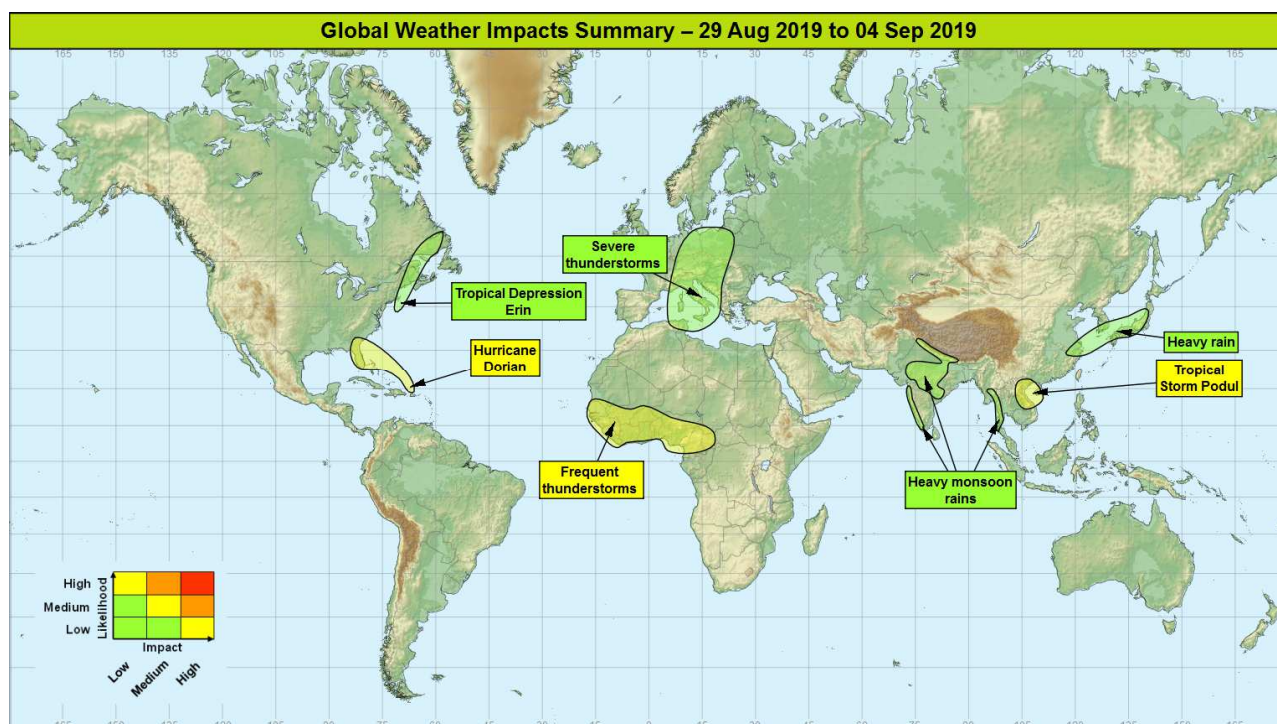


**Global Weather Impacts – Thursday 29<sup>th</sup> August to Wednesday 4<sup>th</sup> September 2019**

Issued on Thursday 29<sup>th</sup> August 2019

**HEADLINES**

- Hurricane Dorian affecting parts of the Bahamas and Florida at the weekend, potentially as a major hurricane.
- Tropical Storm Podul likely to affect Hainan then Vietnam in the next few days.
- Intense thunderstorms continuing across tropical western Africa.



**DISCUSSION**

**Tropical Cyclones**

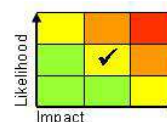
**Hurricane Dorian (Tropical Atlantic and eastern Caribbean Sea)**

**Weather**

Dorian is now around 90 miles north of the coast of Puerto Rico with sustained winds of 85 mph, having strengthened into a hurricane on Wednesday evening as it impacted the British Virgin Islands. The system is expected to continue to track northwestwards during the next 24 hours, before tracking more west-northwestwards towards the Bahamas later Friday and through the weekend. Dorian is expected to strengthen further and is now expected to attain major hurricane status on Saturday as it nears the Bahamas, before heading towards the Florida coast early next week. Heavy rainfall from intense thunderstorms could produce 150-300 mm of rain in a day along its predicted track.

**Discussion**

Dorian has strengthened into a hurricane much sooner than the dynamical models anticipated. As a result, the chance has risen of it becoming a major hurricane by the time it reaches the Bahamas, having encountered favourable environmental conditions (low vertical wind shear and high SSTs) as it turns more west-northwestwards to the south of a ridge building over the western Atlantic. There remains large spread in the ensemble output tracks; the official NHC guidance track is close to the centre of the spread, and this keeps Dorian away from land until it reaches the Bahamas this weekend.



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

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## Expected Impacts

The impacts will likely be flash flooding from heavy rainfall, as well as the threat of a significant storm surge and destructive winds.

### Tropical Depression Erin (Northwest Atlantic)

#### Weather

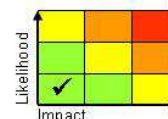
Erin formed Tuesday night and strengthened into a tropical storm on Wednesday as it tracked across the Atlantic roughly parallel to the Eastern Seaboard of the US. It has since weakened and is now a tropical depression around 300 miles south of the US city of Providence, RI. It is expected to become post-tropical by the end of Thursday before bringing heavy rain and strong winds to parts of Nova Scotia and Newfoundland on Friday.

#### Discussion

There is still a fairly large spread in tracks in global model/ensemble output – the official guidance from NHC is in accord with the centre of the model spread which keeps the system offshore until it accelerates NE'ward ahead of an extending mid-latitude trough. At this point Erin will undergo extra-tropical transition, and is likely to bring heavy rain/gales to the extreme E of Canada.

