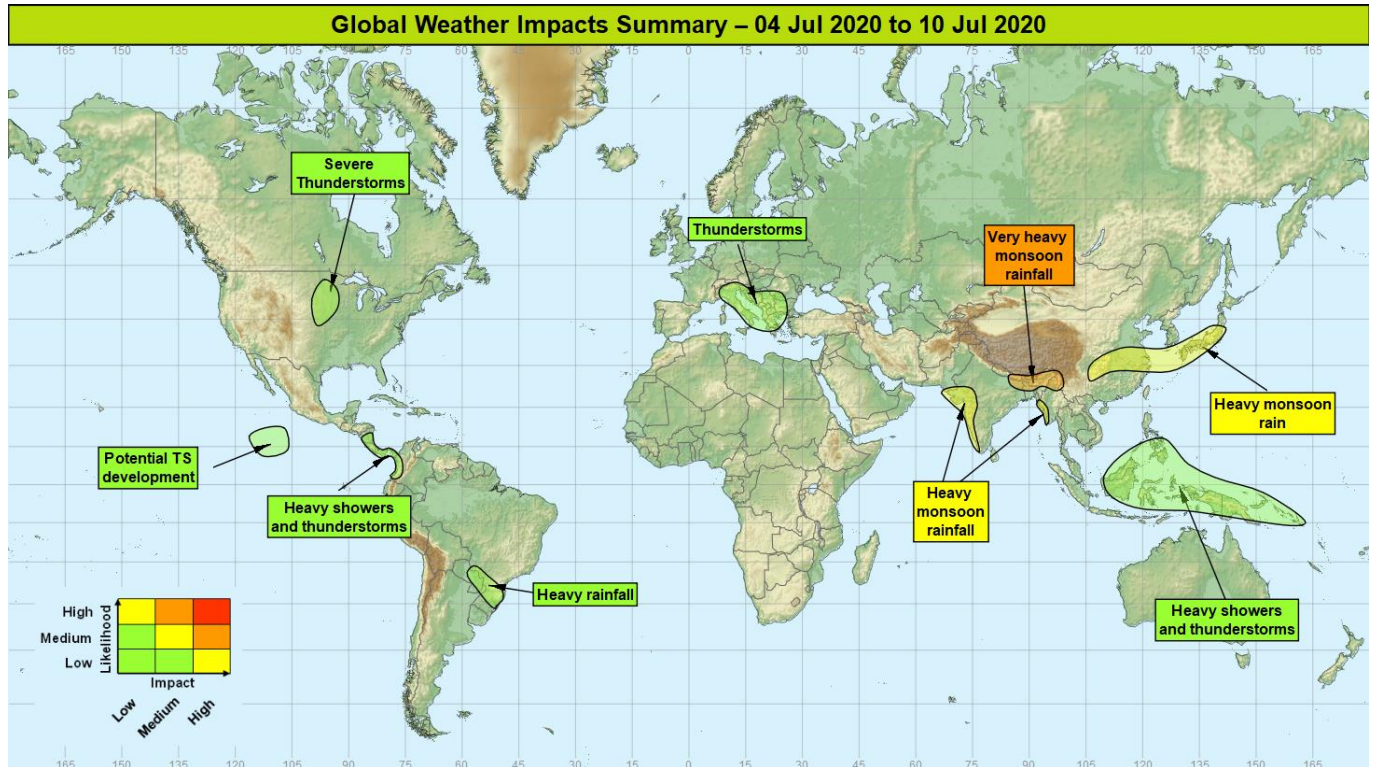


## Global Weather Impacts – Saturday 4<sup>th</sup> to Sunday 10<sup>th</sup> July 2020

Issued on Saturday 4<sup>th</sup> July 2020

### HEADLINE

- Enhanced heavy monsoon rainfall continues for parts of South and East Asia.



### DISCUSSION

#### Tropical Cyclones

There are currently no named tropical cyclones in any basin. However the following area is being monitored for possible formation.

#### Eastern Pacific

##### Weather

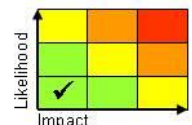
Showers and a few thunderstorms, associated with a broad area of low pressure located several hundred miles south of Manzanillo, Mexico may show some signs for gradual development into a tropical storm in the coming days.

