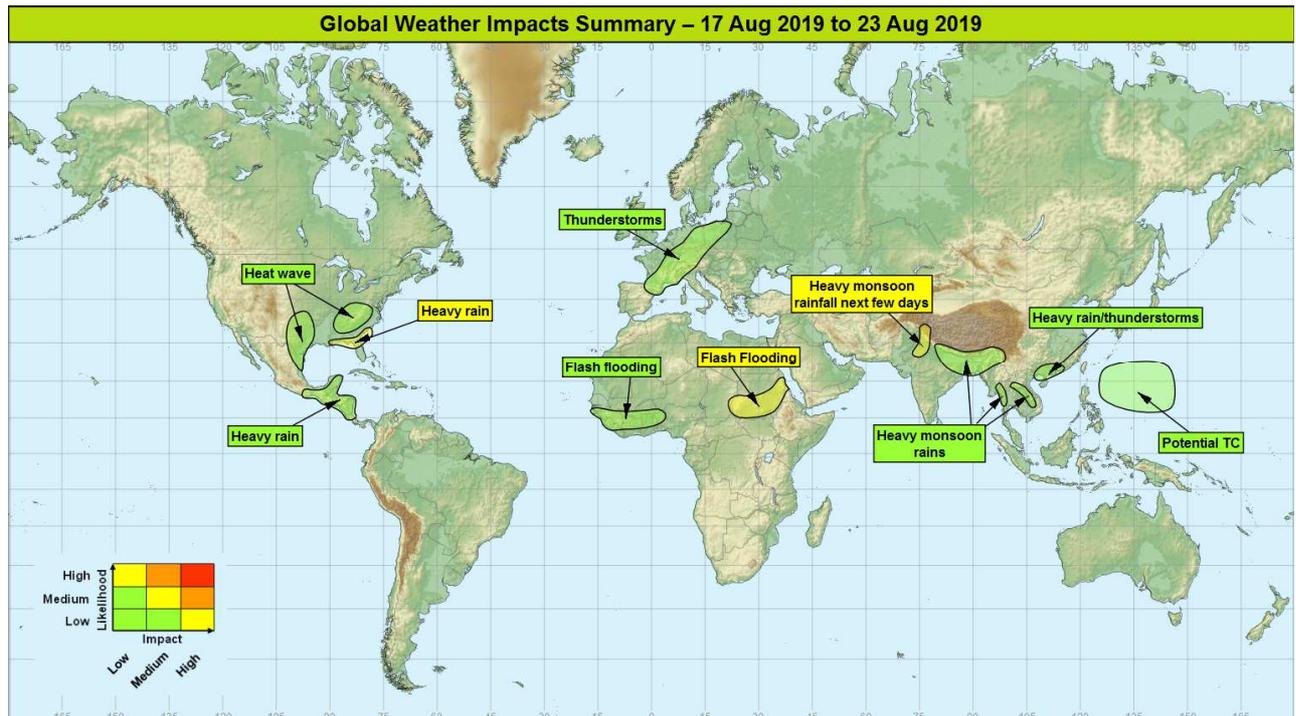


## Global Weather Impacts – Saturday 17<sup>th</sup> to Friday 23<sup>rd</sup> August 2019

Issued on Saturday 17<sup>th</sup> August 2019

### HEADLINES

- Heavy monsoon rainfall across parts of Asia, less so across parts of Africa although recent impacts here could be exacerbated.
- No significant tropical cyclone impacts expected.



### DISCUSSION

#### Tropical Cyclones

There are no current tropical cyclones. The following areas are being monitored for potential tropical cyclone development:

#### Western North Pacific Weather

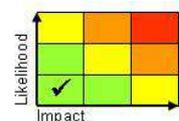
Very low likelihood of tropical cyclone development in this region. Should a system develop, there is a chance that it could bring heavy rain (lower likelihood of strong winds) to parts of SE Asia including Taiwan, south-east China, and the south Islands of Japan mid to late next week.

#### Discussion

There is a weak signal for tropical cyclogenesis from a broad tropical depression which currently contains multiple areas of convection, forming in a similar manner to the recent “Krosa”. Should this system form, the general steering flow takes it in the direction of the locations given mid to late next week.

#### Expected Impacts

Most likely NIL, but slightly increased likelihood of flash flooding.



