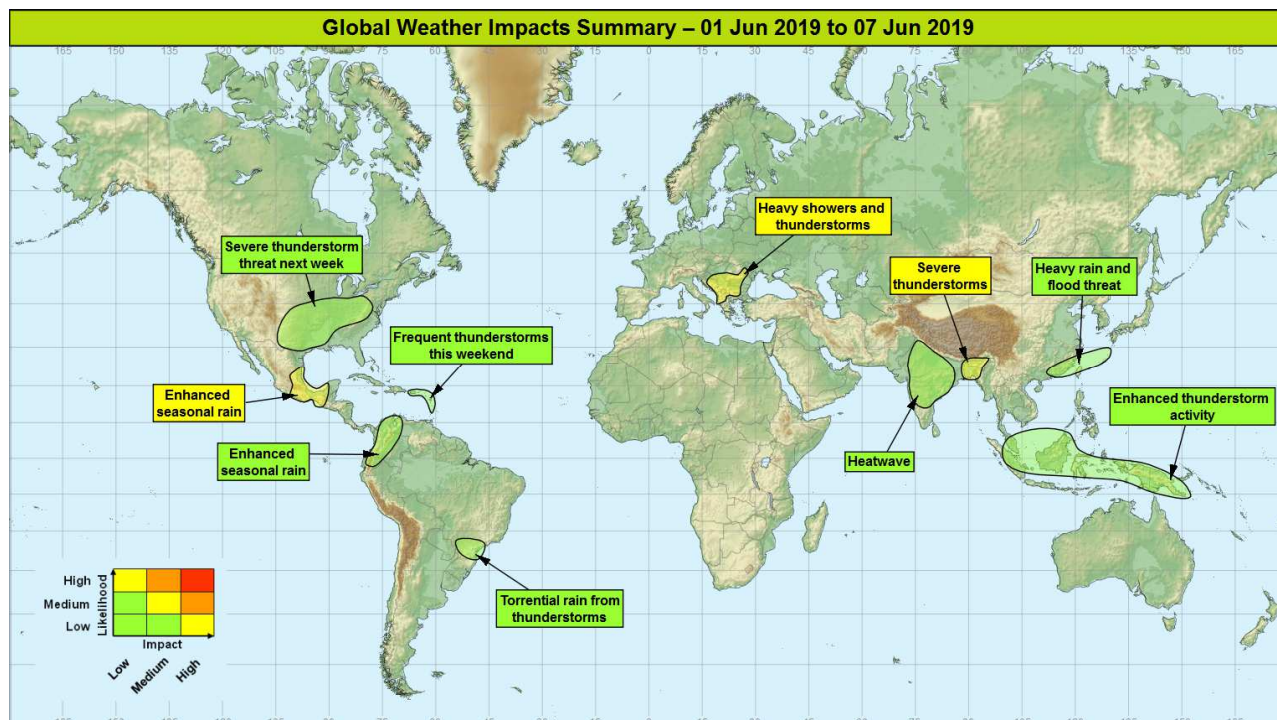


Global Weather Impacts – Saturday 1st June to Friday 7th June 2019

Issued on Saturday 1st June 2019

HEADLINES

- Intense rainfall continuing across parts of Central America.
- Heavy showers and thunderstorms over southeast Europe until the middle of next week.
- Daily severe thunderstorms over northeast India and Bangladesh.



DISCUSSION

Tropical Cyclones

There are no active tropical cyclones and no tropical cyclones are forecast to develop over the coming week.

Europe

Southeast Europe / The Balkans

Weather

Heavy showers and thunderstorms will continue across this region over the coming days. The most intense rain will be during the afternoon and evenings with as much as 50-80mm falling in places within a few hours. However, each day many areas will miss the heaviest rain. Over the course of the next 5 or 6 days accumulative rainfall totals of 150-200mm may build up if areas see successive days of heavy rain, this perhaps most likely over parts of Romania, Serbia as well as Bosnia and Herzegovina. This would be over twice as much as average monthly rainfall. In addition to rain, thunderstorms will produce frequent lightning and hail. Heavy showers should ease in these areas during Tuesday and Wednesday.