#### Expected Impacts

Heavy rainfall/thunderstorms, and locally disruptive winds possible for parts of the east of Canada, and much lower likelihood the far northeast of the USA. Extensive low cloud may impact on aviation for a time as the system brushes close to main hubs such as Boston.



### Tropical Storm Podul (Northwest Pacific)

#### Weather

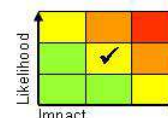
After crossing Luzon on Tuesday, Podul then restrengthened as it moved across the South China Sea. Podul looks unlikely to become a typhoon before reaching Vietnam later Thursday or early Friday, with landfall most probable between Vinh and Huế with sustained winds of around 55 mph. Podul is likely to bring heavy rainfall along its path, with 500-700 mm possible particularly in parts of Vietnam, Laos and perhaps far eastern Thailand as it tracks inland (average September rainfall in this region is around 250-450 mm).

#### Discussion

There is reasonable model agreement for the system to make landfall in central Vietnam later this week, with Hainan also expected to see impacts as Podul passes close by its southern coast during Thursday.

#### Expected Impacts

Flash flooding and landslides will be the most likely impacts, although there will also be a threat of damaging winds, dangerous seas and significant surge issues for parts of Vietnam and Hainan this week and through the weekend.



### Europe

#### Central Mediterranean, Tunisia, parts of central and eastern Europe

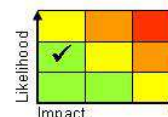
#### Weather

Intense thunderstorms are possible on most days, which could deliver up to 30-50 mm of rain in places in a few hours, along with large hail and strong winds. However, many parts will avoid these thunderstorms. Some of the highest rainfall totals are expected early next week, with over 100 mm possible locally in parts of Italy and the Balkans.

#### Discussion

The upper forcing for these storms will initially be relatively modest, however large CAPE will allow some intense downpours, with large hail, to develop in response to diurnal heating through the end of the week and into the weekend. Marked wind shear could allow for some organised and long-lasting storms to develop. Late in the weekend a more pronounced upper trough is expected to swing eastwards into mainland Europe, helping to force development along and ahead of a surface cold front.

#### Expected Impacts



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Flash flooding will be the main impact, with frequent lightning strikes perhaps leading to an increased risk of power outages. There is a lower likelihood of impacts from strong winds and large hail.

## North America

**Florida; Nova Scotia and Newfoundland** – see *Tropical Cyclones* section.

## Central America and Caribbean

**Bahamas** – see *Tropical Cyclones* section.

## South America

Nil.

## Africa

### West Africa

#### Weather

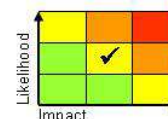
Frequent heavy showers and thunderstorms will continue across this region over the coming week. Thunderstorms are likely to produce locally 50 to 100mm of rain in a short period, with up to 250 mm possible in places during this period. The focus for the largest rainfall totals looks likely to be around coastal areas in the west. This comes on top of wetter than average conditions for many parts over the summer monsoon season so far – around 125-150% of climatology.

#### Discussion

Enhanced seasonal rainfall continues to be signalled 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 affect any of the more urbanised regions within this zone.

#### Expected Impacts

Flash flooding is possible in places together with an increased risk of landslides and river flooding. Risk of some dense lifted dust on the northern periphery of the thunderstorms.



## Middle East

Nil.

## Asia

### Parts of South and Southeast Asia

#### Weather

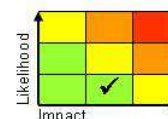
Frequent intense showers and thunderstorms are expected to continue, producing up to 75-150 mm in a 24-hour period. 200-300 mm could fall through the week across parts of west and northwest India and 300-500 mm in parts of southern Myanmar and neighbouring Thailand. This would result in the average August rainfall falling in a week in places.

#### Discussion

Convection associated with a developing monsoon depression will continue to move west across central and northern India then into southern Pakistan over the next few days, being the focus for heavy showers/thunderstorms. Another depression then potentially forms and takes a similar track west or northwest across central India later this week and into the weekend.

Meanwhile, a strong monsoonal flow will bring heavy rainfall to southern Myanmar and parts of Thailand, possibly enhanced over the weekend by the remnants of TS Podul. Southwest-facing upslopes will be most threatened by enhanced rainfall due to orographic uplift of the very moist airmass.

#### Expected Impacts



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

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

### **Weather**

Heavy rainfall is expected across central and southern parts of Japan through the period. The wettest area is expected to be parts of southwest Japan through the rest of this week, with 100-150 mm of rainfall possible in places each day and the potential for up to 450 mm locally. The most torrential downpours are likely to be associated with thunderstorms which could produce frequent lightning. Heavy rain is also expected to develop across parts of eastern China from the weekend, and following some drier days (particularly Friday and Saturday) heavy rain is expected to return to South Korea early next week, with up to 200 mm possible in places.

### **Discussion**

An extending upper trough from the mid-latitudes is signalled to extend and engage the in-situ moist, tropical air across these areas leading to particularly heavy rainfall. The heaviest rains expected over Japan with South Korea likely only impacted on Wednesday.

### **Expected Impacts**

Flash and river flooding are possible, along with an increased threat of landslides in mountainous areas.



**Vietnam, Laos, southern China and eastern Thailand** – see *Tropical Cyclones* section.

## **Australasia**

Nil.

## **Additional information**

Nil.

**Issued at:** 290720 UTC      **Meteorologist:** Laura Ellam / Brent Walker

**Global Guidance Unit**

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

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