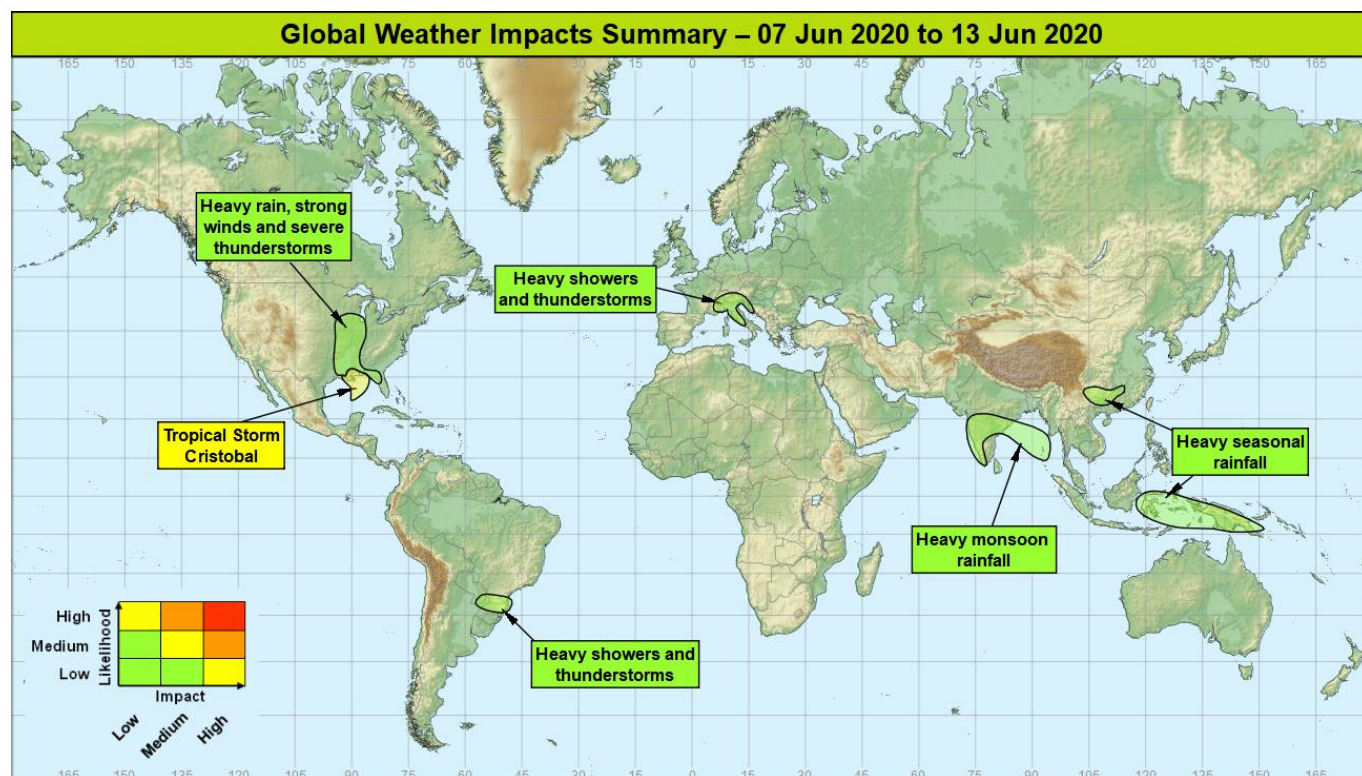


## Global Weather Impacts – Sunday 7<sup>th</sup> to Saturday 13<sup>th</sup> June 2020

Issued on Sunday 7<sup>th</sup> June 2020

### HEADLINES

- Tropical storm Cristobal expected to make landfall across southern USA late Sunday night/early Monday morning.



