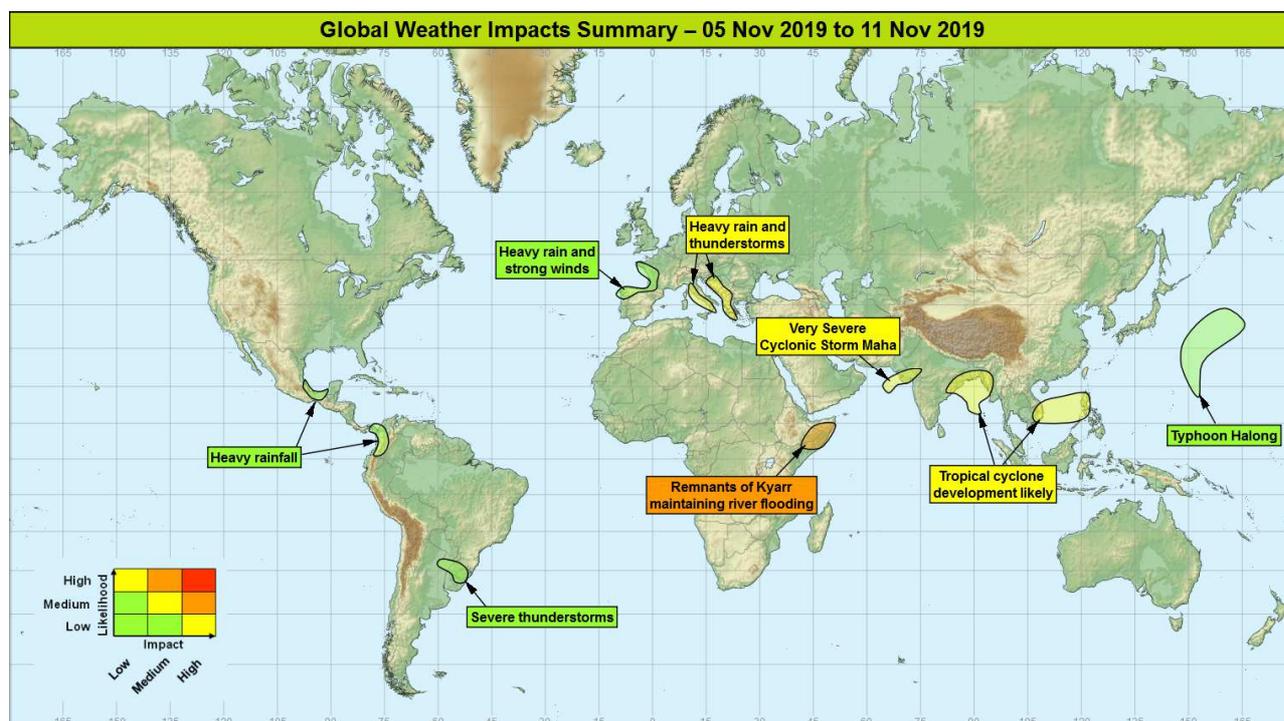


**Global Weather Impacts – Tuesday 5<sup>th</sup> to Monday 11<sup>th</sup> November 2019**

Issued on Tuesday 5<sup>th</sup> November 2019

**HEADLINES**

- The remnants of Kyarr continue to bring very heavy rainfall across parts of Somalia and eastern Ethiopia, maintaining significant flooding in the region.
- Extremely Severe Cyclonic Storm Maha likely to impact parts of northwestern India during the next few days a weakening system.
- Remaining very unsettled across the central Mediterranean with the heaviest rainfall likely to affect the Balkans.



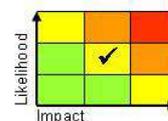
**DISCUSSION**

**Tropical Cyclones**

**Extremely Severe Cyclonic Storm Maha (Arabian Sea)**

**Weather**

Maha continued to strengthen over the northern Arabian Sea on Monday and probably now close to its peak intensity. The storm will likely be slow moving across the central Arabian Sea today before turning to the east toward India. Maha is expected to make landfall on the coast of Gujarat, late Wednesday / early Thursday as a Cyclonic Storm, bringing 200-300 mm of rainfall along its path. Although rainfall of this intensity is not unheard of in this region of India, it would still represent several times the November average, given that this is usually the start of the dry season here.



**Discussion**

*This forecast may be amended at any time*

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Maha formed in response to the organisation of an area of deep convection by an Equatorial Rossby Wave. Environmental conditions have allowed the system to gain strength over the past couple of days. However the system will overrun the cold water in the wake left by Kyarr (in addition to its own wake) leading to some weakening before its anticipated landfall. A trough extension across Iran will lead to strong upper level westerly winds in this region, these will have the impact of steering the system towards the east, but also producing a hostile environment (due strong vertical windshear) that will further weaken the cyclone as it moves east.

