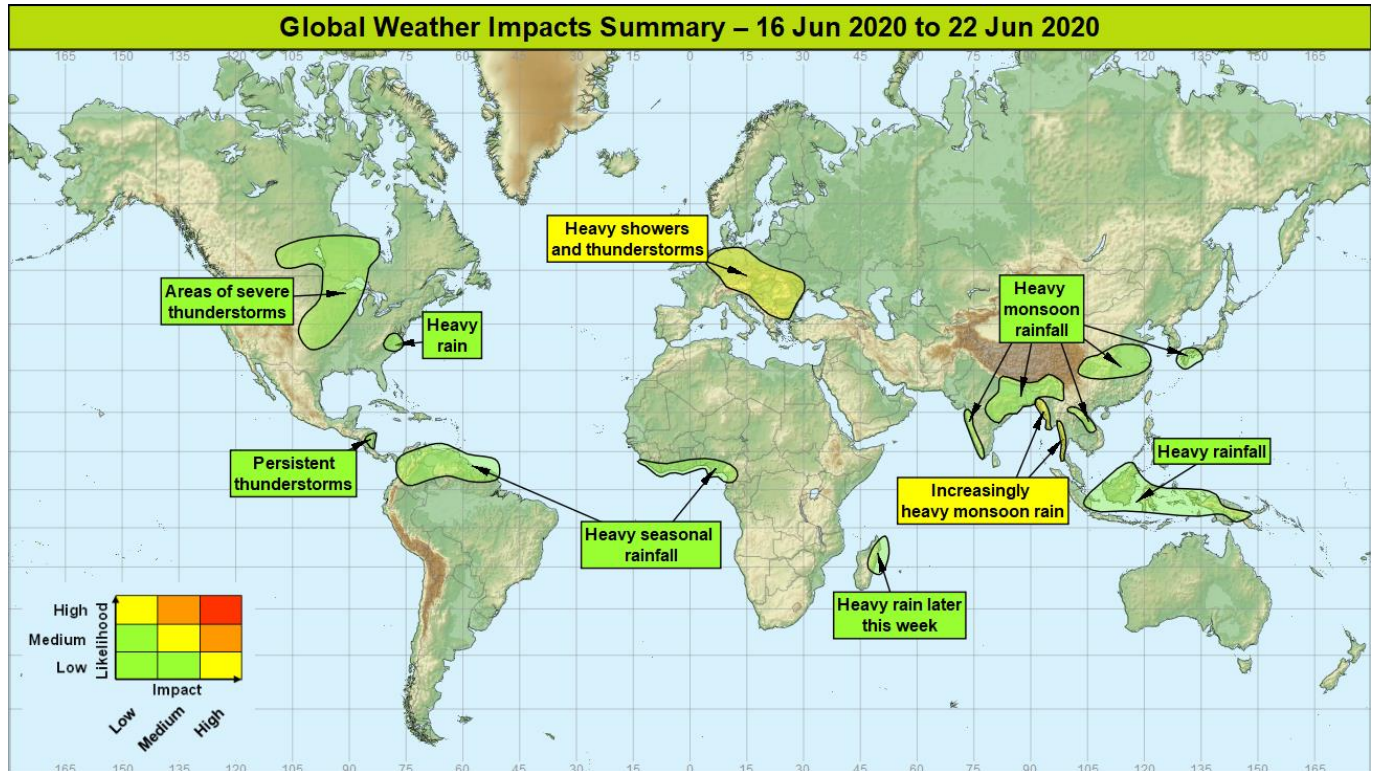


Global Weather Impacts – Tuesday 16th to Monday 22nd June 2020

Issued on Tuesday 16th June 2020

HEADLINES

- Very heavy monsoon rainfall for parts of South and East Asia including Cox's Bazar.
- Heavy showers and severe thunderstorms expected over parts of continental Europe.



DISCUSSION

Tropical Cyclones

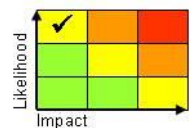
NIL

Europe

Central and south-east Europe Weather

Whilst much of Europe will see thunderstorms through the next few days, Central and SE Europe are expected to see the most widespread and intense of these. Daily thunderstorms bringing widely 20-40, but locally 50-80mm of rain in a few hours will develop over south-east Europe at first, whilst from mid-week a more organised band of thundery rain is expected to arrive across Germany, spreading east to merge with the initial system and develop a broader area in which organised thunderstorms could bring 100-150mm of rain (twice the average for June) in a few hours to some locations.

Discussion



This forecast may be amended at any time

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A warm plume resident across E Europe will see widespread showers and thunderstorms triggered by insolation as well as a number of small scale upper cold pools. Here the showers will be heaviest initially, given high PWAT air and in some cases, fairly slack steering flow. Storms further west in slightly lower WBPT air will initially be less intense, but from mid-week the larger scale vortex close to S UK is signalled to elongate and extend a trough across it, amalgamating the two zones bringing deep and organised instability which will last well outside the diurnal cycle and begin to exhibit a pseudo frontal element. A mixture of convective modes are likely to exist across the area but the larger scale features have been focussed on as these carry higher confidence – and with high CAPE/high PWAT there it is likely that some places within the area will see some significant flash flooding and storm damage.

