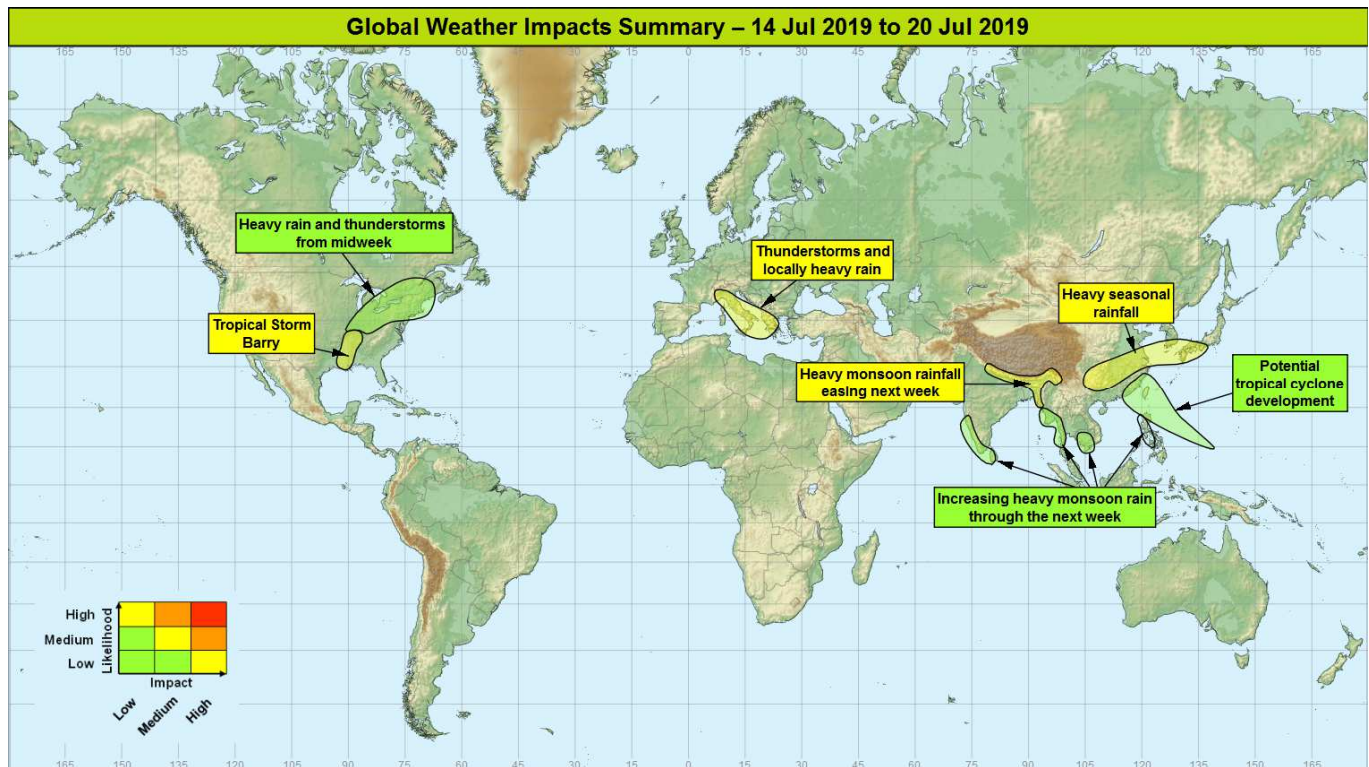


## Global Weather Impacts – Sunday 14<sup>th</sup> to Saturday 20<sup>th</sup> July 2019

Issued on Sunday 14<sup>th</sup> July 2019

### HEADLINES

- Tropical Storm Barry weakening as it moves further north across the central USA.
- Continued heavy rainfall and flooding across parts of south and east Asia, although conditions improving through early next week.
- Threat of severe thunderstorms for parts of southern Europe early this coming week.



