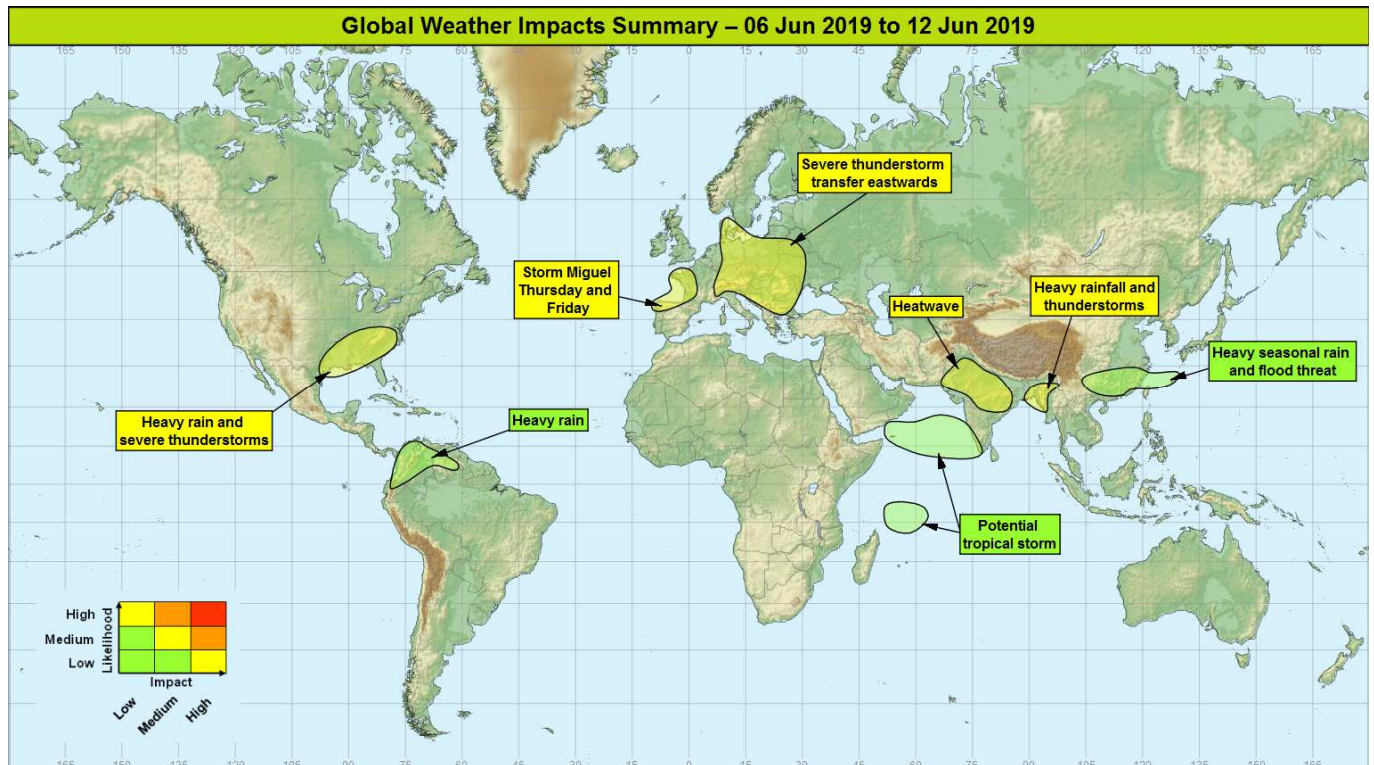


Global Weather Impacts – Thursday 6th to Wednesday 12th June 2019

Issued on Thursday 6th June 2019

HEADLINES

- Very heavy seasonal rainfall and thunderstorms for Bangladesh and Myanmar.
- Heavy rain and severe thunderstorms across continental Europe and southern USA.
- Pre-monsoon heatwave continuing across parts of India and Pakistan.
- Storm Miguel likely to bring disruptive winds to the far north of Spain and western France.



