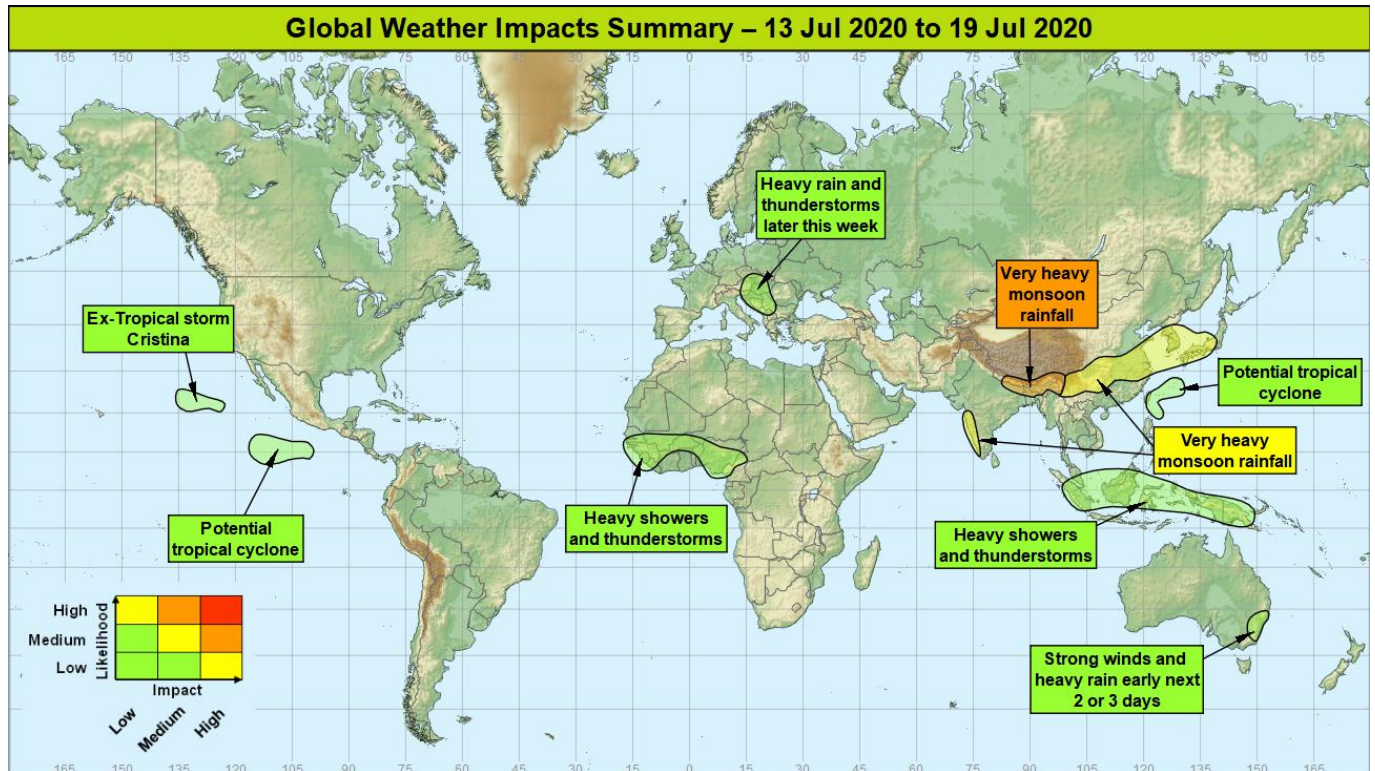


## Global Weather Impacts – Monday 13<sup>th</sup> July to Sunday 19<sup>th</sup> July 2020

Issued on Monday 13<sup>th</sup> July 2020

### HEADLINE

- Very heavy monsoon rainfall will continue in parts of South and East Asia.



### DISCUSSION

#### Tropical Cyclones

##### Ex-Tropical Storm Cristina (Eastern North Pacific)

#### Weather

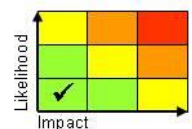
Cristina has decayed into a remnant low pressure system, and will continue to slowly track northwest and weaken further in the coming few days.

#### Discussion

Ex-Cristina continues to be steered westwards by the prominent sub-tropical ridge to the north. A drier airmass and lower SSTs along this route will gradually weaken this system.

#### Expected Impacts

Nil.



*The following area is being monitored for potential tropical storm development:*

#### Eastern North Pacific

#### Weather

A large area of showers and thunderstorms southwest of the Gulf of Tehuantepec, and to the southeast of Tropical Storm Cristina, has the potential for development in the coming days. However this system is moving west and remaining over the open water.

#### Discussion



This forecast may be amended at any time

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The upper-level winds are currently unfavourable for development of a tropical cyclone. However environmental conditions are expected to become more conducive for the formation of a tropical storm in the next few days. The NHC give a 60% probability in the next 5 days. Consistent signal for this to move quickly westwards, remain over the open water and well away from the south of the coast of Mexico.

## **Expected Impacts**

Nil.

## **Western North Pacific**

### **Weather**

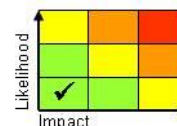
A depression, currently clearing the northern Philippines, may develop further in a weak tropical storm as it passes close to Taiwan in the next few days. Regardless of development, this island is likely to have a period of heavy rain (50-100mm).