#### **Expected Impacts**

Large swells/rip-currents could affect Arabian Sea coastlines. During the next few days Maha is likely to bring damaging winds and torrential rainfall to the coast of Gujarat with flash flooding likely.

#### **Typhoon Halong** **Weather**

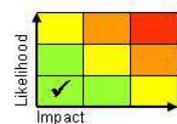
This system has significantly strengthened during the past few days, with sustained 10 minute winds of 115 mph. Halong is around 500 miles northeast of Guam (Northern Mariana Isles) and will continue to track away to the northeast through the coming days as it weakens.

#### **Discussion**

Halong has developed a clear eye in the past 24 hours, indicating that this system is a very strong typhoon. However, there is good model agreement for a weakening of this system as it tracks north then northeast into cooler waters, remaining away from land.

#### **Expected Impacts**

Only impacts to marine transport are expected with this system not expected to impact any land.



The following areas are being watched for tropical cyclone formation over the next 7 days.

#### **Bay of Bengal** **Weather**

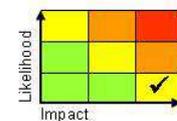
A large area of showers and thunderstorms is likely to become better organised through this week, with a high chance of forming a tropical cyclone later this week. This system is likely to threaten some northern coastal regions of the Bay of Bengal by the weekend.

#### **Discussion**

The circulation associated with Tropical Storm Matmo has remained a distinct feature at mid levels and has tracked west across the Indochina Peninsula into the Bay of Bengal. This circulation will continue to promote thunderstorm activity surrounding it, with underlying sea surface temperatures increasing to over 30°C providing even more energy for convection. Windshear is expected to be more favourable for cyclonic development over the next few days.

#### **Expected Impacts**

Some isolated flash flooding possible across the Andaman and Nicobar Islands in the next few days. Dangerous seas will also develop in the region, with landslide, flash and river flooding impacts possible in Bangladesh, northeastern India and perhaps Myanmar by the weekend.



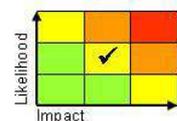
#### **South China Sea** **Weather**

Heavy showers and thunderstorms associated with a tropical depression will again bring heavy rainfall to surrounding coasts of western Philippines over the next couple of days. There is a high likelihood for these to consolidate into a tropical storm through the next few days, with the tropical storm then likely to track west toward Vietnam next weekend bringing the threat of further heavy rain a week or so after Matmo impacts..

#### **Discussion**

There is a growing signal from models for tropical cyclone development in this region, with improved model agreement for a track towards Vietnam.

#### **Expected Impacts**



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Some impacts from flash flooding are possible across parts of the western Philippines in the next few days. Longer term the impacts from any tropical system are more difficult to assess, but there is a growing likelihood of flood and landslide impacts for parts of Vietnam from the weekend.

### **Europe**

#### **Italy, Corsica, Greece, western parts of the Balkans, parts of Tunisia and NE Algeria**

##### **Weather**

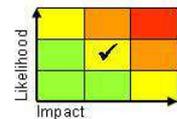
Following recent heavy rainfall in this region, further active weather systems are expected to move across this region until the end of the week at least, bringing persistent, heavy rain and thunderstorms focussed on south-west facing high ground of Italy, the Balkan region, and western Greece. Many places will see 25-50 mm on wetter days, with some prone spots seeing as much as 200 mm per day. It's possible that some locations could see as much as 500 mm of rainfall in total by the weekend, 2 to 3 times the average November rainfall. This will be accompanied by strong winds, especially around coasts.

##### **Discussion**

A cyclonic upper pattern will dominate through the week leading to a continuation of unsettled conditions. As upstream mobility increases this will see a number of plumes drawn across the region, which will see precipitation increasingly modulated by orography and act as a focus for heavy rain and thunderstorms.

##### **Expected Impacts**

Increased likelihood of flash flooding causing damage to property and infrastructure. Lightning strikes, large hail and tornadoes/waterspouts could also produce localised significant damage, particularly in the south of this region.



#### **Western France, northern Spain and Portugal**

##### **Weather**

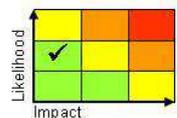
Conditions will also remain unsettled across this region with further spells of strong winds and heavy rain. During the next week around 50-100mm of rain will fall quite widely, especially across southwest France and northern Iberia, with potentially over 200mm in some spots. Winds will be strong at times, although we do not at present expect to see a repeat of winds of the strength Storm Amelia brought to western France on Sunday.