### DISCUSSION

#### Tropical Cyclones

#### Tropical Storm Barry (Gulf of Mexico and southern USA)

##### Weather

Tropical Storm Barry made landfall just west of New Orleans on Saturday as a category 1 hurricane with 1-minute sustained winds of 75 mph. Barry moved slowly inland later on Saturday, weakening back to a tropical storm.

Barry will continue weakening through Sunday as it tracks slowly north across western Louisiana, with winds likely decreasing below tropical storm strength. This weakening is expected to continue during Monday and Tuesday as it continues north across Arkansas and Missouri, where Barry is expected to decay.

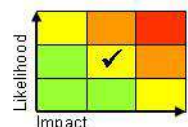
Despite the winds easing, heavy rainfall will continue along the systems track, with up to 400 mm of rainfall in parts of Louisiana, up to 250 mm in parts of Arkansas and 150 mm in southern Missouri. The average July rainfall in this region is 80-100 mm.

Severe thunderstorms are possible in Louisiana on Sunday, producing frequent lightning and a threat of tornadoes.

##### Discussion

Good model agreement for the weakening trend and track through the next 3 or 4 days as Barry moves inland.

##### Expected Impacts



This forecast may be amended at any time

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With Barry weakening it will be the rainfall that will result in the significant impacts from now on. A combination of very heavy rainfall and the already high river levels will result in a heightened threat of river flooding. Flash flooding is also expected in this region, with the possibility of tornado damage on Sunday.

*The following areas are also being monitored for potential Tropical Cyclone development:*

## **Western North Pacific (including Taiwan, northern Philippines and southeast China)**

### **Weather**

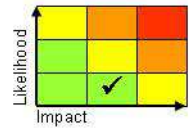
An area of organised thunderstorms north of Papua New Guinea may undergo a slow development over the next few days, possibly strengthening into a tropical storm as it approaches the northern Philippines or Taiwan around the middle of next week, before making landfall in southeast China. Irrespective of development, it is likely that increased shower and thunderstorm activity will contribute to some locally heavy rainfall during this time. Up to 600 mm of rain could fall in a few days in this region, which is twice or three times the average July rainfall in much of this region.

### **Discussion**

Organised convection associated with an Equatorial Rossby Wave has good agreement from the main forecast models that slow development into a tropical cyclone is likely by early to mid next-week. This is backed up by moderate support from the ensembles, with a tighter than normal spread of tracks at this stage.

### **Expected Impacts**

Primary impact would likely be from heavy rain (flooding, threat of landslides), but damaging winds could develop should the system develop towards the stronger end of model guidance.



**Central Atlantic:** An area of shower and thunderstorm activity associated with an African Easterly Wave is unlikely to develop into a tropical cyclone as it moves slowly westward across the tropical Atlantic. However, it may produce locally heavy rainfall this coming week across the Windward Islands.

**Eastern North Pacific:** Tropical Depression Four-E developed on Friday night a few hundred miles south of the southwestern coast of Mexico but is expected to move west-northwest well away from the coast over the next couple of days before dissipating.

## **Europe**

### **Southern Europe (especially Italy and Greece)**

### **Weather**

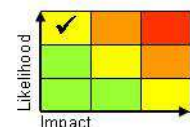
Heavy showers and thunderstorms are expected to transfer southeastwards through this region between Monday and Wednesday. Up to 100 mm of rain is possible in a few places but torrential rain will also be accompanied by frequent lightning, squally winds, large hail and one or two tornadoes.

### **Discussion**

An upper trough will sweep southeast across this region, engaging a plume as well as passing over anomalously warm sea surface temperatures, resulting in deep convective generation. Forecast profiles support the possibility of long lasting, complex thunderstorms, possibly MCS type storms.

### **Expected Impacts**

Although impacts from severe thunderstorms are typically isolated, flash flooding, property and infrastructure damage, power interruptions and a threat to life are possible.



## **North America**

**Gulf of Mexico and southern USA** – see *Tropical Cyclones* section.

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## Northeast USA and southeast Canada

### **Weather**

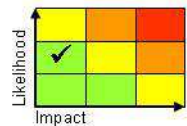
The remnants of Tropical Storm Barry are likely to transfer northeast across this part of North America next week, producing heavy rainfall and thunderstorms that could produce up to 100 mm of rain in a few hours (close to the average July rainfall).

