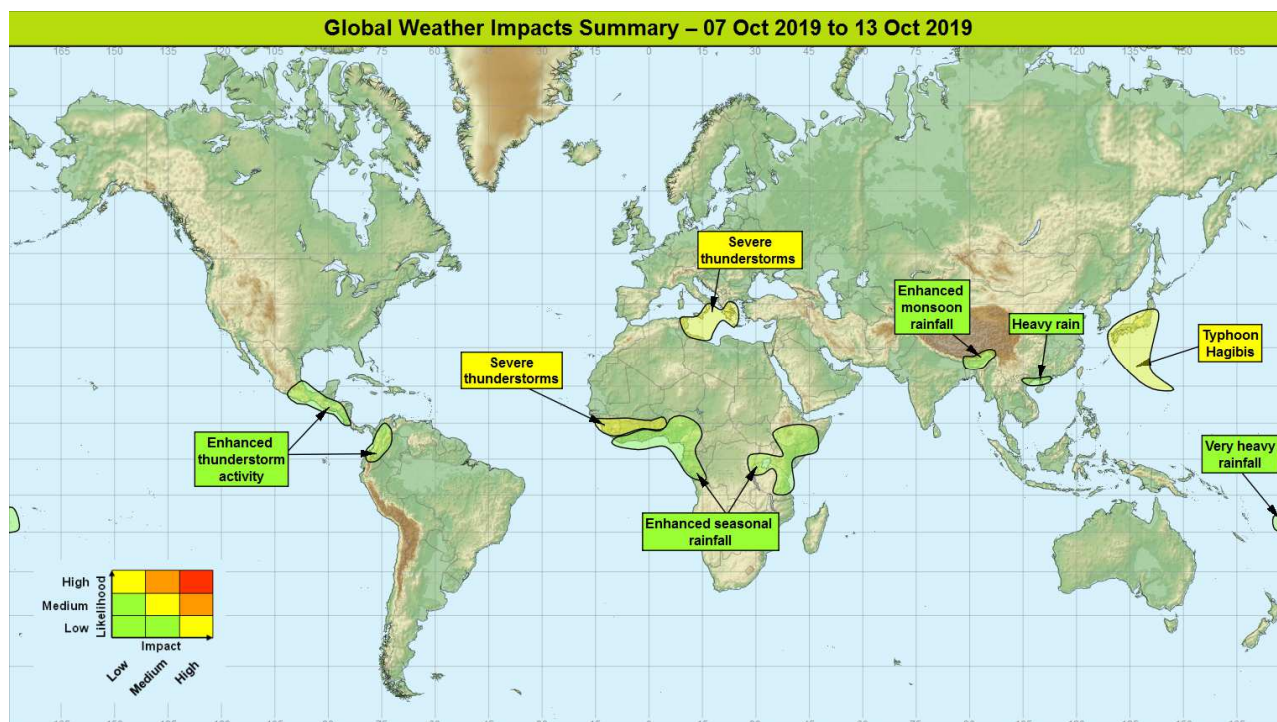


**Global Weather Impacts – Monday 7<sup>th</sup> to Sunday 13<sup>th</sup> October 2019**

Issued on Monday 7<sup>th</sup> October 2019

**HEADLINES**

- Enhanced thunderstorms activity across Tropical Africa, particularly in the west.
- Very unsettled in the central Mediterranean early this week with severe thunderstorms.
- Typhoon Hagibis likely to strengthen and threatens Japan later in the week.



**DISCUSSION**

**Tropical Cyclones**

**Typhoon Hagibis – Northwest Pacific Weather**

Hagibis has intensified into a typhoon and is tracking west-northwest near Guam. There remains a consistent signal that Hagibis will intensify further over the next 48 hours as it tracks northwest, most likely becoming a Violent Typhoon, though is expected to be classified as a Very Strong Typhoon at landfall. Whilst uncertainty in its track increases from Thursday it is likely to start to impact parts of southern Japan from Friday or Saturday.

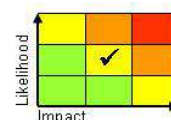
**Discussion**

Hagibis formed through consolidation of ERW coupled convection over the last couple of days. There is a strong signal from NWP for the development of a major typhoon through the coming week with environmental conditions favourable for this. Significant impacts are most likely over southern parts of Japan but its track becomes more uncertain during the later part of the week.

**Expected Impacts**

Flash flooding, increasing threat of destructive winds and a large storm surge. Whilst the location and extent of impacts are uncertain, if Hagibis reaches southern Japan this weekend impacts could be exacerbated with a large number of tourists in this area due to the ongoing Rugby World Cup and Japanese Grand Prix.

**Europe**



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

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## Greece, southern Italy, Malta, Tunisia and northwest Libya

### **Weather**

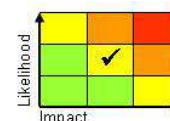
Severe thunderstorms will develop across this region during the next few days bringing large amounts of rain (locally 50-75mm in a few hours) and isolated large hail storms. The heaviest showers look likely to become mainly confined to Tunisia and perhaps northwest Libya from Tuesday. Tunisia is likely to see the highest rainfall totals with up to 200 mm in a couple of days over coastal parts. This region of Tunisia typically receives around 50 mm of rainfall in October, although a similar event was seen here in 2018. Conditions should slowly improve later in the week.

### **Discussion**

A major trough extending across the region is now engaging the resident warm/moist air mass, generating occasional thunderstorms which will be vigorous in places along with potential MCS developments. As the trough disrupts on Tuesday, the mobile portion will accelerate E taking thunderstorms across Greece and into Turkey and quickly dissipating, but the slow moving cut-off sinking across Tunisia and Libya will allow thunderstorms to persist in these areas. A developing easterly flow beneath the upper cold pool helping to focus activity into coastal areas.