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

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## Europe

### Northeast Spain north-eastwards to Poland.

#### **Weather**

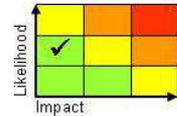
Spells of intense, severe thunderstorm activity are likely within this region next week, although most places will miss the storms. Where they occur, 50-75mm of rain in a few hours, frequent lightning, large hail and strong gusts of wind are likely.

#### **Discussion**

Baroclinic zone associated with Friday's frontal system over the UK will become slow-moving over Europe and subject to a number of frontal waves as the upper pattern becomes more cyclonic which will bring periods of heavy rainfall. Deep instability is likely to be released within the warm plume as it becomes more engaged by cyclonicity aloft, with high CAPE, PWAT, and strong vertical shear; an area from NE Spain to the Alps looks most at risk early next week. There remains large model differences in the timing of short-wave troughs, and how focussed any forcing becomes. Nevertheless, given the ingredients, MCS systems are likely bringing the potential for impacts over a reasonably sized area.

#### **Expected Impacts**

Flash flooding, damaging hail and winds along with power network and aviation disruption.



## North America

### Gulf of Mexico coastline Louisiana eastwards, north Florida, and Atlantic coastline to South Carolina

#### **Weather**

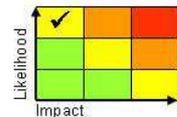
This part of the USA looks likely to see above normal thunderstorm activity over this coming weekend, before activity steadily tails off early next week. These storms could produce up to 75 mm of rain in a few hours, along with the risk of strong winds. The largest rainfall accumulations look likely across parts of NE Florida, where persistent heavy rainfall arriving from the Gulf of Mexico looks likely to dump 200-300mm of rain over the course of the next couple of days, in excess of the normal average for August.

#### **Discussion**

A slow-moving baroclinic zone will be the focus for a daily surge of deep convection, aided by low level convergence, large moisture levels and short wave upper troughs. Persistent SW'ly flow on the S flank of the baroclinic zone will ensure particularly large totals for parts of NE Florida, until the flow eases next week. Activity thereafter is expected to slowly tail off.

#### **Expected Impacts**

Flash flooding is the highest likelihood impact, some river flooding can be expected in parts of NE Florida too. There could be local wind damage from these storms, but the gusty winds and frequent lightning are more likely to affect aviation.



## Central-southern, and south-eastern USA

#### **Weather**

Temperatures widely in excess of 35°C, locally 40°C, some 5-8°C above the average for the time of year, are expected in these regions over the coming week. Temperatures may begin to reduce later next week as cooler air arrives from the north.

#### **Discussion**

Upper ridging dominates with the polar front jet now well to the north of the region – partial thicknesses widely in excess of 144dam, combined with sunny skies and stable profiles will make for a period of hot weather where temperatures are widely 5°C or more above the seasonal norm. Some models indicate amplification of the jet to the north and a plunge of cooler air behind a cold front, but there are significant differences in the timing and N/S extent.

#### **Expected Impacts**

Heat health impacts with risk to life of vulnerable demographics.



## Central America and Caribbean

### North Costa Rica, Nicaragua, Honduras, El Salvador, Belize, far south of Mexico

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## Weather

Greater than normal incidence of heavy showers and thunderstorms expected in the region through the next few days, with a further 100-200mm of rainfall for some locations on top of what has already been seen.

## Discussion

The monsoon trough is expected to remain active across Central America with African Easterly Waves acting to organise shower and thunderstorm activity into regular but very active spells. Persistent southwesterly flow on the Pacific coast and northeasterly flow from the Caribbean Sea is particularly supportive for widespread heavy rainfall.

## Expected Impacts

Heavy rainfall is likely to lead to flash flooding and mudslides, particularly in areas of steeply-sloping or poorly draining terrain.

## South America

Nil.

## Africa

### West Africa.

#### Weather

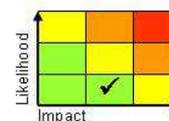
Tropical waves will bring enhanced shower and thunderstorm activity to this region over the next week. Thunderstorms are likely to produce locally 50 to 100mm of rain in a short period, with up to around 400 mm possible in places during this period. The focus for the largest rainfall totals looks likely to be in the far west of this region.

#### Discussion

Enhanced seasonal rainfall continues to be signalled by the models, with above normal totals expected in this region. This will likely come in the form of MCS developments, organised at times by African Easterly Waves, with impacts especially likely should these catch any of the more urbanised regions within this zone. This comes on top of wetter than average conditions over the summer monsoon so far – around 150-200% of climatology since the beginning of May.