### **Discussion**

The deep moisture footprint of Barry will track northeast to be engaged by upper troughs from midweek, resulting in deeply moist and unstable profiles that will pose the threat of intense rainfall. There remains much model spread for timing and location though.

### **Expected Impacts**

Flash flooding looks like the most likely impact, but frequent lightning could cause issues with the power network.



## Central America and Caribbean

Nil significant.

## South America

Nil significant.

## Africa

Nil significant.

## Middle East

Nil significant.

## Asia

Taiwan, northern Philippines and southeast China – see *Tropical Cyclones* section.

## Northern India, Nepal, northern/eastern Bangladesh, Bhutan and northern/western Myanmar

### **Weather**

Frequent torrential thunderstorms are expected to affect the region over the 2 or 3 days, with daily rainfall accumulations expected to decrease by midweek. Whilst rainfall amounts will vary significantly from location to location, 150-300 mm of rain is expected quite widely over the next 3 days (including the Chittagong-Cox's Bazar region) with the southern foothills of the Himalayas potentially receiving a further 750-1000 mm of rain.

### **Discussion**

Anomalously persistent and strong southwesterly flow across the Bay of Bengal over the next few days will maintain above average shower and thunderstorm activity across the region as it impinges on the southern upslopes of the Himalayas, Naga Hills and Chittagong Hills. This comes on top of what has already been a very wet July, with many places in the vulnerable, Rohingya refugee camps already reporting daily totals in excess of 200mm and around 1000 mm from July 1<sup>st</sup>. Further north, over 200,000 people have been affected by floods, with the Brahmaputra already exceeding flood limits in some districts. There have also been flash flood and landslide fatalities in Nepal in recent days.

### **Expected Impacts**

With the focus of the Indian Summer Monsoon having transferred further north into a much more mountainous region, landslides have become an increasing threat. Severe flash and river flooding impacts are also possible. Significant impacts on refugee camps possible, despite efforts to mitigate against the weather.



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## Southwest India, western Sri Lanka, southwest Myanmar, southwest Thailand, Cambodia, southern Vietnam and western Philippines

### **Weather**

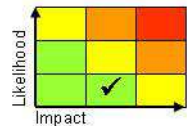
The monsoon rains will become increasingly heavy through the next week, with rainfall accumulations by the end of the week reaching up to 500 mm in places, with widespread accumulations of 100-250 mm. So it looks like many places will see the average July rainfall falling in just a week.

### **Discussion**

There is a consistent signal from all models for a strengthening of the southwest monsoon flow through the next week as a new active monsoon pulse develops in the low latitudes. The rainfall will be in the form of thunderstorms with good vertical wind shear, large CAPE and PWAT of 60-70 mm producing the threat of intense rainfall events in the region.

### **Expected Impacts**

Flash flooding will be increasingly likely, as will landslides in mountainous regions.



## Southern China and southwestern Japan

### **Weather**

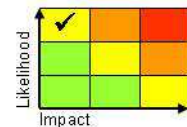
Torrential rain and severe thunderstorms associated with the seasonal rains will affect this region through much of the next week, with 150-250 mm widely, locally as much as 400 mm falling. This is around a month to two month's worth of rain for some locations.

### **Discussion**

Strong convergence along the Mei-yu (Baiu) front will continue to provide a focus for intense rainfall and a threat of severe storms. A succession of upper troughs will engage the northern edge of the monsoon frontal plume through much of the coming week, resulting in persistent, heavy rains in places.

### **Expected Impacts**

Both fluvial and flash flooding is possible, with an additional risk of landslides in mountainous areas. Disruption to transport and infrastructure is likely in what is a densely populated area due to the slow-moving seasonal heavy rainfall.



## Australasia

Nil.

## Additional information

Nil.

**Issued at:** 140535 UTC      **Meteorologists:** Paul Hutcheon and Matthew Lehnert      **Global Guidance Unit**

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