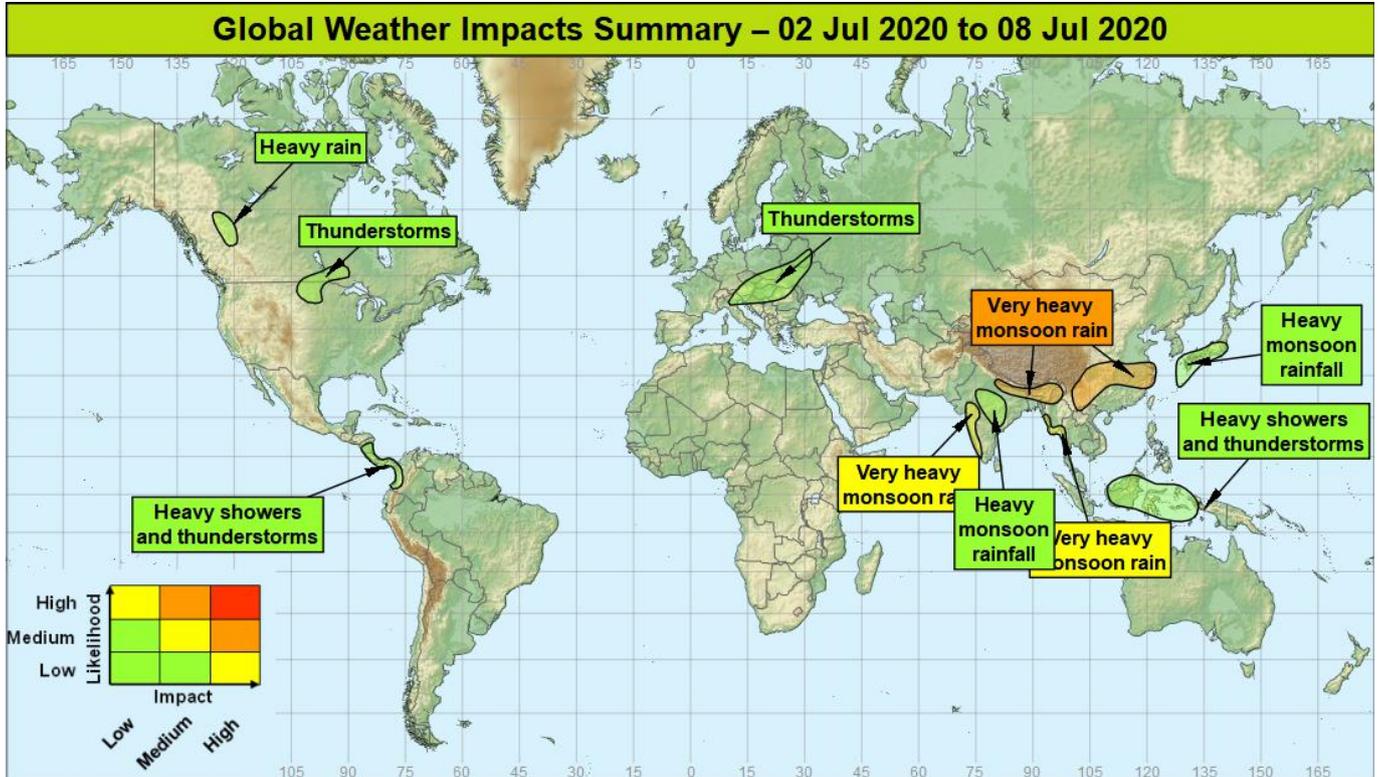


## Global Weather Impacts – Thursday 2<sup>nd</sup> July to Friday 8<sup>th</sup> July 2020

Issued on Thursday 2<sup>nd</sup> July 2020

### HEADLINE

- Very heavy monsoon rainfall continues for parts of South and East Asia



### DISCUSSION

#### Tropical Cyclones

There are no tropical cyclones in any basin. An area of interest approximately 800 km south of Acapulco, Mexico, may develop into a tropical cyclone over the coming days, but poses no threat to land.

#### Europe

#### Parts of central and south-eastern Europe.

##### Weather

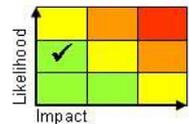
Thunderstorms are likely to develop over the next couple of days across a swathe of Europe extending from northern Italy north-eastwards toward Belarus and western Ukraine. Some of the storms could be severe with a risk of torrential rain (50 mm in an hour), large hail, frequent lightning and strong gusts of wind.

##### Discussion

A plume of high (18-20C) WBPT air will be engaged by shortwave upper troughs producing areas of heavy showers and thunderstorms. Forecast profiles support CAPE in excess of 2000 j/kg in places, with modest shear supportive of some organisation of storms. A more marked upper trough should drive the plume further south-east over the weekend.

