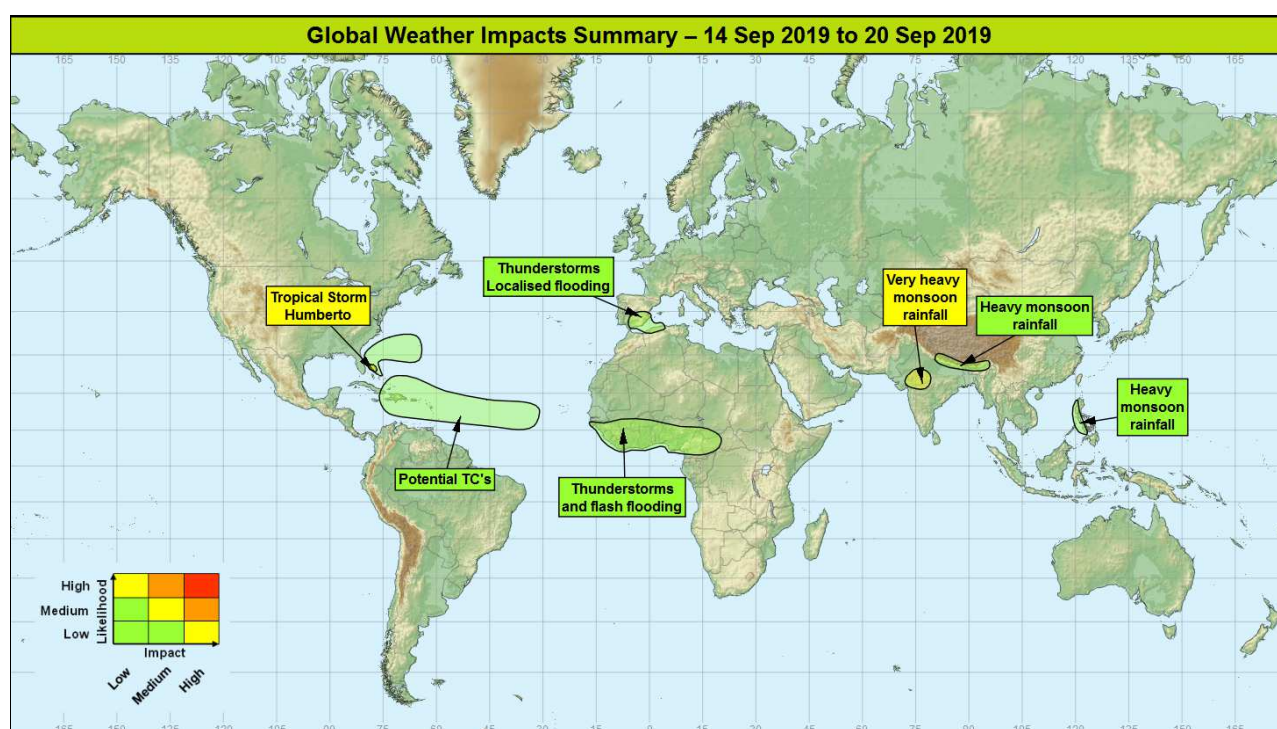


**Global Weather Impacts – Saturday 14<sup>th</sup> to Friday 20<sup>th</sup> September 2019**

Issued on Saturday 14<sup>th</sup> September 2019

**HEADLINES**

- Tropical Storm Humberto bringing probable impacts over northern Bahamas – mainly due to current vulnerability with this system not comparable to the recent Hurricane Dorian.
- Extreme monsoon rainfall continues across central India.
- Conditions over SE Spain and Algeria markedly improving.

