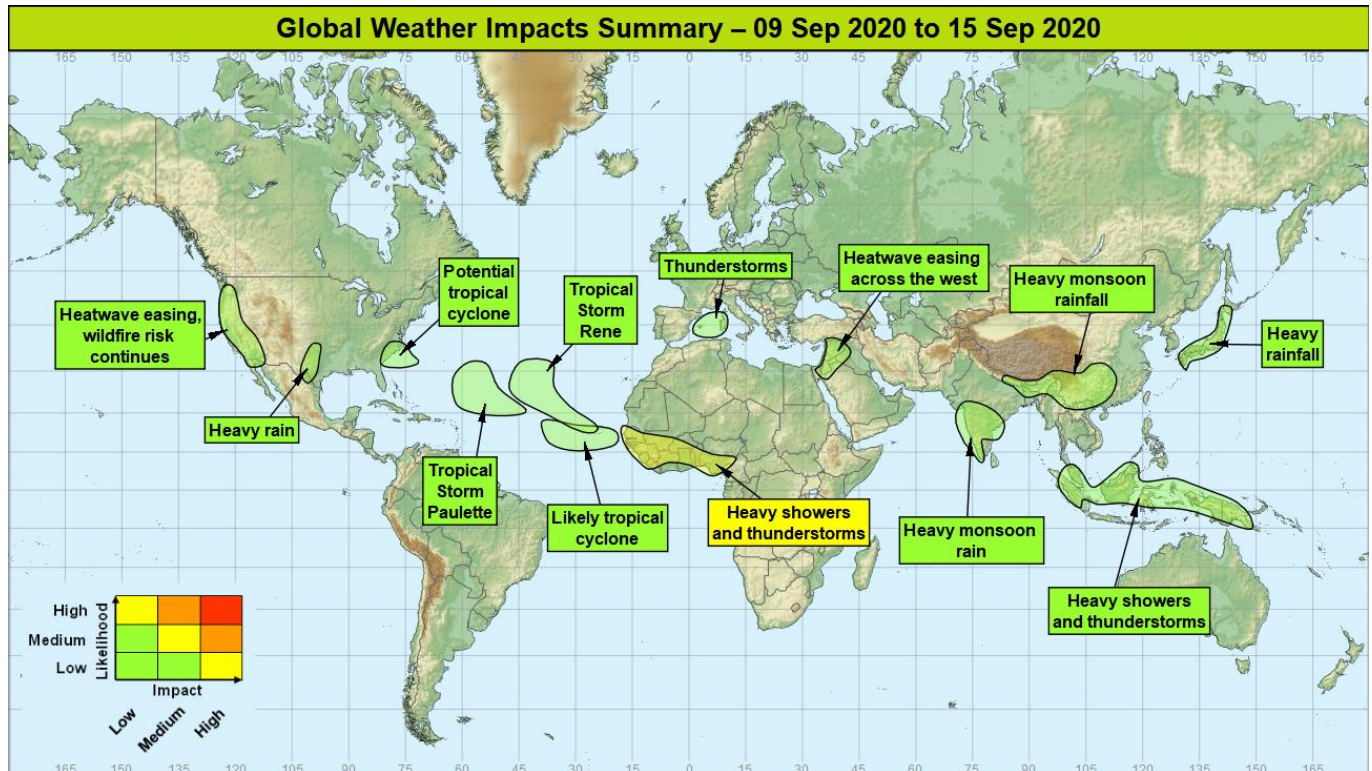


## Global Weather Impacts – Wednesday 9<sup>th</sup> to Tuesday 15<sup>th</sup> September 2020

Issued on Wednesday 9<sup>th</sup> September 2020

### HEADLINES

- Increased threat of flash flooding in parts of West Africa.
- Tropical Storms Paulette and Rene expected to remain over the open tropical Atlantic.



### Tropical Cyclones

#### Tropical Storm Paulette – North Atlantic Weather

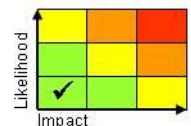
Paulette strengthened into a tropical storm on Monday over the open tropical Atlantic. The system is expected to continue to drift west or northwest over the next few days, most likely maintaining tropical storm strength and remaining over open waters.

