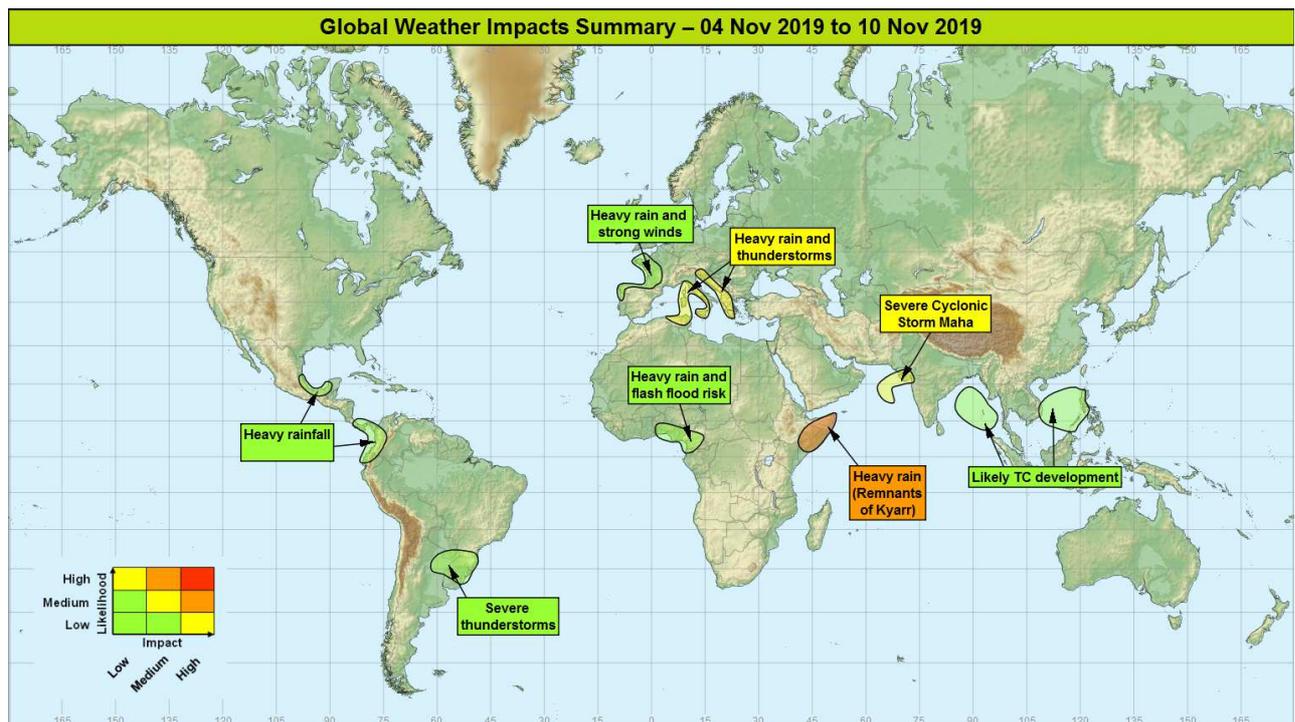


Global Weather Impacts – Monday 4th to Sunday 10th November 2019

Issued on Monday 4th November 2019

HEADLINES

- The remnants of Kyarr continue southwest and bring very heavy rainfall across parts of Somalia and eastern Ethiopia, significant flooding is expected.
- Extremely Cyclonic Storm Maha likely to impact NW India later this week.
- Remaining very unsettled across the central Mediterranean over the coming week.



DISCUSSION

Tropical Cyclones

Extremely Severe Cyclonic Storm Maha (Arabian Sea)

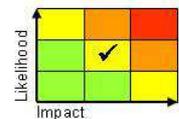
Weather

Maha continues to strengthen over the northern Arabian Sea and is now classified as an Extremely Severe Cyclonic Storm with sustained winds around 105 mph. The storm will likely become slow moving across the central Arabian Sea for a time before most likely turning to the east toward India. Maha is expected to make landfall on the coast of Gujarat, probably on Thursday as a Severe 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

Maha formed in response to the organisation of an area of deep convection by an Equatorial Rossby Wave. Environmental conditions continue to favour gradual intensification of the system for another day or so. However thereafter the system will overrun the cold water in the wake left by Kyarr (in addition to its own wake) leading to some weakening. Towards the middle of next week 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 start to weaken the cyclone as it moves east.

Expected Impacts



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As Maha strengthens large swells/rip-currents could affect Arabian Sea coastlines. Later this week Maha is likely to bring destructive winds and torrential rainfall to the coast of Gujarat with flash flooding likely.

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

Andaman Sea and Bay of Bengal

Weather

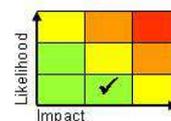
Areas of heavy showers and thunderstorms are likely to become better organised through this week, possibly eventually developing into a tropical cyclone. Models suggest a tropical system may threaten some northern coasts of the Bay of Bengal by the weekend.