Discussion



This forecast may be amended at any time

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A cut-off vortex centred over the southern Adriatic will remain slow-moving until the middle of next week. Daily open cell convection is likely, tending to be focused over mountainous areas. In addition, a number upper short-waves moving N on the forward side of the vortex will periodically engage low-level high WBPT plumes leading to areas of more organised convection/showers/thunderstorms at times and a risk of MCS developments. An upper trough digging down across NW Europe during midweek should help displace the filling vortex NE'wards. This next upper trough will then bring a renewed risk of thunderstorms across large parts of central and E'ern Europe next week.

Expected Impacts

Localised flash flooding could occur each day along with an increased risk of landslides in mountainous areas. Interruption to power supplies and damage to infrastructure and property is possible due to lightning, hail and strong wind gusts. River flooding is not expected.

North America

Central and north-eastern USA

Weather

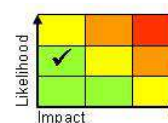
Following a break period there is an increased risk of outbreaks of severe thunderstorms developing again next week. The risk likely to be across the Central and Southern Plains early in the week before extending further eastwards. These storms are likely to bring a combination intense rainfall, very strong winds, large hail and tornadoes. However, at this stage there is uncertainty over which areas will be worst affected.

Discussion

The Pacific North American Index (PNA) has now eased back to neutral/weakly positive with a more zonal upper pattern leading to a decrease in storm activity. However, another spell of negative PNA is likely next week, increasing the severe storm threat again.

Expected Impacts

Flash flooding along with damage to property and infrastructure from large hail, damaging winds and tornadoes. Disruption to travel, particularly aviation. Major river flooding continues across parts of central and southern USA and is likely to continue well into June.



Central America and Caribbean

Southern Mexico and Guatemala

Weather

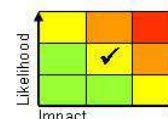
Further heavy rain and thunderstorms likely for the next week although the focus of the highest rainfall amounts is forecast to shift further north compared to recent days. Some places will see up to 75-125 mm in a 24 hour period, with up to 400 mm accumulating through the next week in a few spots. The most active storms are likely transfer from the Pacific coast to across east/southeast Mexico over the weekend and into early next week.

Discussion

An active convective regime remains in place, with a Central American Gyre having formed. This will enhance the onshore flow from the Gulf of Mexico over the weekend and into early next week with activity tending to ease further S.

Expected Impacts

Flash flooding, with significantly increased risk of landslides in mountainous areas. Lightning and strong gusty winds will be additional hazards.



Caribbean (Lesser Antilles (from St Vincent north))

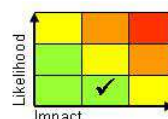
Weather

More frequent thunderstorms than are normally seen in the Caribbean in late May/early June are expected over the weekend before easing early next week. These could produce up to 50-75 mm of rain in a 6 hour period, with some islands seeing 75-100 mm in total.

Discussion

A low-latitude upper trough sinking across the region will enhance showers and thunderstorms. An African Easterly Wave may also play a part in organising convective activity. Conditions will improve in the wake of this trough early next week.

Expected Impacts



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Flash flooding and landslides are the most likely impacts. The severe weather could impact islands that are still recovering from the impacts of the 2017 Hurricane season.

South America

Ecuador, Colombia and the far west of Venezuela

Weather

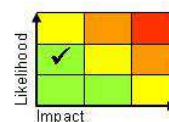
A continuation of the enhanced seasonal rainfall over northwest South America with a further 250-300mm in some places over the coming week. The highest rainfall totals most likely over west facing slopes of the Andes mountains in Ecuador and Colombia.

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. Enhanced low-level westerly flow onto the Pacific coastline of South America, coming over anomalously warm sea temperatures, will provide ample warm, moist and unstable air realised as heavy showers across the region. 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.