##### Expected Impacts

Risk of flash flooding. Damage to crops from large hail is possible. Possible disruption to power supplies.



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**North America**  
**Western Canada**  
**Weather**

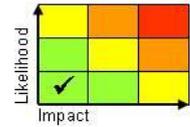
Heavy rain will continue to fall across parts of British Columbia and Alberta through the next couple of days. Around 50 to 100 mm is likely to fall widely, on top of the 30-50mm which fell through yesterday. This is a drier part of Canada, with the region typically receiving 50-75 mm in an entire month at this time of year.

**Discussion**

A deep depression over SW Canada forced by a potent upper trough extending/disrupting across the region will be slow moving for the next couple of days. Heavy and persistent rain is falling on the northern and eastern flanks of this depression, and will continue for another day or two. This part of Canada, east of the Rockies, is drier than further west and also further east towards the Great Lakes. Whilst this is not a large amount of rain it could be more impactful in this drier region.

**Expected Impacts**

Localised flash flooding is possible, with main impacts probably to travel in the region.



**Central North USA, Central South Canada**

**Weather**

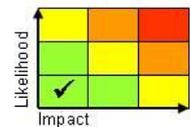
A spell of scattered but intense, slow-moving thundery showers is likely to develop from Friday through Sunday. Whilst most places will see fairly small amounts of rainfall, the heaviest showers will bring localised totals of 100-150mm along with frequent lightning and large hail.

**Discussion**

A plume of very warm, moist Gulf of Mexico air will be drawn north over the next couple of days, as the pattern amplifies over North America. As well as bringing surface temperatures into the low to mid-30's, destabilisation from the low-levels will take place in spite of strong upper ridging, with large amounts of CAPE (>4500 J/kg), PWAT exceeding 45mm, and relatively slack steering winds. This will bring explosive convection with large hail and heavy rain the primary hazards.

**Expected Impacts**

Flash flooding and disruption to transport, localised hail damage to homes and agriculture.



**Central America and Caribbean**

**Costa Rica, Panama, Nicaragua and western Colombia**

**Weather**

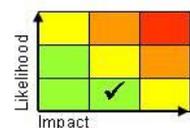
Above-average shower and thunderstorm activity will occur across this region through the coming week. Showers and thunderstorms could bring up to 50mm of rainfall over a short duration, especially this weekend, with up to 250 mm possible throughout the week across the mountains of Central America and as much as 300-400mm across the Colombian Andes.

**Discussion**

The ITCZ is expected to remain fairly active across this region, with the passage of several African Easterly Waves (AEW) bringing one to two day periods of enhanced activity to Central America, and days with less precipitation between these features. Further south enhanced low-level moisture convergence across the Colombian Andes will lead to enhanced activity on most days, hence the higher rainfall accumulations signalled here.

**Expected Impacts**

An enhanced risk of flash flooding and landslides.



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**South America**

**Western Colombia** – See *Central America and Caribbean section*

**Africa**

Nil.

**Middle East**

Nil.

**Asia**

**Northeast India (including Assam), Nepal, northern Bangladesh and Bhutan**

**Weather**

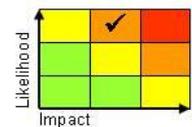
Widespread, heavy and persistent rainfall is expected to continue across this region over the coming 7 days, with a further 200-300mm on top of that which has fallen in the previous week.

**Discussion**

An anomalously strong southwesterly monsoon flow across the region continues to pump an exceptionally moist airmass (PWAT >75mm) inland from the Bay of Bengal. This will generate torrential downpours from showers and thunderstorms, with significant orographic modulation. Despite this occurring early in the monsoon season, flooding and widespread population displacement has already been reported, and is likely to worsen over the coming 7 days. River flooding may become more prevalent over the coming week further south as the rainfall filters down into the wide and heavily populated flood plains of northeast India and Bangladesh.

**Expected Impacts**

Widespread surface and continued river flooding, and likelihood of landslides in the higher terrain of the north of this region.



**Myanmar**

**Weather**

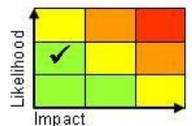
Frequent showers and thunderstorms blown in on a strong south-westerly flow will bring widely 150-250mm of rain, with some prone locations receiving in excess of 500mm of rain over the coming 7 days.

**Discussion**

Similar active monsoonal conditions to those expected to affect areas further north, although this region has been generally drier than average over the past 7 days so antecedent conditions are less conducive to significant impacts at present.