Discussion

The circulation associated with Matmo has remained a distinct feature at mid levels as it has crossed the Indochina Peninsula and emerged into the Bay of Bengal. This circulation will continue to promote thunderstorm activity surrounding it, and as it moves into the Andaman Sea/Bay of Bengal underlying sea surface temperatures will increase to over 30°C, providing even more energy for convection. Windshear is expected to be marginally favourable initially, perhaps becoming more favourable later next week.

Expected Impacts

Some isolated flash flooding possible across the Andaman and Nicobar Islands. If a cyclonic storm forms rough seas will also develop in the region and the system may threaten the northern Bay of Bengal next weekend.



South China Sea

Weather

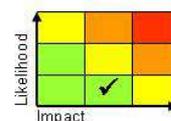
Heavy showers and thunderstorms associated with a broad area of low pressure will again bring heavy rainfall to surrounding coasts of eastern Vietnam and the western Philippines on Monday. There is a growing signal for these to consolidate into a tropical storm through the course of the next few days. The behaviour of any development is uncertain, but it is likely to remain over the sea until the end of the week.

Discussion

There is a growing signal from models for tropical cyclone development through the coming days. However the eventual movement of any system is uncertain. Some models suggest a risk to the Philippines initially, while others support movement toward Vietnam.

Expected Impacts

Some impacts from flash flooding are possible through Monday across parts of eastern Vietnam and the western Philippines. Longer term the impacts from any tropical system are difficult to assess at this stage given the uncertainty in its development / movement.



Europe

Italy, Corsica, Greece, western parts of the Balkans, parts of northern Africa

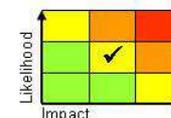
Weather

Following recent heavy rainfall in this region, further active weather systems are expected to move across this region over the coming week 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 end of the week, 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



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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

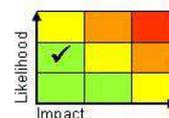
Conditions remain unsettled across this region with further spells of strong winds and heavy rain. During the next week around 50-100mm of rain will fall quite widely, especially across southwest France and northern Iberia, with potentially over 200mm in some spots. Winds will be strong at times, although 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

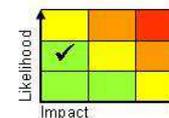
The Gulf of Mexico coastline of southern Mexico will likely see further bouts of heavy showers and thunderstorms through the coming week. These could produce 30-50 mm of rainfall in a short period and over the course of a few days in excess of 200 mm in possible in a few locations.

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

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



South America

Panama, Western Colombia and northern Ecuador

Weather

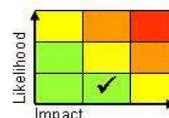
Enhanced shower and thunderstorm activity is likely across this region through the coming week. 50 to 100 mm of rainfall is possible each day, with some places seeing 300-500 mm in total by the end of the week, although these totals likely very localised.

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.



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Uruguay, Paraguay, northeast Argentina and southern Brazil

Weather

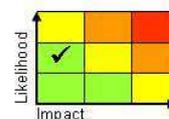
Spells of heavy rain and severe thunderstorms are forecast to gradually edge north-eastwards across this region over the next few days. Rainfall totals of 100-150 mm are possible in places each day. This equivalent to over a month's worth of rainfall (although this will only be in a few isolated locations). 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

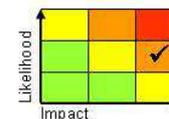
The remnants of Cyclonic Storm Kyarr will continue to edge slowly south-westwards across Somalia and Ethiopia for a few more days. A period of heavy showers and thunderstorms will continue across usually dry parts of Somalia/Ethiopia, perhaps bringing 100-150mm of rainfall over the coming week (this 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 surrounding the remnant circulation 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 week. Given recent media reports documenting severe flooding along the Jubba and Shabelle river catchments, 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.



Parts of central Africa

Weather

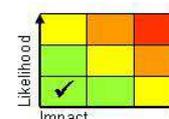
Conditions are expected to be close to or even drier than normal over the coming days so whilst there will be heavy showers and thunderstorms in places any areas seeing above average rainfall will be very localised. However, with recent reports of impacts due to flooding in the region there is likely to be heightened sensitivity following a wetter than average period recently.

Discussion

A strong positive Indian Ocean Dipole (IOD) event continue although with the MJO now in Phase 4/5 this may be temporarily reducing the rainfall signal over east Africa. Based on the strength of the positive IOD event (largest since at least 2001) above average rainfall is likely to return over the coming weeks.

Expected Impacts

Continued increased likelihood of both flash flooding and flooding along some of the regions rivers. In additional there will be a locally enhanced risk of land/mudslides where steep terrain.



Northern Algeria and Tunisia – See *European* section.

Middle East

Nil.

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Asia

South China Sea – See *Tropical Cyclone* section

Andaman and Nicobar Islands (India and Myanmar) – See *Tropical Cyclone* section

Gujarat, North-western India – See *Tropical Cyclone* section

Australasia

Nil.

Additional Information

Tropical Storm Halong has formed over the western Pacific Ocean. However this system is expected to remain well away from land.

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 may bring some relief in the form of rainfall, although this is not expected until later in the week at the earliest.

Issued at: 040820UTC **Meteorologists:** Mark Sidaway / Brent Walker

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