DISCUSSION

Tropical Cyclones

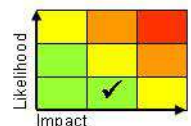
The following areas are being monitored for potential developments:

Indian Ocean, including Oman, Yemen and western India

Weather

There is a low likelihood of a tropical storm development in the western Indian Ocean, but with low confidence for where this development could take place.

- Over the last few days there has been a decreasing signal for tropical storm development in the northwest Arabian Sea and this is now considered a very low likelihood. However, there is still the possibility of heavy rain for southwestern Oman or southeastern Yemen, with the island of Socotra likely to see 100-150mm (the average June rainfall in this region is less than 40mm).
- Over the eastern Arabian Sea there is a growing threat of a tropical storm developing early next week. Again heavy rainfall is expected within this area with up to 150 mm in 24 hours possible along the southwest coast of India, perhaps as far north as Mumbai by next Tuesday.
- In the Southwest Indian Ocean there is a continued low likelihood of a tropical storm forming near the Seychelles this weekend.



This forecast may be amended at any time

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Discussion

An Equatorial Rossby Wave couplet developed in the wake of the MJO as it moved across the western Indian Ocean. This provides the focus for areas organised deep convection with some models showing the potential for these to consolidate into tropical storms to the north and south of the Equator at times. The more significant development will be the northern feature that will produce very heavy seasonal rainfall even if a tropical storm does not form.

Expected Impacts

Flash flooding looks like the main threat, but with a lower likelihood of dangerous maritime conditions and damaging coastal winds.

Europe

Continental Europe

Weather

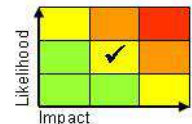
A threat of further severe thunderstorms will gradually transfer east from Belgium, Netherlands, Denmark and Germany into Poland, Belarus and the Baltic countries through the next 3-4 days. These storms could produce up to 50-75 mm of rain in a few hours, along with large hail, frequent lightning and very strong winds. However, many areas will not see these storms.

Discussion

A warm continental plume across central and eastern Europe will be engaged by a longer wave upper trough that gradually progresses eastwards. The result will be forecast profiles showing large CAPE (in excess of 3000 J/Kg), with enough vertical wind shear to produce organised deep convection, perhaps with isolated supercells and MCS. There are still differences between models regarding the exact timing and shape of troughs and where the favourable shear environment phases with CAPE, but there is enough evidence for a low likelihood of medium impacts from severe storms.

Expected Impacts

Flash flooding along with power outages and disruption to the transport (especially aviation) network is possible. Large hail is likely to cause disruption to transport and damage to crops, some buildings and vehicles.



Western France and far north of Spain

Weather

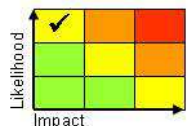
An area of low pressure, named Storm Miguel by the Spanish Meteorological Agency, is expected to cross Iberia on Thursday morning before rapidly deepening as it crosses Biscay. This will lead to a spell of strong and likely disruptive winds from Thursday over northwest Spain before extending to France on Friday. Winds are likely to gust 60-70 mph in exposed coastal areas with 50-60 mph gusts extending inland over France. Whilst this area is used to strong wind events this is more unusual during the summer which may make impacts more likely.

Discussion

A jet streak running around the base of the quasi-stationary longwave trough over the E Atlantic/W Europe is now engaging a marked baroclinic zone to the northwest of Iberia. This resulting in vigorous cyclogenesis during Thursday as the surface low crosses the jet axis. There is good model agreement that the low will track across Biscay and then over NW France during Friday.

Expected Impacts

Disruption to maritime and aviation activities. Smaller risk of damage to property or infrastructure. Given the time of year, there is an increased chance of damage to temporary structures. Large waves likely along the coast with an increased risk of minor coastal flooding.



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North America

Southern USA

Weather

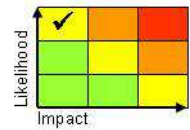
Heavy rain and thunderstorms will affect parts of southern USA through the rest of the week and weekend. Some places could see up to 100-150 mm in a 24 hour period.

Discussion

A plume of tropical air from the Gulf of Mexico will be drawn north and east across the southern states during Thursday. The plume will be engaged by a low latitude upper trough leading to areas of severe convection over the next few days.

