mph at the time of landfall, though the biggest impact from the system is likely to be a combination of heavy rain (200-300mm) and storm surge (1-4 feet).

Discussion

As the circulation associated with tropical depression Cristobal pushes N into the Gulf of Mexico, due to increasing S'yly upper flow, the system will start to strengthen as it travels across SSTs in excess of 28°C. This, combined with a relatively favourable atmospheric environment, means Cristobal will likely continue to strengthen right up to landfall. Whilst official guidance does not forecast Cristobal attaining hurricane strength, the system will need monitoring for development over and above expectations (as seen on Friday evening).

Expected Impacts



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As Cristobal clears to the north, gradual recovery in conditions is expected across Mexico. For the southern USA impacts are likely to be less severe but still with the risk of heavy rain, storm surge and wind damage. Rough seas expected over the Gulf of Mexico.

No other areas are currently being monitored for tropical storm development

Europe

France, Switzerland, Austria, Slovenia, Croatia, Bosnia and Montenegro

Weather

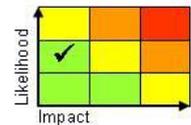
Several rounds of unsettled weather are likely for this part of Europe right up to the end of the forecast period. The heaviest and most frequent rain/showers are expected over parts of northern Italy and Austria with the potential for 150-200 mm (equivalent to a month's worth of rain) possible. However, each day some localised torrential downpours are possible, with the potential to bring 50-100 mm within a few hours. As well as heavy rainfall, frequent lightning, hail, and locally strong wind gusts are likely, with thunderstorms persisting well into the night-time period.

Discussion

With a major upper ridge becoming dominant in the mid-Atlantic, several upper trough extensions are likely to dive SE across these areas - a cut-off upper low is likely to develop by Tuesday. Associated cold air aloft, overlying warm air near the surface, will lead to decent lapse rates and the risk of several periods of severe thunderstorms. Conditions should slowly improve later next week.

Expected Impacts

Flash flooding looks possible in places, along with an increased threat of landslides in mountainous terrain. Hail and wind damage looks like a lower likelihood than flash flooding.



North America

Southern USA – see *Tropical Cyclones* section

Eastern Plains of the US

Weather

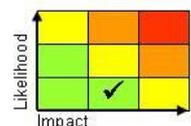
As tropical moisture from Cristobal comes north early next week across these areas, heavy rain and strong winds are likely, and for the east of the area, there is the risk of some severe thunderstorms. Some localised rainfall totals in excess of 200mm are possible by the end of next week. This would be in excess of the average rainfall for June in this area, which is around 180mm.

Discussion

As Cristobal makes landfall early next week it is signalled to draw copious tropical moisture N across the central US. WBPTs in excess of 20-22°C are likely to be drawn N as far as the Great Lakes and Canadian border. Whilst this warm air will be the source for some thunderstorms, the most impactful conditions are likely as a major mid-latitude trough engages the warm air from Tuesday. This is likely to lead to at least one cyclogenesis event, with associated heavy dynamic rain, and in the warm sector, severe thunderstorms. This will be a complex development, with low confidence for now in exact position/timing of any development.

Expected Impacts

Heavy rain bringing risk of flash and river flooding, as well as landslides in hillier areas. Strong winds, severe thunderstorms, large hail and tornadoes will likely be additional hazards.



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Central America and the Caribbean

Southern Mexico, Guatemala, El Salvador, southern Honduras and western Nicaragua

Weather

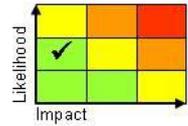
Heavy rain and thunderstorms are expected to continue to affect this region before easing by the start of next week. Up to 100 mm of rainfall will build up in places, especially over higher ground, this coming on top of very heavy rainfall in the past few days. The average June rainfall in this region is 150-300 mm.

Discussion

A broad cyclonic circulation (Central American Gyre) remains resident across Central America. The very moist winds associated with the gyre will continue to enhance the heavy rain and thunderstorm activity until the weekend. However, as Cristobal continues N, it will result in the breakdown of the gyre and weakening of rainfall across the region by the start of next week.

Expected Impacts

Flash flooding and mud/landslides, especially in area of mountainous terrain.



