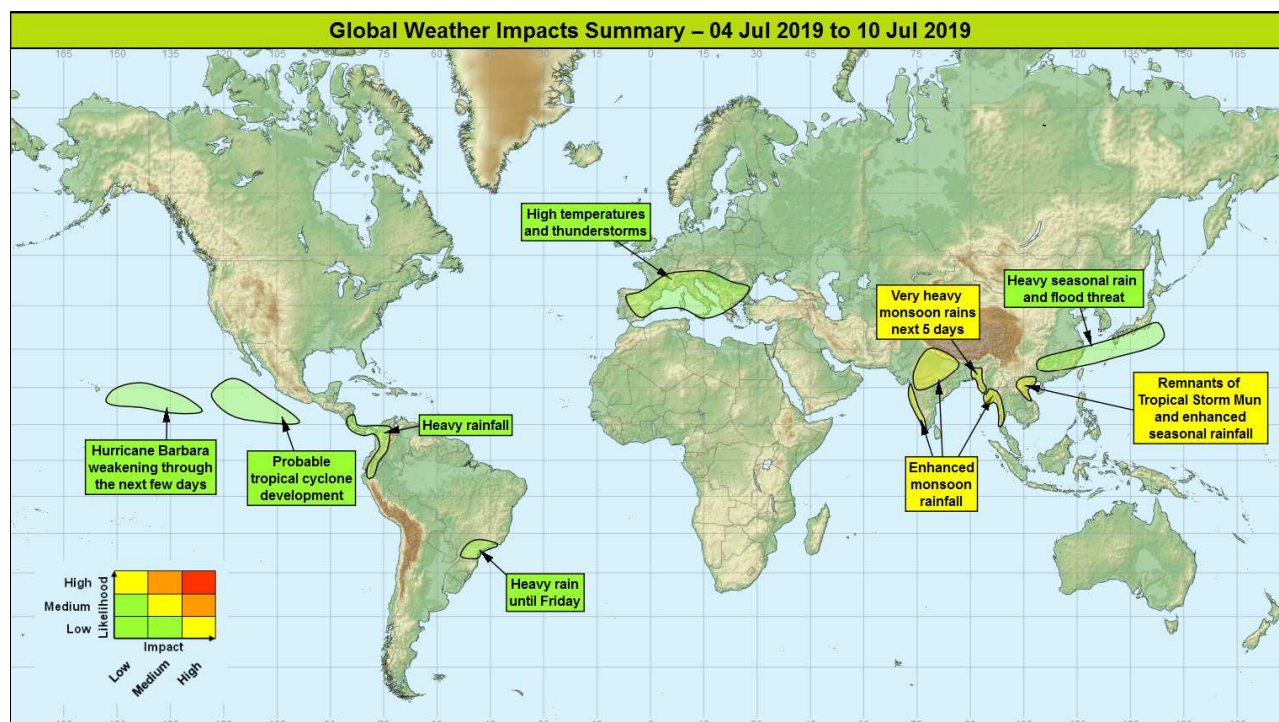


Global Weather Impacts – Thursday 4th to Wednesday 10th July 2019

Issued on Thursday 4th July 2019

HEADLINES

- Heavy monsoon rains continue across many parts of southern and eastern Asia.
- Cox's Bazar looks to be at an increased likelihood of flooding and landslides from Friday.
- Remnants of Cyclone Mun continuing to bring heavy rain to Vietnam on Thursday.



DISCUSSION

Tropical Cyclones

Hurricane Barbara – eastern Pacific Weather

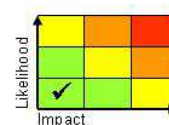
Barbara remains a major hurricane, but with 1 minute sustained winds having decreased to 130 mph (category 3 on the Saffir-Simpson Scale) from the peak 1 minute speeds of 155 mph in recent days. Barbara is expected to continue weakening as it tracks westwards, weakening to a tropical storm or depression before it gets close to Hawaii next week.