#### **Discussion**

Paulette's organisation has shown gradual improvement over the last 24 hours. Increasing vertical wind shear should prevent Paulette from becoming a hurricane although this can't be ruled out in the short term. There is high confidence that its track will remain over open water although it is worth noting a very small minority of ensemble member forecasts from MOGREPS suggest a more direct W'ly track than official forecasts. Its exact movement is likely to be complicated to some degree due to interaction with Rene.

#### **Expected Impacts**

Nil.



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## **Tropical Storm Rene – Cabo Verde and North Atlantic**

### **Weather**

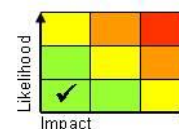
Rene strengthened into a tropical storm over the Cabo Verde islands on Monday night and has since continued to slowly drift west. Associated strong winds and thunderstorms are now clearing the islands. Over the coming days Rene is expected to track west-northwest over the open Atlantic. There is the potential for Rene to strengthen to hurricane strength over the next couple of days as is suggested by the latest guidance from NOAA NHC.

### **Discussion**

Outer bands of convection associated with Rene have cleared Cabo Verde. Over the next couple of days, the system will move west over sea surface temperatures of around 27°C. This coupled with favourable atmospheric conditions (low wind shear) means some intensification looks likely. Uncertainty in its track does increase beyond the next couple of days, in part due to potential interaction with Paulette.

### **Expected Impacts**

Nil.



*The following areas are being monitored for potential tropical cyclone development:*

## **North Atlantic, east coast of USA**

### **Weather**

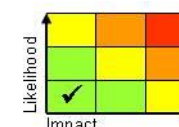
An area of organised thunderstorms Bermuda has a small chance of strengthening into a tropical storm before reaching the coast of the USA over the next few days. Irrespective of development, enhanced heavy showers and thunderstorms are expected for parts of the Eastern Seaboard, mainly the Carolinas, with the potential for 50-100 mm of rain in places over the next couple of days.

### **Discussion**

An enhanced E'ly flow is feeding showers into coastal areas. A more organised area associated with a shallow surface depression further offshore is being monitored by the NHC for possible development although the NHC suggest only a low likelihood 30-40% over the next few days.

### **Expected Impacts**

Slightly increased threat of flash flooding in places.



## **North Atlantic, Cabo Verde**

### **Weather**

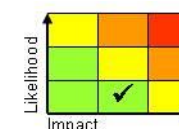
Later this week and into the weekend it looks likely that a disturbance moving west out of Africa will likely develop into a tropical depression. At this stage, any impacts look likely to be confined to the southern islands of the Cabo Verde with heavy rain likely and also a risk of strong winds and rough seas.

### **Discussion**

An African Easterly Wave (AEW) is expected to move off the coast of West Africa later this week, which could subsequently develop into a tropical depression over the warm waters of the tropical Atlantic. NHC suggests a 70% chance for this to occur during the next five days.

### **Expected Impacts**

Increased threat of flash flooding and potential impacts to transport and maritime activities for the Cabo Verde islands.



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## Europe

### Spain (Balearics), France (Corsica) and Italy (Sardinia)

#### **Weather**

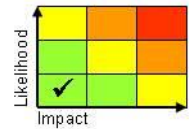
Areas of thunderstorms are expected over the western Mediterranean over the next few days before conditions improve over the weekend. Thunderstorms could be severe in places although many will remain over the sea. Torrential downpours (30-50 mm in a couple of hours) are likely with additional hazards from potential lightning, hail and localised strong, gusty winds.

#### **Discussion**

A slow-moving upper cold pool will remain over the western Med over the next few days leading to steep lapse rates along with a cut off upper low providing synoptic lift. Therefore the environment will be associated with abundant CAPE and wind shear is likely to be sufficient for some organised clusters of severe convection to develop with isolated tornadoes and waterspouts possible.

#### **Expected Impacts**

Low probability of flash flooding and localised damage from hail/lightning/strong winds.



## North America

### Western USA and far northwest of Mexico

#### **Weather**

Temperatures across the region are starting to fall closer to average from their recent record highs. However, wildfire conditions will continue for the next few days with the potential for an early-season Santa Ana wind event to exacerbate the fire risk in southern California.