South Brazil

Weather

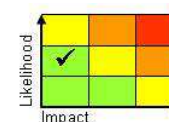
Torrential rain in places along with thunderstorms is expected over the weekend before easing early next week. Up to 150 mm of rain could fall in a 24 hour period, with 200 mm possible in places over the weekend (average monthly rainfall is around 100 mm).

Discussion

A trough in the STJ will engage a plume over southern Brazil generating a band of thunderstorms. High PWAT and tall, skinny CAPE profiles will contribute to large volumes of rain. The upper trough is forecast to move through early next week with the high WBPT retreating N.

Expected Impacts

Localised flash flooding and increased chance of landslides in mountainous areas. Localised strong winds and frequent lightning are additional hazards which may cause damage to property and disruption to transport and utilities.



Middle East

Nil significant.

Asia

Northeast India, Bhutan and Bangladesh

Weather

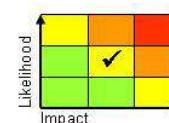
Daily rounds of severe thunderstorms are expected across this region through much of the next week. As well as intense rainfall (up to 150 mm daily, although many areas will miss the heaviest rain), large hail and strong winds are possible. Some places could see as much as 700-900 mm of rain during the next week, this equivalent to 2-4 times the average for this time of year. During next week there is an increased chance of severe thunderstorms developing further south over Bangladesh.

Discussion

Shortwave upper troughs in the sub-tropical jet will transfer east over northern India and Nepal to lead to destabilisation of the very warm and moist airmass, and the development of diurnal thunderstorms. High CAPE and vertical wind shear will aid the development of severe, long-lasting storms, with hail and strong winds additional hazards.

Expected Impacts

Localised flash flooding and increased chance of landslides in mountainous areas bringing a danger to life. Large hail, strong winds and frequent lightning are additional hazards which may cause damage to property and disruption to transport and utilities. Increased but still very low likelihood of impacts for vulnerable populations within the Cox's Bazar district.



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India**Weather**

The pre-monsoon heat wave is expected to intensify across parts of India through the coming week, with maximum temperatures widely into the mid 40s of Celsius, around 5 to locally 10°C above average. This event could become more significant through the following week or two due to the anticipated late arrival of the monsoon rains.

Discussion

There are signals that the arrival of the monsoon rains into India will be around a week later than usual. This will allow for an extended period of day on day temperature rises that could result in a prolonged pre-monsoon heat wave.

Expected Impacts

Increased threat of heat stress and power failures.

**South-eastern China, Taiwan and the Ryukyu Islands of Japan****Weather**

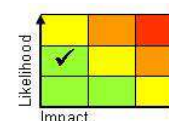
Very heavy rainfall will continue to affect parts of south-eastern China, Taiwan and the Ryukyu Islands of Japan until early next week. Over 100 mm is possible in places over 24 hours. In some areas this could lead to event totals of 250-350 mm. This would be over the average monthly rainfall for May (which is 150-300 mm). This rainfall is associated with an active pulse of the seasonal Mei-yu rains. In addition, severe thunderstorms could produce large hail, very strong winds and frequent lightning.

Discussion

There is good model agreement for an upper trough to move east and engage a surface warm plume and the seasonal monsoon (Mei-yu) front from Friday through to Monday. This will destabilise the low-level plume, resulting in large CAPE/vertical wind shear profiles bringing the threat of severe convection.

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.

**Indonesia, Brunei, Malaysia, Singapore and Papua New Guinea****Weather**

A period of enhanced thunderstorm activity will bring accumulations of up to 80-120mm per 24 hours to some parts of this area. This could lead to accumulations over a few days of 300 mm. (For comparison the May/June average is around 200 mm).

Discussion

The MJO now in Phase 2 over the Indian Ocean is likely responsible for the enhanced rainfall signature over the next week or so. Activity probably increasing as the MJO moves E over the Indian Ocean.

Expected Impacts

Flash flooding and landslides in steeper terrain are likely to be the main impacts.

**Australasia**

Nil significant.

Additional information

Nil.

Issued at: 010330 UTC **Meteorologist:** Chris Bulmer

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