South America

Southern Brazil, far northeast Argentina and eastern Paraguay

Weather

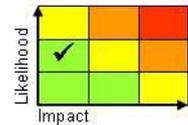
An area of heavy rain and thunderstorms is likely to persist through Saturday and Sunday, with up to 50-100mm of rainfall quite widely, perhaps 150-200 mm falling in some places in a few days (most likely southern Brazil).

Discussion

An area of low pressure has formed over Uruguay, with its quasi-stationary cold front affecting primarily S'ern Brazil. Here, heavy rain and thunderstorms are likely to continue until the front finally clears by early Monday.

Expected Impacts

Flash flooding is possible with a threat of landslides in more mountainous areas.



Africa

Nil.

Middle East

Nil.

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Asia

Western Ghats of India

Weather

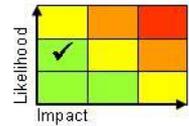
An active first pulse of the Indian Summer Monsoon rains will cross the Western Ghats of India, with persistent heavy rain and thunderstorms expected to continue before easing early next week. A further 100-200 mm is likely to fall in places with perhaps the wettest areas seeing 250-300 mm. This is typically the start of the wet season here with rainfall in June normally in the order of 600-700 mm.

Discussion

The deep layer, very moist southwesterly monsoon flow has become established in the wake of Cyclonic Storm Nisarga, marking the commencement of the 2020 Indian Summer Monsoon (right on the climatological date – 1st of June). The Indian Summer Monsoon has progressed further north over SW India in the last few days (as-per climatology), but still remains a little slower than normal in the Bay of Bengal.

Expected Impacts

Despite monsoon rainfall being usual in June across the Western Ghats of India, this monsoon pulse looks very active and could result in an early season flood event.



Southern Myanmar and Andaman Islands

Weather

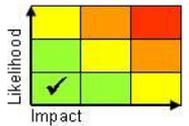
Frequent heavy showers and thunderstorms in this area over the coming week with the potential for 200-250 mm of rain to build up in places. This is typically the start of the wettest time of the year in these areas and although these sort of totals aren't exceptional it does look likely to be an active pulse of monsoon rainfall.

Discussion

The Southeast Asia monsoon continues to move north leading to increased, very moist, deep layer south-westerly flow, which marks the start of the wet season in these areas.

Expected Impacts

Increased chance of flash flood and landslides.



Southern China

Weather

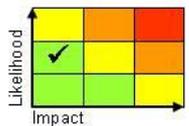
Heavy monsoon rainfall is expected over the coming week. Some places are likely to see 100-150mm per day in association with heavy and persistent rain across quite a wide area of southern China. 300-500mm of rainfall is most likely in total across the wettest areas, which is around or just above the average June rainfall in this region. There is also the potential for intense short period rainfall from thunderstorms.

Discussion

Increasing monsoon southerly flow into southern China will enhance moisture and wind convergence associated with the seasonal Mei-yu front, leading to episodes of heavy rain and thunderstorms. Whilst the upper flow is not especially conducive so large scale development, a number of short-waves embedded within the flow will continue to trigger rainfall across a similar area along the quasi-stationary front, leading to large rainfall accumulations building up.

Expected Impacts

Increased threat of flash flooding and landslides.



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Parts of Malaysia, Indonesia and Papua New Guinea

Weather

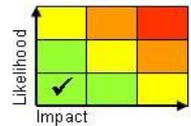
Showers and thunderstorms are expected to be more frequent than normal across these area over the next week with a few places possibly seeing the average June rainfall (150-250 mm) in just a week.

Discussion

Kelvin wave activity running east across the area is expected to lead to heavier than normal rainfall across parts of the Maritime Continent over the coming week.

Expected Impacts

Slightly increased likelihood of flash flooding and landslides.



Australasia

Nil.

Additional Information

Cox's Bazar, southeast Bangladesh

There will be a threat of a heavy shower or thunderstorm most days, especially through the afternoon and into the evening, but with only a low likelihood of any flash flooding impacts. This activity is likely to be below what is usually expected for early June.

Western Yemen

The persistent and heavy showers of the last few days have mainly cleared from the area. For the next week, any showers should be confined to the Western Highlands. The odd heavy shower or thunderstorm is possible most afternoons/evenings, but significant rainfall is not expected.

Issued at: 06/0600UTC **Meteorologist:** Jason Kelly/Mark Sidaway

Global Guidance Unit

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