Expected Impacts

Flash flooding events looks likely, with a risk of some hail and wind damage too. Lightning impacts on transport and power networks are likely.

North America**Eastern USA****Weather**

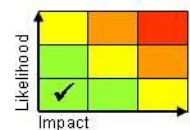
Spells of heavy rain and some thunderstorms will continue across the region for the next couple of days. Around 50-75 mm of rain could fall fairly widely daily, with up to 150 mm falling in total in a few locations by Wednesday.

Discussion

A cut-off vortex over SE US has induced cyclogenesis just offshore of NE Florida and this is providing a moist and deeply unstable E'ly flow onto the coast of North Carolina. A succession of heavy showers and thunderstorms, merging into persistent rain, will affect this region, before the system occludes out and drift northwards through Wednesday whilst slowly fading.

Expected Impacts

Localised flash flooding is the primary hazard, particularly in the vicinity of Raleigh.

**North-Central USA, south-Central Canada.****Weather**

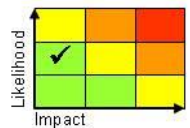
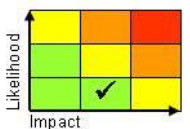
Areas of thunderstorms, locally severe, will develop in this broad region over the next few days. Over the next couple of days, heavy rain and organised thunderstorms across Central Canada will generate areas of 30-50, locally 70-80mm of rain per day, some places perhaps seeing 100mm over the next couple of days. Activity will tend to spread east and south through the latter part of this week. Lightning, large hail and isolated tornadoes are also likely.

Discussion

A weakly negative PNA pattern with troughing over NW North America and a downstream ridge over Central US is associated with large scale southerly flow and broad advection of very warm, moist air across Central US and into Central Canada. Over the next couple of days, the warm front will interact with a number of increasingly complex vortices to generate areas of thunderstorms which merge into increasingly organised spells of rain drawn both west in the circulation of the associated surface as the system begins to occlude, and E as they reach the mid-latitude westerlies. As the Pacific trough progresses, forcing will become focussed increasingly far S across parts of North Central US, priming things for outbreaks of severe thunderstorms and MCS's here later in the week.

Expected Impacts

Areas of flash flooding are possible, with urban areas mainly at risk. Localised hail and wind damage, both from straight line winds and also isolated tornadoes.

**Central America and Caribbean****Nicaragua (especially Caribbean Sea coast)****Weather**

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A steady stream of thundery showers running west from the Atlantic will bring fairly persistent heavy rain to large parts of Nicaragua, with a focus on the eastern coast. Some places will see 50-75mm in a day, and there is a chance that some locations could see in excess of 200mm over the next 5 days, which is close to a month's worth of rain for this location.

Discussion

A number of African Easterly Waves are expected to run across or to the north of this region over the next few days, bringing enhanced easterly flow in their wake and concentrating moisture and showers/thunderstorms in the convergent flow as it slows inland.

Expected Impacts

Areas of flooding, mainly flash flooding, are possible, along with landslides in elevated terrain. Some parts of Nicaragua may be more sensitive given the impacts from Tropical Storm Amanda earlier this month.

South America

Colombia, Venezuela, Guyana, Suriname and French Guiana

Weather

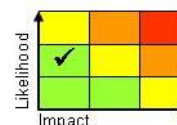
Showers and thunderstorms will be more widespread and intense than usual across the region over the next week. Widespread daily accumulations of 50-75 mm are expected with some regions having up to 250 mm by early next week.

Discussion

The ITCZ across northern parts of South America will be active than normal over the next week, mainly due to high SSTs in the tropical Atlantic Ocean.

Expected Impacts

Increased risk of flash flooding across the region.



Africa

Southern parts of West Africa

Weather

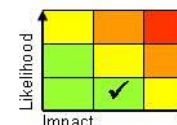
Heavy showers and thunderstorms are probable at times through the next week, likely coming in bursts of one to two day events. Each event could produce 50-75mm of rain, with total accumulations of up to 150mm possible through the next seven days. To the north of this area dense dust storms are likely at times from dry thunderstorms. Through June this coastal region usually sees 250-500mm of precipitation.

Discussion

A number of Africa Easterly Waves are signalled to affect this region through the next week, bringing periods of organised deep convection with much less widespread convection in between. It has to be said that forecasting of the convective detail at anything other than very short range is very low confidence, such that no further details can be given in this broad assessment. Volatility in NWP output for this region over the past 24 hours speaks to this. Just to the north of the highlighted region, the convection is likely to produce strong dry downdraughts that will result in dense Haboob dust storms.

Expected Impacts

Isolated flash flooding events could occur, with an increased threat of landslides where terrain is steep.

