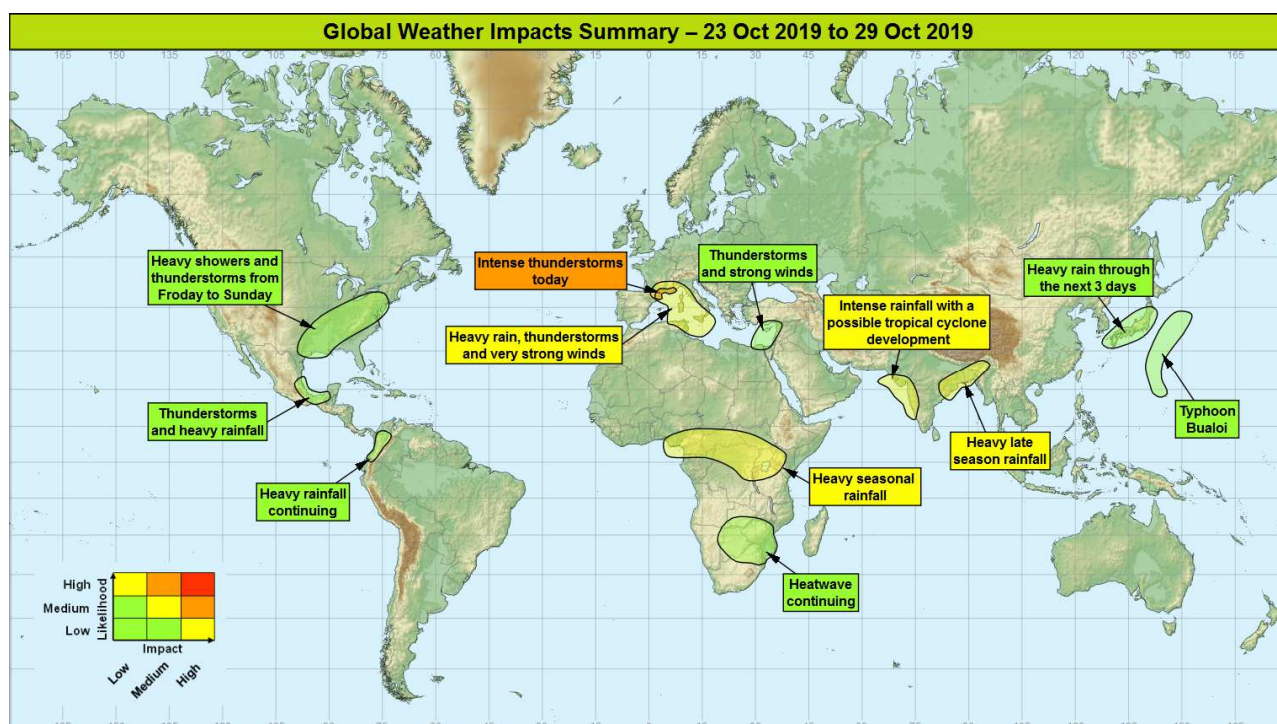


**Global Weather Impacts – Wednesday 23<sup>rd</sup> to Tuesday 29<sup>th</sup> October 2019**

Issued on Wednesday 23<sup>rd</sup> October 2019

**HEADLINES**

- Heavy rain and severe thunderstorms affecting parts of southwest Europe over the next few days.
- Heavy late season rainfall in parts of India and Bangladesh.
- Above average rainfall across parts of central Africa.



**DISCUSSION**

**Tropical Cyclones**

**Typhoon Bualoi (Northwest Pacific)**

**Weather**

Typhoon Bualoi was located around 800 miles south of Tokyo on Wednesday morning with 10 minute sustained winds of 115 mph and gusts to 160 mph.

Bualoi is expected to steadily track northeastwards and weaken through the next few days to keep it away from Japan.

**Discussion**

Bualoi will move into an area of cooler sea surface temperatures and increased vertical wind shear as it tracks further north through Wednesday, resulting in the system weakening and being steered away from Japan.

**Expected Impacts**

Only impact will be to marine transport in the vicinity of the system.