##### Discussion

The NHC are suggesting a 20-30% risk for the formation of a tropical storm in the next 5 days. There is good model consensus for any system to move west-northwest and remain across the open water.

##### Expected Impacts

Nil expected.



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## Europe

### Southern / South-Eastern Europe

#### **Weather**

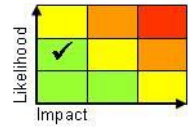
Further heavy showers and in places severe thunderstorms are expected across parts of Italy and SE Europe until Tuesday. Potential for some torrential rain (50 mm in an hour, locally 100 mm in a few hours) with thunderstorms, large hail, frequent lightning and strong gusts of wind. Some locations could see their average July rainfall in a few hours with perhaps the focus for the most severe storms across northern Italy.

#### **Discussion**

A plume of high (18-20C) WBPT air will be engaged by disrupting upper trough producing areas of heavy showers and thunderstorms. Forecast profiles support CAPE in excess of 2000 J/kg in places, with column shear supportive of some organisation of storms. The upper trough/vortex is expected to diminish and clear east on Tuesday.

#### **Expected Impacts**

Risk of flash flooding. Damage to crops from large hail is possible. Possible disruption to power supplies.



## North America

### Central North USA

#### **Weather**

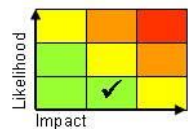
Isolated but intense thundery showers are likely over the weekend across the Northern and Central High Plains of the USA. Whilst some places will see fairly small amounts of rainfall, the heaviest showers will bring localised totals in excess of 100mm along with frequent lightning and large hail.

#### **Discussion**

A plume of very warm, moist Gulf of Mexico air will be drawn north, as the pattern amplifies over North America. As well as bringing surface temperatures into the low to mid-30's, destabilisation from the low-levels will take place in spite of strong upper ridging, with large amounts of CAPE (>5000 J/kg on Saturday), PWAT exceeding 45mm, and relatively slack steering winds. This will bring potentially explosive convection with large hail and heavy rain the primary hazards.

#### **Expected Impacts**

Flash flooding and disruption to transport, localised hail damage to homes and agriculture.



### Central America and Caribbean

#### Costa Rica, Panama, Nicaragua and western Colombia

#### **Weather**

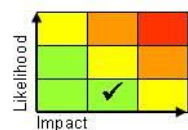
Above-average shower and thunderstorm activity will occur across this region in the coming few days. Showers and thunderstorms could bring up to 50mm of rainfall over a short duration, especially this weekend, with up to 250 mm possible throughout the week across the mountains of Central America and as much as 300-400mm across the Colombian Andes. By mid-week there are signs for the shower activity to return to more normal.

#### **Discussion**

The ITCZ is expected to remain fairly active across this region, with the passage of several African Easterly Waves (AEW), or the remnants of AEWs, bringing one to two day periods of enhanced activity to Central America, and days with less precipitation between these features. Further south enhanced low-level moisture convergence across the Colombian Andes will lead to enhanced activity on most days, hence the higher rainfall accumulations signalled here.

#### **Expected Impacts**

An enhanced risk of flash flooding and landslides.



## South America

### Western Colombia – See Central America and Caribbean section

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## Paraguay, South-Eastern Brazil

### **Weather**

A period of heavy rainfall is likely to develop from Monday across the region, peaking on Wednesday. 50-100 mm of rainfall is possible in 24 hours, with some places seeing over 150 mm (around the average July rainfall) through a period of a few days.

### **Discussion**

The South Atlantic Convergence Zone looks likely to become active across this region early next week. This in response to the northward shifted jet inducing activity across the strong baroclinic zone. Associated cyclogenesis across the Atlantic, may bring some strong winds for a time mid-week.

### **Expected Impacts**

Increased risk of flash flooding and landslides.



## Africa

Nil.

## Middle East

Nil.