Discussion

There is good model agreement that Barbara will continue to track west to north-westwards over the coming day, quickly weaken towards the weekend as it encounters cooler SSTs as well as stronger wind shear.

Expected Impacts

Any impacts will be limited to maritime activities.



This forecast may be amended at any time

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Remnants of Tropical Storm Mun – (Northern Vietnam and southern China)

Weather

Tropical Storm Mun developed on Monday in the Gulf of Tonkin, with sustained winds of 40mph. Overnight the system made landfall across northeast Vietnam, and has since weakened to a remnant low. Observations indicate very large rainfall accumulations across northern Vietnam on Wednesday, with further heavy rainfall (up to 200 mm) likely in places on Thursday, before drier conditions follow.

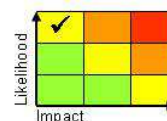
Discussion

After landfall Mun readily weakened to a remnant low. The moisture footprint associated with the system is likely to bring one further day of heavy rainfall to northern Vietnam, before mean swept westwards and merging into the monsoon plume.

Expected Impacts

There will be a significant threat of flash flooding and an enhanced risk of landslides.

The following area is being monitored for possible tropical cyclone development:



East North Pacific

Weather

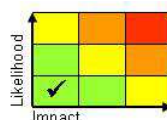
Further tropical storms could develop in the wake of Barbara through the next week in the Eastern North Pacific, although any systems that do develop will track westwards and remain over the open Pacific ocean.

Discussion

Good signal from all models for at least one more tropical storm development in this region along the ITCZ, influenced by African Easterly Waves and the weak MJO.

Expected Impacts

Any impacts will be limited to maritime activities.



Europe

Southern Europe

Weather

Anomalously high temperatures will remain focused across southern Europe, predominantly south of the Alps. Temperatures across southern parts of the continent are likely to remain around 5 °C above average through much of the coming week, and could still reach 35-40 °C in places. Thunderstorms will form in places each day, especially from Sunday. These could produce 30-50 mm of rainfall in a few hours, along with large hail, gusty winds and frequent lightning.

Discussion

There will be a sharp north-south divide across Europe regarding airmasses, with the anomalous heat restricted to southern parts. A transient upper ridge will greatly reduce the deep convection risk in the region for the rest of the week compared to recent days, but a more zonal flow will develop from the weekend, increasing the deep convective threat again.

Expected Impacts

High temperatures will bring heat health impacts to vulnerable populations, particularly given the spell of very warm nights (minima >20 °C), whilst placing strain on some utilities and transport networks (e.g. railways). Increased likelihood of wildfires. Flash flooding, large hail and damaging winds are possible where intense thunderstorms form.



North America

Nil.

Central America and Caribbean

Nicaragua, Costa Rica and Panama – see *South America* section.

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South America
Southeast Brazil
Weather

A band of heavy, thundery rain will move slowly north across south-eastern Brazil through the next couple of days. Daily rainfall totals of 50 to 75 mm are likely, with some locations perhaps seeing in excess of 100 mm over the next few days. Frequent lightning and strong gusty winds will be additional hazards.

Discussion

The South Atlantic Convergence Zone is expected to be active through the next couple of days, moving erratically northward. Strong low level wind convergence combined with strong mid/high level flow roughly parallel to the front will support training of thunderstorms along the slow moving boundary, and thus potential for large rainfall totals to accumulate in the high PWAT airmass north of the front.

Expected Impacts

Localised flash flooding, potentially of urban areas, and localised wind/lightning damage.

**Western Colombia, Ecuador, Nicaragua, Costa Rica and Panama****Weather**

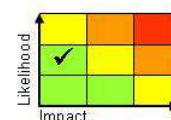
Increased frequency of heavy showers and thunderstorms are expected in this region through the next week, although Ecuador will not likely see this until the weekend. Up to 250 mm of rain could fall in places, which is in excess of an average monthly rainfall at this time of year in southern parts of Central America, and well above the average monthly rainfall further south, especially in Ecuador where it is now the drier season.