#### **Discussion**

The broadscale pattern has begun to re-orientate to allow cooler air to push southwards across the region, though this will in turn allow offshore winds to strengthen, with this early-season Santa Ana event maintaining an elevated to critical fire risk.

#### **Expected Impacts**

Wildfires will continue to burn in the region, even with temperatures easing, leading to reduced air quality. Strengthening winds in southern California will make fire containment more difficult.



### Southern USA and far north of Mexico

#### **Weather**

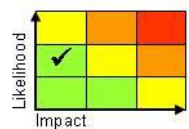
Prolonged heavy rainfall, along with some thunderstorm activity, is expected across these areas over the next couple of days. 100-150 mm of rain is likely to fall fairly widely with 200-250 mm in a few locations. This well in excess of a typical month's worth of rain.

#### **Discussion**

A marked trough extension will engage an extremely strong baroclinic zone across the area (unusually cold air to its rear leading to heavy snowfall and unseasonal cold weather) leading to a spell of persistent rain with some thunderstorm activity likely to be triggered in the warm air ahead of the surface front.

#### **Expected Impacts**

Increased risk of flash and riverine flooding.



## Central America and Caribbean

### Far north and far northwest Mexico – See *North America* section

## South America

Nil.

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## Africa

### Western Africa

#### **Weather**

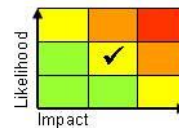
Further periods of prolonged, heavy showers and thunderstorms will affect the region at times in the coming week. Whilst not all areas will see heavy rain, each day 50-75 mm could fall in places within a few hours, and over this period the wettest areas may see 200-300 mm build up (most likely towards the Atlantic coast). This does tend to be the wettest time of the year in the region, but the forecast rainfall will still be equivalent to typical monthly amounts in places.

#### **Discussion**

The monsoon trough currently lies close to its climatological northern extent from roughly Senegal towards southern Sudan. Along and to the south of this trough lies moisture-laden air, with the African Easterly Jet periodically buckling due to the passage of African Easterly Waves. Localised medium impacts are likely to continue to be seen across this wide region.

#### **Expected Impacts**

The potential for further flash and riverine flooding across much of the region, with an enhanced risk of landslides in areas where terrain is steep (such poorly located settlements on the edge of expanding cities). Along the northern boundary of the highlighted region strong wind gusts from thunderstorms will likely trigger dust storms reducing air quality and impacting travel.



## Middle East

### Syria, southeast Turkey, Iraq, Lebanon, and Israel

#### **Weather**

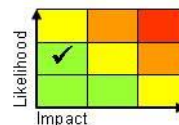
A continued spell of high temperatures with daily maxima well in excess of 40°C in places (which is some 5-8°C above normal for the time of year) will continue for much of this week, but should gradually ease somewhat across the west of the region.

#### **Discussion**

Large-scale subsidence from an upper-ridge coupled with light winds and strong insolation has led to prolonged high temperatures. Winds will gradually increase across the west of the region allowing temperatures along the more populated Mediterranean coastal strip to fall back closer to normal over the weekend.

#### **Expected Impacts**

Adverse effects on health of people (particularly children and elderly), and livestock exposed to the heat. Some increased demands on power networks likely due to increased energy demand for things such as air conditioning.



## Asia

### Japan

#### **Weather**

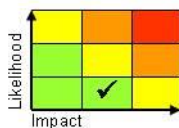
Enhanced rainfall, showers and thunderstorm activity are expected across the country at times this week. At sea level around 100mm of rainfall could fall in places, with 200-300mm possible over prone mountain ranges. These totals would represent over half a month's worth of rainfall.

#### **Discussion**

Now that Typhoon Haishen has completed its extra-tropical transition and cleared north, the cold front extending south from this system (the de-facto monsoon front) will become slow-moving across this region and continue to bring pulses of heavy rainfall. There is also the potential for a depression to form near Japan over the weekend helping to further organise rainfall.

#### **Expected Impacts**

Flash and riverine flooding is likely, as are landslides in regions where terrain is steep.