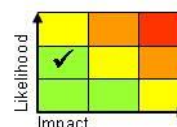


Northeast Madagascar

Weather

An area of heavy showers and thunderstorms, currently over the Central Indian Ocean, looks likely to drift south-westwards over the next few days to bring a spell of heavy and persistent rainfall to this region, possibly on Friday but more likely over the weekend. Rainfall amounts at this range are very uncertain, but there is potential for in excess of 500mm in the worst case scenario. This is much more than the average monthly rainfall for this time of year, but equally in excess of the monthly averages of the wetter austral summer months (c. 300mm).

Discussion



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A tropical low just on the southern side of the Equator, associated with the near Equatorial trough, is expected to drift slowly south and west on the periphery of the South Indian sub-tropical ridge. An element of development looks likely but the environment (strong shear) won't be conducive to organised tropical cyclogenesis. Nevertheless, a highly asymmetric system is expected to be accelerated onto the coast of NE Madagascar, bringing similar moisture and rainfall rates to those associated with tropical storms in the summer half of the year.

Expected Impacts

This region is used to heavy, tropical rainfall, but this does come at a more unusual time of year. There is likely to be an increased risk of flash flooding, and localised landslides in steeper areas.

Middle East

Nil.

Asia

West, central and northeast India, Bangladesh, northern Myanmar and Bhutan

Weather

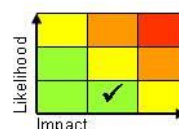
Another active pulse in the monsoon is signalled, with heavy rain and thunderstorms spreading more widely across this region as the monsoon progresses northwards. Rainfall across eastern and central India will be enhanced by a slow moving monsoon depression, which will also enhance the monsoon south-westerly flow across the northern Bay of Bengal. Each day, there will be the potential for 150-200 mm of rain to fall in places. In excess of 1000mm could fall in a few spots in each of the highlighted regions, which is two to three months' worth of rain in just a week in some places.

Discussion

The monsoon is expected to continue to progress northwards in an active phase through the coming week, with enhanced SW'ly flow bringing persistent rain/thunderstorms to the western Ghats, Bangladesh, and NE India. A monsoon depression forming over Chhattisgarh and becoming slow moving will concentrate large areas of rainfall here and in parts of Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, and Odisha through the middle of this week.

Expected Impacts

Chance of significant flash flooding and an increased threat of river flooding and landslides.



Western Myanmar and the far southeast of Bangladesh (including Cox's Bazar)

Weather

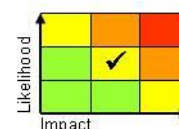
The monsoon heavy showers and thunderstorms are expected to become more frequent across this region early this week. Over 500mm of rain is possible in a few places over the next few days, around 60% of the June average for Cox's Bazar.

Discussion

A veering low-level flow is expected to generate more widespread deep convection and drive it onto the coastal fringe of Myanmar and southeastern Bangladesh during this week, enhanced by the development of a monsoon depression over NE India. The likelihood of impacts from this event has now been increased due to it extending into the Cox's Bazar area.

Expected Impacts

Increasing threat of flash flooding and landslides.

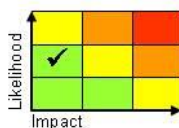


Southern and central China, western Japan, Laos, and Vietnam

Weather

Heavy monsoon rainfall is expected across the region over the next seven days. Some places are likely to see 100-150mm per day in association with heavy and persistent rain across quite a wide area of this region. 300-500mm of rainfall is most likely in total across the wettest areas, which is above the average June rainfall in this region. There is also the potential for intense short period rainfall from thunderstorms.

Discussion



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Ongoing monsoon southerly flow into this area will continue to enhance moisture and wind convergence associated with the seasonal Mei-yu/Baiu front, leading to episodes of heavy rain and thunderstorms. Whilst the upper flow is not especially conducive to large-scale development, a number of shortwaves embedded within the flow will continue to trigger rainfall across a similar area along the quasi-stationary front, leading to large rainfall accumulations. Over two million people are already severely impacted by flooding in parts of China.

Expected Impacts

Increased threat of further flash and fluvial flooding as well as landslides.

Indonesia, Malaysia and Papua New Guinea

Weather

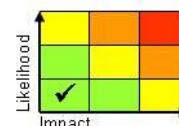
Above average rainfall will continue across this region in the form of heavy showers and thunderstorms. These will be capable of locally bringing 50 mm of precipitation in a short duration, with some locations likely to see 100-200 mm through the coming week. Average precipitation accumulations in June across this region are around 250 mm

Discussion

At least two Kelvin Waves that are currently active will cross this region through the coming days bringing eastward moving zones of enhanced shower and thunderstorm activity.

Expected Impacts

An increased risk of flash flooding and landslides in regions where terrain is steep.



Australasia

Nil.

Additional Information

Cox's Bazar, southeast Bangladesh

See the *Western Myanmar and the far southeast of Bangladesh* section.

Western Yemen

Isolated showers and thunderstorms should be confined to the Western Highlands or the western part of the Gulf of Aden coastline through the next seven days, with these showers posing a very low likelihood of an isolated flash flood event.

Issued at: 160720 UTC **Meteorologist:** D J Harris / Brent Walker

Global Guidance Unit

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