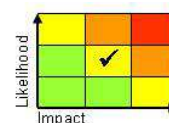


**DISCUSSION**

**Tropical Cyclones**

**Tropical Storm Humberto – Atlantic Weather**

Humberto will bring a swathe of heavy rain and strong gusty winds across the eastern and northern Bahamas this weekend. Rainfall totals will most likely be of the order 30-70 mm; the potential for much larger totals (100-200 mm) lurks just offshore, with a small chance these could affect the eastern islands between San Salvador and the Abacos. Early next week, tropical storm force winds and heavy rain on the western periphery of the storm could affect coastal parts of SE US, Humberto likely developing into a hurricane over the open Atlantic. Confidence in the future track is very low, but parties with interests in Bermuda should monitor the progress of the system closely.



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

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## Discussion

A tropical wave has been gradually consolidating over the past few days allowing Humberto to form overnight, this is in spite of lower oceanic heat content and moderate shear which will only serve to slow the rate of intensification. There is consensus now that the centre of the system will head NW across the N Bahamas, run parallel to the Eastern Seaboard, before probable intensification into a hurricane. A swathe of high rainfall totals is signalled by all the models, and the slow eastward trend of the most likely track has seen the potential for this to affect land decrease. Nevertheless, with confidence in the evolution moderate at best, this trend could easily reverse bringing much more impactful rainfall totals to the Abacos especially, hampering recovery efforts. Confidence in the development beyond the weekend is low, but there is a non-zero chance that the system will be in the vicinity of Bermuda mid to late next week.

## Expected Impacts

Heavy rain and locally gusty winds has potential to cause further impacts to the vulnerable islands of northwest Bahamas over the next couple of days, with recovery efforts in the wake of Hurricane Dorian likely to be hampered. Rough seas and, localised flooding are possible, with a lower risk of damage from strong winds.

*The following areas are being monitored for potentially impactful developments through the forecast period:*

## Atlantic Ocean

### Weather

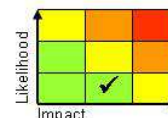
A number of tropical waves emerging into the tropical Atlantic from West Africa are being monitored for potential tropical cyclone development. Currently confidence is very low in any details, but any systems that do develop will have the potential to affect Caribbean Islands later next week.

### Discussion

Further African Easterly Waves will move west across the tropical Atlantic, with a low likelihood of these being sources for tropical cyclogenesis within the forecast period. With moderate to strong wind shear across a large part of the tropical Atlantic, tropical cyclogenesis only becomes likely by the time they reach the Caribbean. Model solutions have been very volatile up to now (not unusual), with the best that can be said for now is that any development that does occur is more likely to be towards the end of this forecast period, and has a non-zero chance of affecting the Caribbean islands.

### Expected Impacts

Very low likelihood of tropical cyclone impacts (heavy rain, strong winds, storm surge) mid to late next week.



## Europe

### Spain and northern Algeria

### Weather

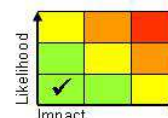
Further heavy showers and thunderstorms will steadily ease through today with conditions markedly improving in areas of Spain affected by severe flash flooding over the past couple of days. Further localised flash flooding is possible where the heaviest showers occur today, with 30-60mm possible in a few hours, along with gusty winds.

### Discussion

The cut-off upper Low over Iberia will slowly retreat westwards and fill over the next couple of days, initially taking an area of scattered thunderstorms with it bringing potential for further localised flash flooding over parts of southern Spain – however areas of SE Spain recently severely affected are likely to see far fewer showers today with conditions markedly improving. Rainfall over Algeria significantly reducing too.

### Expected Impacts

Low risk of further isolated flash flooding, primarily over Spain, with continued risk of landslides/rock-falls in areas of more steeply sided terrain, particularly where large amounts of rain have recently fallen. Some isolated river flooding along the rivers Albaida and Jucar is possible today, before levels begin to recede on Sunday.



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## North America

The Bahamas and southeast USA – See *Tropical Cyclones* section.

## Central America and Caribbean

Caribbean – See *Tropical Cyclones* section.

## South America

Nil.

## Africa

Northern Algeria – See *Europe* section.

