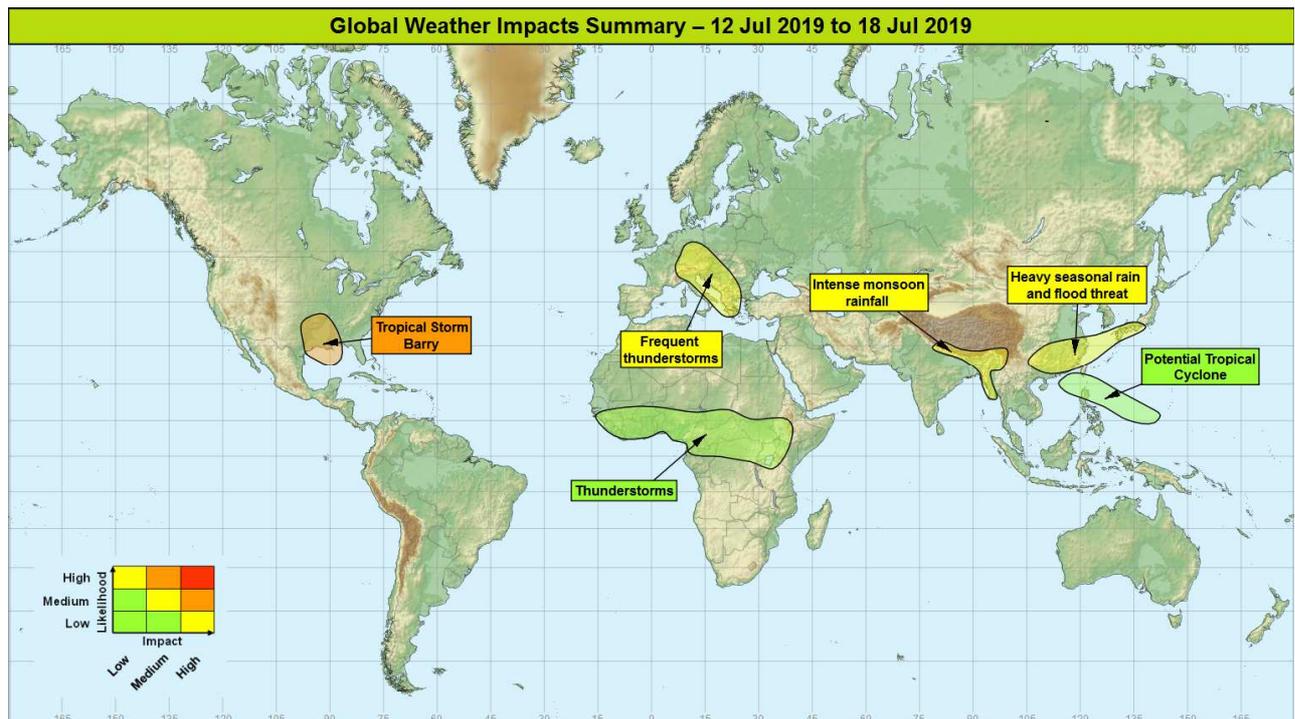


## Global Weather Impacts – Friday 12<sup>th</sup> to Thursday 18<sup>th</sup> July 2019

Issued on Friday 12<sup>th</sup> July 2019

### HEADLINES

- Tropical Storm Barry making landfall along the USA Gulf coastline, bringing the threat of severe flooding.
- Significant impacts possible in parts of NE India, Bhutan, Nepal, SE Bangladesh and NW Myanmar in association with a prolonged active phase of the South Asian Monsoon.



### DISCUSSION

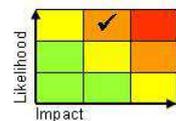
#### Tropical Cyclones

##### Gulf of Mexico and adjacent coastal states.

##### Weather

An area of thunderstorms has become organised sufficiently to be designated Tropical Storm Barry. Barry is expected to bring storm surge, large amounts of rainfall and strong winds to the central Gulf coast during the next few days, as it tracks slowly west before turning north and making landfall. The track, and thus duration over warm waters and landfall location are still somewhat uncertain, with the most likely strength and impacts dependent on this.

##### Discussion



This forecast may be amended at any time

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Despite SSTs a few degrees above normal, over the course of the next couple of days Barry will encounter moderate shear and ingestion of dry air, limiting the rate at which it can strengthen. Despite this, all models do indicate a gradual strengthening, which is reflected in the official forecast, the final strength before landfall likely to be close to Category 1 Hurricane (1 minute sustained winds of 74-94 mph). There is a significant spread with recent runs of the GM indicating a landfall further west than the majority of other output – the official NHC forecast showing the most likely track as heading towards central parts of Louisiana. As well as significant storm surge, Barry will bring a swathe of heavy rain inland, with 200-400 mm, locally 500mm expected along its inland track over the course of 48 hours or so. There is likely to be a tornado threat on the NE quadrant of Barry's circulation as it makes landfall.

#### **Expected Impacts**

Torrential rainfall (bringing flash flooding), damaging winds, and storm surge (of 3-6 feet) are the main hazards. Depending on exact track, tidal locking of estuaries such as the Mississippi Delta could occur, with levees in the area being overwhelmed, exacerbating flood risk. Before landfall, disruption to oil production in the Gulf of Mexico is expected.