### DISCUSSION

#### Tropical Cyclones

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

###### Weather

Cristobal has strengthened back to tropical storm strength since moving back over the Gulf of Mexico. 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

Whilst official guidance does not forecast Cristobal attaining hurricane strength, the system will need monitoring for development over and above expectations. High SSTs (in excess of 28C) will favour development but this may be balanced by moderate vertical wind shear and the entrainment of dry air. The system has a non-classical appearance on satellite imagery (more akin to an extra-tropical system) with heavy rain and thunderstorms extending a long way east of the system's centre.

###### Expected Impacts

For the southern USA heavy rain and storm surge may lead to flash flooding with wind damage also possible. Rough seas expected over the Gulf of Mexico.



*No other areas are currently being monitored for tropical storm development.*

**This forecast may be amended at any time**

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## Europe

### France, Switzerland, Austria, Slovenia and Croatia

#### **Weather**

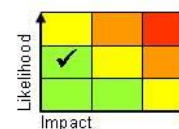
Several rounds of unsettled weather are likely for this part of Europe through the next week. The heaviest and most frequent rain/showers are expected over parts of northern Italy and Austria with the potential for 200-250 mm (equivalent to a month's worth of rain) possible in places. However, each day some localised torrential downpours are likely 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**

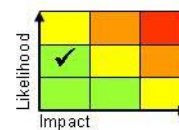
As tropical moisture from Cristobal comes north early next week across these areas, heavy rain and strong winds are likely, and for the east of the area, there is the risk of some severe thunderstorms. Some localised rainfall totals in excess of 200mm are possible by the end of next week. This would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

Nil.

**South America****Southern Brazil, far northeast Argentina and eastern Paraguay****Weather**

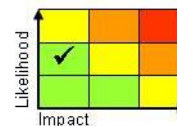
Current heavy rain and thunderstorms in this area will ease on Sunday. However, a further bout of heavy rain and thunderstorms is expected to develop from Tuesday, then lasting through the following few days. 50-100mm of rainfall is likely quite widely, perhaps 150-200 mm falling in some places in a few days (most likely southern Brazil).

**Discussion**

In the wake of the current system clearing E an active pulse in the SACZ is signalled during the middle of next week high WBPT air being drawn S over Brazil. The will lead to a slow-moving baroclinic zone become established over these areas for 2 or 3 days acting as a focus for heavy rain and thunderstorm development.

**Expected Impacts**

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

**Africa**

Nil.

**Middle East**

Nil.

**Asia****Southern India and Andaman Islands****Weather**

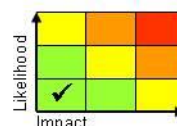
The recent active pulse in the monsoon is now waning, with exception of heavy rains continuing over the Andaman Islands. Another active pulse in the monsoon is signalled during next week with heavy rain and thunderstorms spreading more widely across southern India again. Each day, there will be the potential for 100-150 mm of rain to fall in places.

**Discussion**

Whilst heavy monsoon rains will continue across parts of the Bay of Bengal there will be a short respite across parts of southern India. The MJO moving into Phase 2 over the Indian Ocean is likely to be responsible for another active phase developing next week with the monsoon likely to make further progress N. There is currently a muted signal for a tropical depression forming over the western Bay of Bengal which will need monitoring.

**Expected Impacts**

Increased chance of flash flood and landslides.



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## Southern China

### **Weather**

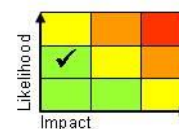
Heavy monsoon rainfall is expected over the coming week. Some places are likely to see 100-150mm per day in association with heavy and persistent rain across quite a wide area of southern China. 300-500mm of rainfall is most likely in total across the wettest areas, which is around or just above the 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 and fluvial flooding as well as landslides.



## Parts of Malaysia, Indonesia and Papua New Guinea

### **Weather**

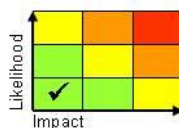
Showers and thunderstorms are expected to be more frequent than normal across these area over the next week with a few places possibly seeing the average June rainfall (150-250 mm) in just a week.

### **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**

Drier conditions have become established again. 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:** 07/0300UTC **Meteorologist:** Chris Bulmer

**Global Guidance Unit**

**This forecast may be amended at any time**

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