## Asia

### Central and eastern China, South Korea and Japan

### **Weather**

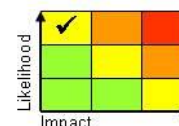
The monsoon front that extends from Central China to Japan is expected be in an active phase in the coming week. Extensive heavy and persistent rainfall, will bring widespread 150-250mm of rain per day, perhaps up to 350mm over the higher ground of Japan. Thunderstorms will bring some significant rain in a short period, with hail and strong winds also expected. This heavy rain follows recent heavy rain, especially across parts of China.

### **Discussion**

An active Beiu monsoon front is expected this week as the upper flow becomes more cyclonic across the region. This will combine with the very warm and moist airmass (PWAT > 75mm) and will generate torrential downpours from showers and thunderstorms, with significant orographic component. This event is early in the monsoon season, but follows flooding and associated widespread population displacement in the last few weeks. Media reports suggest that parts of China are currently experiencing the worst flooding in over 70 years.

### **Expected Impacts**

Widespread surface and continued river flooding, and likelihood of landslides in the higher terrain.



### Northeast India, Nepal, northern Bangladesh, Bhutan, and northern Myanmar

### **Weather**

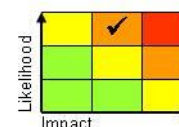
Heavy monsoon rainfall is expected through the coming 7 days across parts of the region, with totals widely in excess of 300mm and potential 600mm in places. This compares to the typical average at this time of year of 200-400mm per month. This follows recent heavy rainfall that has already lead to some severe flooding across parts of the region.

### **Discussion**

An anomalously strong southerly to southwesterly monsoon flow across the Bay of Bengal is leading to very active monsoon front across the region. This will generate further torrential downpours from showers and thunderstorms, with significant orographic component. Despite this occurring relatively early in the monsoon season, flooding and widespread population displacement has already been widely reported, and is likely to worsen over the coming 7 days. River flooding may become more prevalent over the coming week further south as the rainfall filters down into the wide and heavily populated flood plains of northeast India and Bangladesh.

### **Expected Impacts**

Significant risk of riverine flooding, and an increased likelihood of landslides.



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## Western Indian, southeastern Pakistan and western Myanmar

### **Weather**

Further heavy monsoon rainfall is expected across these this regions in the coming week. Widespread heavy showers and thunderstorms. 50-100 mm of rainfall per day is possible, with some places seeing 250-350 mm over a period of a few days, representing about a weeks' rainfall at this time of year.

### **Discussion**

An anomalously strong southerly to southwesterly monsoon flow, plus a monsoon trough across northern India is expected to bring further enhanced rainfall across the parts of this region. This will generate further torrential downpours from showers and thunderstorms, with significant orographic component.

### **Expected Impacts**

Flash flooding and an increased landslide risk.



## Parts of Malaysia, Philippines, Indonesia, Papua New Guinea and the Solomon Islands

### **Weather**

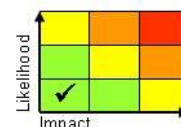
Above average rainfall will continue across this region in the form of heavy showers and thunderstorms. These will be capable of locally bringing 50-100 mm of precipitation in a short duration, with some locations likely to see 150-250 mm through the coming days, although some mountainous parts of the island of New Guinea could see over twice this amount. Average precipitation accumulations in June across this region is around 250 mm.

### **Discussion**

Strong and consistent signal from NWP for enhanced rainfall across this region. Profiles in the area show large amounts of PWAT, and large skinny CAPE so heavy rainfall likely to be the most disruptive element.

### **Expected Impacts**

An increased risk of flash flooding and landslides in regions where terrain is steep.



## Australasia

Nil.

## Additional Information

### **Cox's Bazar, southeast Bangladesh**

Scattered shower and thunderstorm activity with storms blowing in from the Bay of Bengal. Strengthening monsoonal flow over the weekend should see the most frequent, heaviest showers falling here. Around 150-200mm is likely during the course of the coming 5-7 days.

### **Western Yemen**

Largely dry at first, but over the weekend there is an increased risk of thundery showers breaking out over western Yemen. Daily totals of 30-50mm in the heavier showers are most probable. Showers should ease down again as we go in to next week

**Issued at:** 040600UTC **Meteorologist:** Tony Wardle

**Global Guidance Unit**

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