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

#### **West Pacific, Northern Philippines**

##### **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 around the middle of next week.

##### **Discussion**

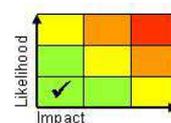
Organised convection associated with an Equatorial Rossby Wave has good agreement from the main forecast models that slow development into a tropical cyclone is likely by early to mid next-week. This is backed up by moderate support from the ensembles, with a tighter than normal spread of tracks at this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

##### **Expected Impacts**

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

**Central Atlantic:** Convection surrounding an African Easterly Wave, which shows some circulation, currently has a very low probability of developing into a tropical cyclone, with the wider environment unsupportive of a more definite development.

**East Pacific:** A number of features, associated with shear instability along the ITCZ and organised by tropical waves, could develop into weak tropical cyclones over the coming 7 days. There are no consistent signals at present, whilst any system that does develop is extremely unlikely to affect land.



#### **Europe**

##### **Central and SE Europe**

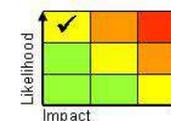
##### **Weather**

Frequent heavy showers and thunderstorms are likely in this region, particularly focussed over high ground (eg Northern Alps and mountainous regions of SE Europe). Daily totals of 50-75mm are likely in some places, much of which falling in the space of 3-6 hours. Some strong wind gusts and isolated large hail are possible too.

##### **Discussion**

An amplifying upper pattern (the ridge of which is responsible for bringing more settled conditions to the UK over the weekend) will lead to extension of cyclonic pattern in the vicinity of the UK currently across Central and then SE Europe. This will engage a broad zone of PS14 and greater WBPT, leading to diurnal destabilisation and the generation of frequent heavy showers, CB and thunderstorms.

##### **Expected Impacts**



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Flash flooding, large hail and damaging winds are possible where intense thunderstorms form. Impacts are likely to be isolated, but a number could occur over the broad region over the coming 3 days.

## North America

**Gulf of Mexico and the Gulf coast states of the USA** – see *Tropical Cyclone* section

## Central America and Caribbean

Nil significant.

## South America

Nil significant.

## Africa

### Central and western parts of Africa

#### **Weather**

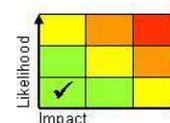
A greater incidence of heavy showers and thunderstorms than normal is probable through the coming few days across these central latitudes of Africa. The heaviest showers could bring 50-75 mm in a few hours, frequent lightning, and strong winds which could generate areas of dust and very poor air quality on the northern edge of the active shower region.

#### **Discussion**

Although weak, the MJO is already showing signs of enhancing convective rainfall across central latitudes of Africa. The MJO will slowly move through this area over the coming days, with shower activity declining towards its normal state. Whilst it is present, it will likely result in more frequent and/or active African Easterly Waves, as well as a higher likelihood of large MCS events.

#### **Expected Impacts**

Flash flooding is the most likely impact, with a lower likelihood of wind damage. Dense dust storms on the northern edge of this region may produce hazardous air quality.



## Middle East

Nil.

## Asia

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

#### Myanmar

#### **Weather**

Frequent torrential thunderstorms associated with the South Asian Monsoon are expected to affect the area over the coming 5-7 days. 250-500 mm is likely quite widely, with locations perhaps seeing over 1000mm of rain, most likely on the southern foothills of the Himalayas. Cox's Bazar, which has missed the worst of the rain so far, looks likely to see an increase in heavy rain/flooding over the coming week.

#### **Discussion**

Whilst a monsoon break develops further south, the monsoon trough looks likely to be extremely active over the next week, with frequent thunderstorms developing as the exceptionally moist monsoon flow impinges on higher ground of the Himalayas (where the largest rainfall totals are expected to occur, draining into the Brahmaputra), 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 1000mm from July 1<sup>st</sup>. Further north, over 200000 people have been affected by floods, with the Brahmaputra already exceeding flood limits in some districts.



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**Expected Impacts**

With the focus of the Indian Summer Monsoon now signalled to transfer further north into a much more mountainous region, landslides 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.

**Southern China and southwestern Japan****Weather**

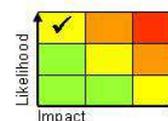
Torrential rain and severe thunderstorms associated with the seasonal rains will affect this region through much of the week ahead, with 150-250 mm widely, locally as much as 400 mm falling. This is around a month to two month's worth of rain for some locations.

**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**

The record-breaking heatwave across Alaska – with temperatures widely into the high 20s°C to low, locally mid 30s°C – will soon be on the decline, with temperatures likely easing back closer to average over the next few days. Thunderstorms are also expected, which may help dampen the forest fires which have developed across the state over the last few days, though lightning remains a possible source of ignition away from rain cores. A cold front approaching from the north may bring a more definitive change to normal or even cool conditions towards the end of next week.

**Issued at:** 120720 UTC    **Meteorologists** D J Harris / Brent Walker

**Global Guidance Unit**

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