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## **Northern Bangladesh, eastern Nepal, northeast India and northern Myanmar**

### **Weather**

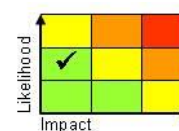
A further spell of enhanced shower and thunderstorm activity looks likely in this region over the next week. Up to 150mm of rain could fall in a day in places, with an accumulated rainfall amount of up to 400mm over the hills and mountains.

### **Discussion**

As is typical the cause of the increased rainfall in this region appears to be associated with a modest increase in the moist south-southwesterly flow from the Bay of Bengal. This broad pattern which leads to this setup is more likely when the BSISO1 index is in Phase 1 or 2, with this indeed occurring at the present time.

### **Expected Impacts**

Slight increase in the risk of flash flooding and landslides in mountainous areas.



## **Southern India**

### **Weather**

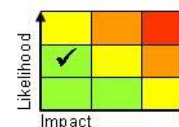
An active pulse in monsoon rains are expected over the next week across much of southern India. Overall the highest rainfall totals are likely to build up over the Western Ghats with 250-350mm building up in places over the next 5 or 6 days. Elsewhere, many areas will see 50-100 mm of rain. There is also a chance of much heavier rain developing along the Bay of Bengal coast should a monsoon depression develop.

### **Discussion**

Consistent signal for an active pulse in the monsoon developing. A slack monsoon depression may develop in the BoB, but this will mainly act to maintain south-southwesterly low-level flow.

### **Expected Impacts**

Increased risk of flash flooding in places.



## **Southern China and the far north of Vietnam**

### **Weather**

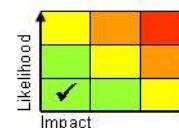
Shower and thunderstorm activity across this region will be well above average during this coming week. Showers could bring 50-100mm of rainfall to any location in a short duration, with the potential for 200-400mm for some spots through the week. Although these amounts are high for September, they would only represent just above average rainfall amounts for the wettest months of the year (June and July).

### **Discussion**

The monsoon frontal trough has been drawn across the region. Minor shortwave troughs in the southern-shifted sub-tropical jet will engage with the monsoon front generating enhanced precipitation.

### **Expected Impacts**

Slight increase in the risk of flash flooding and landslides in mountainous areas. Perhaps a risk of some minor riverine flooding in smaller catchments.



## **Indonesia, Malaysia, Papua New Guinea and Brunei**

### **Weather**

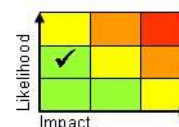
Heavy showers and thunderstorms will continue to be more frequent, intense and widespread than normal over the coming few days. Around 50-75 mm of rain could fall in a couple of hours in places, with overall accumulations through the week of around 150-250 mm.

### **Discussion**

Higher than normal SSTs in the region, and enhanced easterly trade winds, perhaps in part due to the developing La Niña like conditions, is fuelling deep convection, with showers and thunderstorms more intense and frequent than is usual for the time of year. This may well be further enhanced by the passage of the weak MJO oscillation across the region Maritime Continent over the next week.

### **Expected Impacts**

Slight increase in the risk of flash flooding and landslides in mountainous areas.



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**Australasia**

**Papua New Guinea** – see *Asia* section.

**Additional Information****Cox's Bazar, southeast Bangladesh**

Whilst showers and thunderstorms can't be ruled out each day, especially early in the period, there is a signal for drier than average conditions over the coming week, reducing the risk of any impacts from flash flooding.

**Yemen**

The development of scattered, daily heavy showers is likely to remain focused over the Western Highlands. Activity probably around if not below average for the time of year.

**Sudan/South Sudan**

Daily heavy showers and thunderstorms are expected through the coming days across South Sudan and the south of Sudan. Probably wettest in parts of South Sudan with 75-100 mm building in a few locations. This is now the latter part of the wet season which means localised flash flooding events are a little more likely where the heaviest showers fall.

**Mainland Europe, away from Iberia**

Whilst not likely to cause too many impacts, a late-season heatwave is likely for parts of Mainland Europe, developing through the coming weekend, and peaking early next week. Temperatures are likely to be widely some 5-8°C above normal, with parts of France seeing temperatures come 8-12°C above normal. This would bring maximum temperatures into the high 30s°C in places.

**Issued at:** 090730 UTC      **Meteorologists:** Chris Bulmer/Jason Kelly

**Global Guidance Unit**

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