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

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*The following area is being monitored for tropical storm development that may affect land in the next 7 days:*

## **Arabian Sea and western India**

### **Weather**

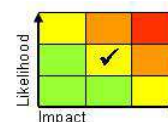
A slack area of low pressure is likely to develop during the next few days across the eastern Arabian Sea, perhaps developing into a tropical cyclone close to the Indian coast towards the weekend. However, there is a lot of uncertainty over the track of any subsequent development. There is higher confidence for heavy late season rainfall to affect western India, with up to 600 mm possible in places during the next week.

### **Discussion**

An equatorial Rossby wave is expected to engage the western portion of the retreating South Asian Monsoon leading to the development of a tropical low. Should a system develop, it will be in an environment conducive to further strengthening. Indeed, a significant minority of ensemble members, as well as most deterministic models develop a major tropical storm, though there is a large spread with respect to track and timing of any development.

### **Expected Impacts**

Flash and river flooding possible in western India, including Mumbai. If a cyclone forms wind damage and dangerous marine conditions are also possible.



## **Europe**

## **Western Mediterranean**

### **Weather**

Heavy showers and thunderstorms are expected to transfer eastwards through this part of Europe through the next 2 or 3 days, with these conditions likely to become slow moving near Tunisia, Malta and Sicily from the weekend into next week.

The most intense thunderstorms are expected through Wednesday, affecting the far northeast of Spain and the French Mediterranean coastal region. Up to 200 mm of rain could fall in a 12 hour period here, with the storms producing large hail, frequent lightning, very strong winds and a threat of a tornado.

Through Thursday and Friday the heavy showers and thunderstorms will transfer east to affect parts of Italy, Corsica and Sardinia, as well as coastal parts of Algeria. Rainfall totals do not look likely to be as extreme as there will be today (Wednesday), but up to 100-150 mm of rain could accumulate in 24 hours with frequent lightning and large hail still possible.

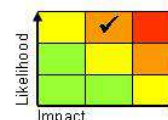
From the weekend the focus will be further south, with the shower intensity lowering again, but still providing a threat of 50 mm in 24 hours, and up to 100-150 mm through a 3 day period due to this region of heavy shower activity becoming slow moving.

### **Discussion**

A marked upper vortex will slowly transfer east-southeast from Iberia to Tunisia through the next week, with the areas of forcing engaging a very warm plume to produce conditions conducive to severe convection. Forecast profiles support upscale growth of thunderstorms into one or more MCS events with back building likely along the coast acting to enhance rainfall here. Rainfall totals of up to 98 mm in 6 hours have been recorded near the Spanish / French border overnight.

### **Expected Impacts**

Flash flooding will be the highest impact, with frequent lightning, large hail and very strong winds possibly causing damage to property and infrastructure, as well as travel disruption. Landslides are also possible in areas of more steeply sided terrain.



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## Eastern Mediterranean

### **Weather**

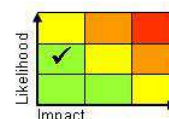
A slow moving area of low pressure will produce areas of heavy showers and thunderstorms across and around the Eastern Mediterranean through the next 2 or 3 days, with up to 100 mm of rain possible in 24 hours from thunderstorms. Frequent lightning is likely, with strong winds and rough seas also expected.

### **Discussion**

A disrupting upper trough in the Eastern Mediterranean will engage a plume on Wednesday to produce an area of low pressure. This system looks warm cored and could produce a 'Medicane' like feature in the coming days. If this occurs it would be at an unusually east longitude for a 'Medicane' which usually form west of Crete.

### **Expected Impacts**

Flash flooding looks like the main impact, but strong winds and rough seas will likely impact the transport network.



## North America

### Central and eastern USA

### **Weather**

An area of heavy showers and thunderstorms will develop across the Gulf states on Friday, and then extend north and east through the weekend, before clearing east into the Atlantic early next week. Up to 200 mm of rain could fall in 24 hours, with frequent lightning and large hail possible.

### **Discussion**

An extending upper trough from the Rockies will engage a low latitude warm plume to produce an increasingly active frontal wave that will track northeast across the eastern half of the USA.

### **Expected Impacts**

Flash flooding is the most likely impact, but power and transport disruption from lightning also likely.



## Central America and Caribbean

### Southern Mexico

### **Weather**

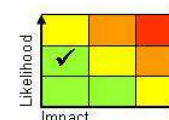
Thunderstorms are expected to affect this region of Mexico at times through the next 5 days, producing 24 hours rainfall totals of up to 150 mm, with event accumulations of up to 300 mm.