## West Africa

### Weather

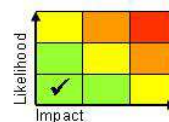
Much of this region has seen above average rainfall during the past 2-4 weeks courtesy of an unusually active West African Monsoon season, with reports of major flooding in countries such as Nigeria, Niger, Mali and Mauritania. Further heavy rainfall is expected with many locations experiencing periods of enhanced thunderstorm activity followed by a few days of quieter conditions. In the heaviest showers, 50-80 mm could fall in an hour, perhaps as much as 150 mm in a few hours.

### Discussion

African Easterly Wave activity will continue to bring organised areas of deep convection/MCS activity westward through the next week, contributing to a further period of above average rainfall across parts of West Africa.

### Expected Impacts

Ongoing enhanced risk of flash flooding and high river levels. Some further damage to property and infrastructure is possible. Displacement of population, degradation of sanitary conditions.



## Middle East

Nil.

## Asia

## Central India

### Weather

The incessant monsoon rain experienced in this region over the past week (many locations typically reporting 400 mm of rainfall over the past 5 days) is expected to continue over the weekend before conditions improve next week. A further 50-80, locally 120mm of rainfall is likely today and possible Sunday too, with some locations reaching 500 or even 600mm of rain in total for the event. This region typically receives around 185 mm during September.

### Discussion

A monsoon low pressure system formed along the monsoon trough in central India and will remain slow moving through the weekend, before models signal it to quickly dissipate. Torrential downpours accompanied by gusty winds and lightning at times, are expected to continue. The state of Madhya Pradesh has been consistently signalled by model output to receive the highest rainfall totals, and there have been reports of impacts including widespread flooding, flooded homes and businesses, and damaged crops.

### Expected Impacts

Further flooding of homes, businesses, and impacts on agriculture. Damage to roads/rail transportation links.



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**North-east India, Nepal, Bhutan****Weather**

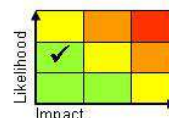
Persistent and at times very heavy monsoon rainfall is expected to develop over the next few days in this region, with potential for 50-80mm per day and some locations seeing as much as 250mm by the middle of next week.

**Discussion**

Persistent southerly winds drawn in by the heat low over the Tibetan Plateau, encouraged by broad monsoon troughing over India, will see repetitious showers and thunderstorms triggered by both surface convergence and uplift over the foothills of the Himalayas over the next few days. Whilst showers will be generally hit and miss, and not all locations will see showers every day, rainfall totals of 100-200mm are expected quite widely in this region over the coming 5 days.

**Expected Impacts**

Risk of localised flash and river flooding, landslides in areas of steeper terrain. Occasional frequent lightning/large hail causing damage to crops and risk to humans and livestock.

**North-west and Central-west Philippines****Weather**

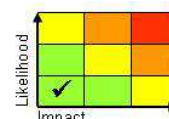
Above average rainfall is expected over the coming days associated with enhanced monsoonal flow. Over the coming week the most exposed parts of the west Philippines could see 200-300 mm of rain, with some locations seeing in excess of 100mm within 24 hours.

**Discussion**

The north-easterly monsoon appears to have become quickly re-established across the northern part of the South China Sea, this further encouraged by a broad monsoon depression centred over the NW Pacific. A shallow tropical wave/vortex to the W of the Philippines is continuing to enhance the SW'ly flow S of the monsoon front, bringing a spell of enhanced monsoon shower activity with the highest totals falling on exposed western parts (especially upslopes) of the northern and central parts of the islands.

**Expected Impacts**

Flash flooding events possible, especially if showers affect a large urban centre such as Manila. As the week progresses an increasing likelihood of small river flooding and landslides.

**Australasia**

Nil.

**Additional information**

Nil.

**Issued at:** 140320 UTC      **Meteorologists:** D J Harris / Nick Silkstone

**Global Guidance Unit**

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