Discussion

The combination of an approaching active MJO phase and the westward progression of African Easterly Waves will enhance seasonal rainfall in this region through the next week. In addition the potential formation of Central American Gyre is signalled in the southwestern Caribbean, and these systems can lead to exceptional rainfall accumulations across Central America during the rainy season.

Expected Impacts

An enhanced threat of flash flooding and landslides will be the most likely impacts this week.

**Africa**

Nil.

Middle East

Nil.

Asia

Southern China and northern Vietnam – see *Tropical Cyclones* section.

Southern Bangladesh and northwestern Myanmar**Weather**

There is a significant threat of very heavy monsoon rainfall in this region from Friday, with up to 1000 mm of rain (which is equivalent of a months worth of rain) likely to fall in places over a 5 day period. Most places will see over 250 mm during this time. Towards the middle of next week rainfall accumulation are expected to fall close to climatology.

Discussion

The development of a monsoon low pressure system through the weekend across northern India will help to strengthen the very moist and unstable southwest monsoon flow into this region. There is a consistent signal from deterministic and ensemble output for a significant monsoon rainfall event in this region, within the zone affected lies the Cox's Bazar humanitarian camps.

Expected Impacts

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There is an increased threat of flooding and landslides in this region, which included Cox's Bazar humanitarian camps. The vulnerability of these camps is thought to be much reduced compared to 12 months ago, due to the actions of international organisations. Measures taken to reduce vulnerability include the relocation of people from the more hazardous areas, re-vegetation programs to improve land stability, improved drainage/ water supply, and making materials available to improve shelters. As a result the likelihood of international resources (additional to those already present) being required to assist with the impacts of this event is assessed to be low.

Large parts of India, along with much of western Myanmar

Weather

Heavy monsoon rain is expected in these locations through the coming week, with many areas seeing in excess of 200 mm.

Several monsoon low pressure systems will bring heavy rainfall (up to 500 mm in a few days) to parts of central and northern India, which is equivalent to around two months worth of monsoon rainfall.

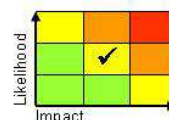
Meanwhile, heavier than normal monsoon rainfall will continue across parts of western India, with 300-500 mm of rain signalled in places over the coming week, which is close to a month's worth of rain for somewhere like Mumbai.

Discussion

The Indian Summer Monsoon is expected to continue in an active phase over the next week due to the MJO continuing to slowly move through the Pacific. There is a strong model signal for a monsoon depression to slowly track west-northwest across central India through the next few days, with another system following further north next week. Heavier and more frequent than normal showers/thunderstorms are also signalled over the next week for the far west of India, again associated with enhanced monsoon flow as the monsoon slowly marches northwards.

Expected Impacts

Torrential rain will increase the threat of flooding and landslides.



Central China and south-western Japan

Weather

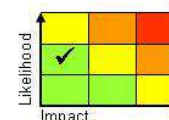
Torrential rain and severe thunderstorms associated with the seasonal rains will affect this region through much of the next week, with 200-400 mm, locally 700 mm falling over the next week. This is around a month to two month's worth of rain for some locations.

Discussion

Strong convergence along the Mei-yu/Baiu front will continue to provide a focus for intense rainfall and a threat of severe storms. Semi-permanent upper troughing across the northeast of China will engage the monsoon frontal plume through much of the coming week, resulting in persistent, heavy rains in places.

Expected Impacts

Both fluvial and flash flooding is possible, with an additional risk of landslides in mountainous areas. Disruption to transport and infrastructure is likely in what is a densely populated area due to the slow moving seasonal heavy rainfall.



Australasia

Nil.

Additional information

Nil.

Issued at: 040755 UTC **Meteorologists** Paul Hutcheon / Nick Silkstone

Global Guidance Unit

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