Expected Impacts

Flash flooding is the most likely impact, but frequent lightning, large hail, damaging winds and tornadoes are also possible and may cause localised disruption and damage.



Central America and Caribbean

Nil significant.

South America

Ecuador, Colombia, Venezuela and Guyana

Weather

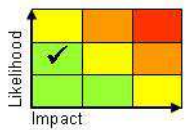
A continuation of the enhanced seasonal rainfall over northwest South America with a further 250-300mm in some places. The highest rainfall totals most likely over west facing slopes of the Andes mountains in Colombia.

Discussion

The ITCZ remains shifted a little south relative to normal, with the reduction in the usual wet seasonal rains withdrawing northwards from this region delayed. A series of African Easterly Waves will result in peaks of rainfall. Largest rainfall amounts are likely to be on Andes, as elevated terrain and orographic lift provide the most reliable trigger mechanisms for convection.

Expected Impacts

Flash flooding and landslides are possible, along with the potential for river flooding with this region having already experienced an anomalously wet month.



Africa

Nil significant.

Middle East

Southwestern Oman and southeastern Yemen – see *Tropical Cyclones* section

Asia

Bangladesh and northern Myanmar

Weather

Intense showers and thunderstorms are expected during the next 3 or 4 days, but with the focus shifting further south each day. This will mean that the threat of very heavy rainfall will transfer south from Dhaka to Cox's Bazar through the rest of the week. Up to 500 mm of rain could fall in a few days, which would be around the average rainfall for the whole of June in this region.

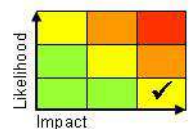
Discussion

The sub-tropical shortwave upper troughs, that are an ingredient in the development of severe thunderstorms in this region, continue to weaken through the next few days.

This leaves the main driver for the deep convection being the very warm and moist southwesterly flow from the Bay of Bengal associated with the onset of the SW Asia monsoon.

Expected Impacts

Flash flooding looks like the main impact, especially for vulnerable populations within the Cox's Bazar district.



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Central and northern India, along with eastern Pakistan

Weather

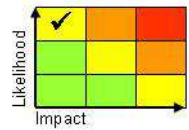
The pre-monsoon heatwave will decline over the next 2-3 days, before becoming re-established over the weekend and through the early part of next week. Temperatures will increase to the high 40s of Celsius and locally into the low 50s Celsius, around 5 to 10°C above average.

Discussion

The arrival of the monsoon rains into India are currently around 10 days slower than average, but may well jump northwards over the next week as the MJO propagates eastwards. As a result it is difficult to make predictions about arrival times across NW India and Pakistan, but an extended heatwave may lead to increasingly high impacts over the next few weeks.

Expected Impacts

Significant threat of heat stress and power failures.



Southern China, Taiwan and Ryukyu Islands, Japan

Weather

Heavy rainfall and thunderstorms will extend east from central China, affecting South Korea and parts of western Japan on Thursday, before drifting south into southern China by the end of the week and then becoming slow moving.

Up to 300 mm of rain could fall in a few days and there is also the potential for severe thunderstorms that could produce hail and strong winds, with a deep area of low pressure likely to develop for a time in the Yellow Sea, producing gales and very rough seas.

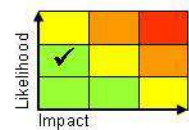
Discussion

There is good model agreement for upper troughing to engage a surface warm plume and the seasonal monsoon (Mei-yu / Baiu) front during the rest of this week. This will destabilise the low-level plume, resulting in large CAPE/vertical wind shear profiles bringing the threat of severe convection, and developing a deep depression for a time in the Yellow Sea.

A further upper trough extension across the Korean Peninsula will push the monsoon front further south into the weekend.

Expected Impacts

Flooding and flash flooding are likely to be the main impacts, especially in urban areas. Disruption to transport and infrastructure is also likely in what is a densely populated area. Lower likelihood of dangerous sea conditions in the East China Sea later in the week.



Southwest India – see *Tropical Cyclones* section

Australasia

Nil significant.

Additional information

Nil.

Issued at: 060710 UTC **Meteorologist:** Neil Armstrong / Chris Bulmer

Global Guidance Unit

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