### **Expected Impacts**

Localised flash flooding, isolated hail/lightning and minor wind damage, some disruption to transport and utilities possible. Over Tunisia more severe flooding is possible. A similar, perhaps more severe event in this region in September 2018 resulted in deadly flash floods which killed at least 4 people.



## North America

Nil.

## Central America and Caribbean

### Parts of Central America, northwest Columbia and Ecuador

### **Weather**

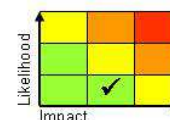
Shower and thunderstorm activity is expected across the tropical Pacific Ocean coastline, maintaining the possibility of locally heavy downpours producing 50-75 mm of rainfall in a few hours. The largest cumulative rainfall totals are expected to be across portions northwest Columbia which has already been impacted by flooding in the past week.

### **Discussion**

A series of tropical waves will be supportive of enhanced convection across Central America.

### **Expected Impacts**

Increased risk of flash flooding with landslides also more likely in areas of steeply sided terrain. Further river flooding is possible, especially in parts of northern and western Colombia.



## South America

Colombia and Ecuador – See *Central America and Caribbean* section.

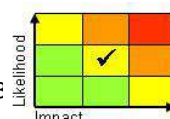
## Africa

### Parts of West Africa

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## Weather

Shower and thunderstorm activity is expected to be more frequent than normal for much of the coming week. Severe thunderstorms will tend to bring 30-50 mm of rain within a few hours in places and where they become more organised could produce up to 100 mm. Through the week the wettest areas could see 250-300 mm of rain.

## Discussion

Whilst the West African Monsoon is slowly withdrawing, AEW activity will continue to enhance thunderstorms activity in this area with a consistent signal for positive rainfall anomalies from NWP. This comes at a time when river levels are approaching an annual maximum and is therefore when flooding impacts are considered most likely.

## Expected Impacts

Increased likelihood of flash and river flooding along with land/mudslides in areas of more steeply-sided terrain. Antecedent conditions contributing to increased sensitivity.

## Parts of East Africa

### Weather

The rainy season is now underway and whilst heavy showers and thunderstorms are typical in these areas, activity is likely to be heavier than usual in parts of this region over the coming week. Severe thunderstorms will tend to bring 30-50 mm of rain within a few hours in places and where they become more organised could produce up to 80 mm. Through the week the wettest areas could see 200-250 mm of rain.

### Discussion

A strong positive Indian Ocean Dipole event is now underway. This is likely responsible for the signal for above average rainfall in these areas over the coming week. Based on the strength of the positive IOD event this could lead to above average rainfall in these areas for the next 2 to 3 months which may gradually may impacts more likely.

### Expected Impacts

Increased likelihood of flash flooding along with land/mudslides in areas of more steeply-sided terrain.



## Middle East

Nil.

## Asia

Japan – See *Tropical Cyclones* section.

## Southern China and northern Vietnam

### Weather

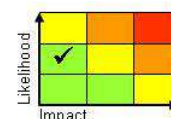
A zone of heavy showers and thunderstorms now over the far south of China will transfer westwards into northern Vietnam over the next couple of days. Up to 50 mm of rain may fall in a short time, with potentially 100-150 mm in 24 hours.

### Discussion

Enhanced convection associated with the passage of a Rossby wave across the region,

### Expected Impacts

Increased potential for flash flooding along with land/mudslides in areas of more steeply-sided terrain.



## Northeast India, North Bangladesh and Bhutan

### Weather

An increase in monsoon rainfall across the region is expected early this week, with frequent showers and thunderstorms bringing 50-100mm per day in some locations, and locally in excess of 200mm before the end of the week.



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## Discussion

The slow but steady southward progression of the sub-tropical jet is starting to have an influence on the monsoon plume, which is slow to retreat this year. Longwave troughing approaching from the W, replacing the current broad ridge, is expected to have a remote but still important influence in that it will promote more frequent convection. Profiles exhibit high PWAT and large CAPE, slow steering flow will increase the rainfall totals where the heavy showers develop (expected to become quite widespread).

## Expected Impacts

Increased risk of flash flooding, and river flooding (many rivers already very high with further rainfall increasing the flooding risk and exacerbating ongoing issues).

## Australasia

### Fiji

#### Weather

Enhanced heavy rain and embedded thunderstorms are expected to develop in the vicinity of Fiji over the coming days, bringing 100-200mm of rainfall in around 48 hours. This equates to almost a month's worth of rain for somewhere like Nadi

#### Discussion

The South Pacific Convergence Zone lies just to the N, with a sharp and relatively low-latitude trough disruption/cut-off vortex swinging by on Sunday/Monday. This will draw the SPCZ southwards, and develop an area of heavy rain and slow moving thunderstorms across Fiji and surrounding areas. As the upper trough relaxes away early next week rainfall will return to normal levels.

#### Expected Impacts

Increased likelihood of flash flooding, and disruption to transport/homes/businesses.



## Additional Information

The Indian Summer Monsoon (also called the South Asian Monsoon) has still to retreat south. This process should have started on the 1<sup>st</sup> of September, with the northern edge of the monsoon by now having retreated southeast of Delhi and Mumbai. This is now the latest ever commencement of the monsoon withdrawal, but a marked withdrawal is expected to take place within the next week. The 2019 Indian Summer Monsoon (June to September) has been the third wettest on record (back to 1901), and the wettest since 1994. September was the wettest September across India in 102 years.

**Issued at:** 070700 UTC    **Meteorologists:** Chris Bulmer/Tony Wardle

**Global Guidance Unit**

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