**Expected Impacts**

Increased likelihood of flash flooding, and risk of landslides as storms impinge on mountainous terrain.



**Western India**

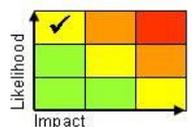
**Weather**

Heavy rainfall is expected through the coming 7 days, with totals widely in excess of 250mm and in excess of 500mm more locally in the foothills of the Western Ghats. This compares to the typical average at this time of year of 200-250mm per week.

**Discussion**

Enhanced south-westerly monsoonal flow is expected across this region, bringing more numerous showers and thunderstorms to this region than usual, even for the time of year. An Equatorial Rossby Wave over India may also help to encourage more frequent convection in the coming days as it drifts westwards. This region has seen below normal rainfall over the past 7 days, so to some degree this will be welcome but given the volume of rainfall low impacts are inevitable.

**Expected Impacts**



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Localised flooding, and an increased likelihood of landslides in the Western Ghats.

**Central India**

**Weather**

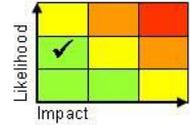
There is a chance that a slow moving monsoon weather system could generate 300-500mm in parts of this region over the coming days, which would be around a month's worth of rainfall for this part of India.

**Discussion**

The GM has consistently signalled the development of a slow moving monsoon depression in this region, concentrating showers and thunderstorms and generating rainfall totals in excess of 500mm in 6 days. However, other models are less keen, whilst this region has generally been drier than average over the past 7 days. Should the system develop, most places are likely to see only slightly above normal rainfall totals given the monsoon season.

**Expected Impacts**

Increased risk of localised flash flooding.



**Central and southeastern China**

**Weather**

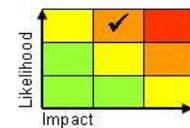
Continued very heavy monsoon rainfall is expected across the region over the next seven days. 100-200mm is expected to fall quite widely, with localised peaks of 300-500mm possible. These upper totals represent 2-3 times the average July rainfall, and large parts of China have seen much wetter than average conditions over the past month or two with numerous flooding impacts.

**Discussion**

Ongoing monsoon southwesterly 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. A number of shortwaves embedded within the upper flow will continue generate low amplitude frontal waves which will trigger heavy rainfall across a similar area along the quasi-stationary front, leading to very large rainfall accumulations. Media reports suggest that in this area of China the current flooding is the worst seen in over 70 years.

**Expected Impacts**

Significantly increased threat of flash and riverine flooding, although this heavily modulated by dam management. An increased (but still very low) risk of the failure of some flood protection structures (including dams). An increased risk of landslides in areas where terrain is steep.



**Japan**

**Weather**

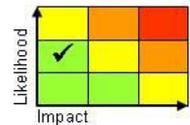
Very heavy rainfall is expected across the south of the country in particular this week with many areas seeing 50-100mm of rainfall, and as much as 300-400mm across the mountains in the region. This could represent 2-4 weeks' worth of precipitation falling in some of the wetter areas in just a few days.

**Discussion**

The monsoon southwesterly flow has now arrived across this region. Along the monsoon front (known as the seasonal Baiu front) convergent low-level flow will lead 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 amplify heavy rainfall further along the quasi-stationary front, leading to large rainfall accumulations.

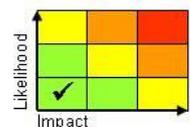
**Expected Impacts**

Increased risk of flash flooding and landslides.



**Parts of eastern Indonesia and Papua New Guinea**

**Weather**



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Above average rainfall will continue across this region in the form of heavy showers and thunderstorms. These will be capable of locally bringing 50-75 mm of precipitation in a short duration, with some locations likely to see 100-200 mm through the coming days, although some mountainous parts of the island of New Guinea could see over twice this amount. Average precipitation accumulations in June across this region is around 250 mm.

**Discussion**

Strong and consistent signal from NWP for enhanced rainfall across this region. Profiles in the area show large amounts of PWAT, and large skinny CAPE so heavy rainfall likely to be the most disruptive element.

**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**

Scattered shower and thunderstorm activity with storms blowing in from the Bay of Bengal. Strengthening monsoonal flow over the weekend should see the most frequent, heaviest showers falling here. Around 100mm is likely during the course of the coming 5-7 days.

**Western Yemen**

Dry across most of the country at first, but an area of showers and thunderstorms in the far east of the country today (Thursday) will drift westwards over the coming few days, bringing an increased (but probably still low) flash flooding risk. Daily totals of 30-50mm in the heavier showers are most probable.

**Issued at:** 020700UTC

**Meteorologist:** D J Harris / Mark Sidaway

**Global Guidance Unit**

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