### **Discussion**

The combination of an African Easterly Wave (AEW), slow moving cold front and upper vortex will produce conditions for deep convection at times through the next 5 days in southern Mexico.

### **Expected Impacts**

Flash flooding and landslides look like the most likely impacts.



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## South America

### Western Colombia and northern Ecuador

#### **Weather**

Further frequent heavy showers and thunderstorms are expected over northwestern parts of South America over the coming week. This follows a period of above average rainfall over the past month with some locations recording double their October rainfall. Over the next week, much of the area is likely to receive a further 75-125 mm of rain, locally 250-300 mm.

#### **Discussion**

There is a continued model signal for above average rainfall in this mountainous region of northwestern South America.

#### **Expected Impacts**

Continuation of flooding impacts is likely across the region with more mountainous areas at heightened risk of landslides due to saturated ground.



## Africa

### Parts of central Africa

#### **Weather**

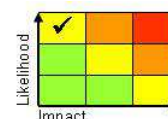
Above average rainfall is expected to continue through the next 7 days across the region with frequent heavy showers and thunderstorms. Whilst rainfall amounts will inevitably vary from place to place, some locations may receive their entire average October rainfall in a few hours.

#### **Discussion**

A strong positive Indian Ocean Dipole (IOD) event continues. This is probably responsible for the above average rainfall signal in these areas over the coming week. Based on the strength of the positive IOD event (largest since at least 2001) this could lead to above average rainfall in these areas for the next 2 to 3 months which may gradually make impacts more likely.

#### **Expected Impacts**

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



### Parts of southern Africa

#### **Weather**

Temperatures are widely some 5-10, locally 15°C above average across parts of southern Africa. Within the area highlighted maximum temperatures are expected to exceed 35°C, and in some places 40°C (especially northeast South Africa, south Mozambique, south Zimbabwe and eastern Botswana) until early next week. For South Africa temperatures may return to near normal by the middle of next week. Whilst these temperatures are normal for mid-summer, falling this early in the season makes it near record breaking, particularly over parts of South Africa.

#### **Discussion**

The IOD is causing excessive rain to fall in east Africa close to the equator, and keeping the weather dry, hot and sunny in much of southeastern Africa, especially the north of South Africa. With light winds this will make the heat feel quite oppressive.

#### **Expected Impacts**

Utilities will be under strain due to high air conditioning requirements, and water demands will be high in a region still waiting for the first rains of the spring/summer season. Increased potential for health impacts for vulnerable demographics. Severe wildfire conditions will be present across large tracts of this area too.



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## **Middle East**

**Levant coastline** – See the Europe section.

## **Asia**

**Western India** – See the Tropical Cyclones section.

### **Northeast India and Bangladesh**

#### **Weather**

An area of heavy rainfall and thunderstorms will transfer northeast across northeastern India and Bangladesh through the next 3 or 4 days producing up to 300 mm of rain at a time of year when rainfall totals usually lower due to the monsoon withdrawal. So up to twice the average October rainfall could fall in one day.

#### **Discussion**

An area of low pressure in the Monsoon trough is expected to be steered northeast around the sub-tropical ridge to bring unseasonably heavy rainfall to this part of the Indian sub-continent.

#### **Expected Impacts**

Flash flooding and landslides look like the most likely impacts, especially with this heavy rain event coming at the end of the summer monsoon season.



## **Japan**

#### **Weather**

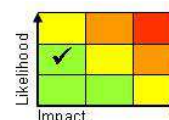
A spell of heavy rain is expected to move northeast across much of Japan through the next 3 days, including areas impacted by Typhoon Hagibis earlier this month. A further 100-200 mm of rainfall is likely in a 24-36 hour period.

#### **Discussion**

An upper trough will engage a plume to steer a frontal wave northeast across Japan through the rest of this week, bringing a period of heavy rainfall across many parts of Japan.

#### **Expected Impacts**

Increased sensitivity following the passage of Typhoon Hagibis is likely to lead to greater impacts than otherwise expected. Flash flooding and renewed river flooding are possible, in addition to landslides in areas of more steeply-sided terrain.



## **Australasia**

Nil.

### **Additional Information**

Nil.

**Issued at:** 230725 UTC    **Meteorologists:** Chris Tubbs and Paul Hutcheon

**Global Guidance Unit**

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