##### **Discussion**

South-shifted Atlantic mobility will steer a number of active Atlantic systems into western Europe. Although no one system is expected to be as potent as Storm Amelie, the cumulative effect of several systems could lead to increased impacts come the end of the week.

##### **Expected Impacts**

Increased risk of flooding. Risk of landslides in steep terrain. Strong winds may bring impacts to travel and power supplies.



### **North America**

Nil.

### **Central America and Caribbean**

#### **Southeast Mexico**

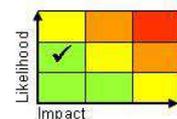
##### **Weather**

The Gulf of Mexico coastline of southern Mexico will likely see further bouts of heavy showers and thunderstorms through the coming week. These could produce 30-50 mm of rainfall in a short period and over the course of a few days in excess of 200 mm in possible in a few locations.

##### **Discussion**

Well above average sea surface temperatures of the Gulf of Mexico and Bay of Campeche, will help feed and maintain active convection into this region through the coming week.

##### **Expected Impacts**



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Flash flooding and landslides look like the most impactful events in this region.

**Panama** – See *South America* section.

### **South America**

#### **Panama, Western Colombia and northern Ecuador**

##### **Weather**

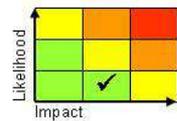
Enhanced shower and thunderstorm activity is likely across this region through the coming week. 50 to 100 mm of rainfall is possible each day, with some places seeing up to 500 mm in total by the weekend, although these totals likely very localised.

##### **Discussion**

Surface rooted convection release is likely with in excess of 3000 J/kg CAPE available, leading to some severe and slow moving storms each day.

##### **Expected Impacts**

Increased risk of flash and river flooding with landslides possible in mountainous areas. In recent days 1000 people were affected when the San Jose river burst its banks in north western Colombia.



#### **Part of Paraguay and Uruguay along with the far northeast Argentina and southern Brazil**

##### **Weather**

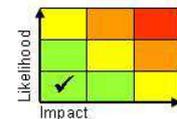
Spells of heavy rain and severe thunderstorms are forecast to continue north-eastwards across this region over the next few days. Rainfall totals of 50-100 mm are possible in places each day, although this will only be in a few isolated locations. Frequent lightning, large hail and strong wind gusts will be additional hazards.

##### **Discussion**

The SACZ will remain active during this period, enhanced by a southward extension of tropical air over central South America engaged by various minor upper troughs in the subtropical jet. This will allow a mixture of surface based and elevated convection, severe thunderstorms (bringing large hail and greatest strong wind threat) are most probable towards the northern edge on zone of convection.

##### **Expected Impacts**

Flash flooding, transport disruption and a small risk of property damage from hail and wind gusts.



### **Africa**

#### **Somalia and Eastern Ethiopia**

##### **Weather**

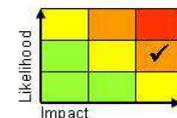
The remnants of Cyclonic Storm Kyarr will continue to produce heavy showers and thunderstorms across usually dry parts of Somalia/Ethiopia, perhaps bringing 75-150mm of rainfall over the coming 5 to 7 days (this is equivalent to more than 6 months worth of rain for many parts of this region).

##### **Discussion**

Areas of deep convection continue in the moisture plume which is the remnant of Kyarr. These areas of deep convection will promote frequent shower and thunderstorm activity over Somalia and parts of eastern Ethiopia over much of the coming days. Given recent media reports documenting severe flooding along the Jubba and Shabelle river catchments (which has already resulting in international financial aid), this additional rainfall is likely to further worsen the situation in this region.

##### **Expected Impacts**

Across Somalia and the far east of Ethiopia heavy rainfall will exacerbate significant flooding that is currently ongoing along major rivers in this region.



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**Middle East**

Nil.

**Asia**

**South China Sea, Philippines, Vietnam** – See *Tropical Cyclone* section

**Bay of Bengal , Andaman and Nicobar Islands, northeastern India, Bangladesh and Myanmar** – See *Tropical Cyclone* section

**Northwestern India** – See *Tropical Cyclone* section

**Australasia**

Nil.

**Additional Information**

The annual smog season across parts of Northern India is making news, with authorities describing pollution levels in New Delhi as unbearable <https://www.bbc.co.uk/news/world-asia-india-50280390>. The remnants of Tropical Cyclone Maha is likely to combine with a higher latitude upper trough to bring some relief in the form of rainfall on Thursday and Friday.

**Issued at:** 050805UTC    **Meteorologists:** Mark Sidaway / Paul Hutcheon    **Global Guidance Unit**

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