#### Expected Impacts

Flash flooding is likely together with an increased risk of landslides.



## Sudan

#### Weather

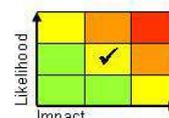
Further scattered heavy showers and thunderstorms are expected to affect central and southern parts of Sudan in the next week or so. Where these occur, 30-50, locally 75 mm of rain is possible, along with lightning and gusty winds.

#### Discussion

With the ITCZ approaching its northern limit, rainfall from scattered thunderstorms across southern Sudan is not unusual in August; indeed it is the wettest month of the year on average in Khartoum (48 mm). However, numerous states have reported flash flooding (Khartoum reporting a daily rainfall total of 155mm a week or so ago) and related human health impacts over the past week. Warnings of “catastrophic health impacts” by local authorities have been reported, if the situation is not brought under control.

#### Expected Impacts

Further localised flash flooding may lead to property and infrastructure damage in the region, whilst ongoing impacts may be exacerbated. Higher river levels along the Nile and tributaries are also to be expected.



## Middle East

Nil.

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## Asia

### Northwest India

#### **Weather**

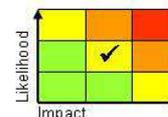
Further heavy rainfall is expected in this region over the coming weekend before easing off early next week. Some locations in north-central India have seen daily totals of around 200mm associated with this system, similar daily totals are likely to continue with some places seeing 300 to locally 400mm over the weekend (around double the August monthly average).

#### **Discussion**

A monsoon low pressure system is slowly spinning down over the region, before dissipation is expected over the higher ground of the Himalayas towards the end of the weekend/early next week. The high PWAT environment within this system will allow for further very high 2 or 3 day rainfall totals, like those seen in some locations of northern India earlier this week.

#### **Expected Impacts**

Flash flooding is likely in this region, and river flooding is probable too. This is likely to result in further travel disruption, displaced populations as well as some damage to property and infrastructure.



### Northeast India, Nepal, Bhutan, Bangladesh, north/central Myanmar, northeast Thailand, Laos, Cambodia

#### **Weather**

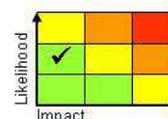
Frequent intense showers and thunderstorms are expected through the next week, producing up to 100-200 mm in a 24-hour period, and up to 600 mm through the next week in places. This would result in the average August rainfall falling in a week in places.

#### **Discussion**

An enhanced S to SW'ly monsoon flow will bring a spell of heavy monsoon rainfall to parts of Southeast Asia through the coming week. Southwest facing upslopes will be most threatened by enhanced rainfall due to orographic uplift of the very high (60-70 mm) PWAT column.

#### **Expected Impacts**

Flash flooding events are highly likely, with an increasing likelihood of river flooding and landslides.



### South China, Taiwan.

#### **Weather**

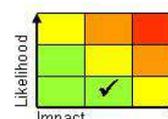
Heavy rainfall over the weekend is likely to bring 100-200 mm, with some places near the coast perhaps seeing in excess of 250mm. Enhanced showers and thunderstorms will continue into the early part of next week, although activity is likely to fall to nearer normal levels. Some of the areas affected were recently impacted by Tropical Storm Wipha, with resilience thus likely to be somewhat lower than normal.

#### **Discussion**

An upper trough extending down from higher latitudes over the weekend will bring enhanced rainfall and thunderstorms along the baroclinic zone resident in this area – an associated weak low pressure system forming in the Gulf of Tonkin will act to enhance the southerly monsoon flow in this area too, adding to the persistence and intensity of the rainfall. The upper trough is expected to move away early next week, with activity falling to near normal levels as a result.

#### **Expected Impacts**

Increased risk of flash flooding and landslides, damage to property and transport links, particularly in areas recently affected by Tropical Storm Wipha.



### Australasia

Nil.

### Additional information

#### Kerala, India

A monsoon break has developed and will likely persist over the next week, supporting a gradual reduction in the extent of flooding, although larger rivers may remain high for a couple more days due to the lag time for rainfall to feed into the lower parts of larger catchments.

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**Issued at:** 170600 UTC

**Meteorologist:** D J Harris / Paul Hutcheon

**Global Guidance Unit**

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