### **Discussion**

An ERW and high SSTs are aiding the development of deep convection and a depression has formed in the northern Philippines Sea. Overall, conditions are not particularly favourable for further significant development, but there could be some additional deepening of the system over the next 24hrs or so.

### **Expected Impacts**

Localised flash flooding, especially in southern and eastern parts of Taiwan, is possible.



## **Europe**

### **Southeast Europe**

#### **Weather**

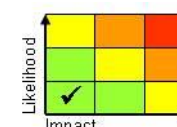
Heavy rain, along with some thunderstorms, is expected to develop across the region later this week and into the weekend. Around 75-125 mm of rain could fall in a couple of days, with the risk of some short-period heavy rainfall (30-50 mm in a few hours) where thunderstorms become intense and prolonged. The July monthly average rainfall is between 50 and 75 mm.

#### **Discussion**

An active cold front will move SE across Europe and becoming slow-moving across SE Europe and the driving upper trough disrupts to form a cut-off vortex. In addition to heavy rain along the front, some intense and prolonged thunderstorms have the potential to break out in the high WBPT plume ahead of the cold front.

#### **Expected Impacts**

Flash flooding is likely with secondary impacts related to lightning strikes, such as interruptions to power supplies, also possible.



## **North America**

Nil.

## **Central America and Caribbean**

Nil.

## **South America**

Nil.

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## Africa

### Parts of West Africa

#### **Weather**

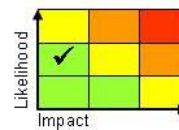
Heavy showers and thunderstorms are likely to be more frequent than usual through much of this week across parts of West Africa, producing 50-100mm of rain in just a few hours in places. The heaviest rainfall is likely to affect the western part of this region (Sierra Leone, Guinea and Liberia) where up to 250mm of rain could accumulate (average monthly rainfall in this region is 400-600mm).

#### **Discussion**

More active or more frequent African Easterly Waves are likely to affect West Africa through the coming week, producing above average rainfall in places, especially close to the Atlantic coastline.

#### **Expected Impacts**

Increased likelihood of flash flooding and landslides.



## Middle East

Nil.

## Asia

### Northeast India, eastern Nepal, northern Bangladesh, Bhutan, and northern Myanmar

#### **Weather**

Following recent extreme rainfall across the hills and mountains in this region, continued very heavy monsoon rainfall and thunderstorms is expected through much of the next 7 days. Across low lying areas, further totals of 125-250mm are widely expected, with the hills and mountains likely to see a further 600-800mm or perhaps locally in excess of this. The typical average at this time of year of 400-500mm per month across low lying regions, and 1000mm per month over the mountain sites. Whilst this is still a large amount of rain, overall, rainfall should be a less intense and persistent this week compared to last week.

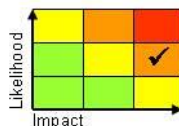
Recent rainfall has brought significant flooding across the region, and this additional rain will likely see river levels rise significantly once again in the coming week or two.

#### **Discussion**

South Asian Monsoon will remain very active across this parts of southern Asia this week. Environmental conditions will remain conducive to very heavy rainfall, although not as extreme as last week. High PWAT airmass (>80mm), aided by SSTs approaching 30C (which is 1-2C above average) undergoing dynamic and orographic ascent will maintain torrential rain and thunderstorms for many days to come. CAPE will mainly be skinny, leading to efficient ppn generation, but occasional mid-level dry intrusions may well allow lightning and large hail to be additional hazards. The longer term models suggest that rainfall amounts are likely to remain above average for several weeks in this region.

#### **Expected Impacts**

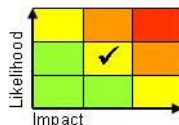
Flooding and widespread population displacement has already been widely reported and continued significant riverine flooding is expected to affect the region. There is also a very high threat of further landslides in the higher terrain. Even though the predicted rainfall is less than was seen last week, it is still above average and is likely to combine with the very wet antecedent conditions to pose a continued flood threat in the region.



### Central and eastern China, much of the Korean Peninsula and Japan

#### **Weather**

Following exceptional rainfall across these regions over recent weeks, the monsoon front that extends from central China to Japan is expected to remain active through the coming week, with further pulses of intense rain and thunderstorms. Another 100-200mm of rain is expected widely across this region, with peak accumulations over the hills and mountains are likely to be in the region of 300-500mm across parts of central China. The heaviest rain is expected to clear to the south of the Korean Peninsula by Tuesday.



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## Discussion

The southerly winds associated with the monsoon are drawing very warm and moist flow across this region with extremely high values of PWAT (>75mm). This will generate further torrential downpours from rain, showers and thunderstorms, with the mountains seeing the highest totals. Despite this occurring relatively early in the monsoon season, flooding and widespread population displacement has already been widely reported.

## Expected Impacts

Widespread surface and continued significant riverine flooding affecting the region, and likelihood of landslides in the higher terrain.

## Western India

### Weather

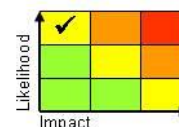
A period of heavy monsoon rainfall (intense showers and thunderstorms) is expected through the next 5-7 days (peaking on Wednesday and Thursday), with up to 600mm of rain falling (50-75% the average July rainfall).

### Discussion

A deep, strong and moist SW'ly airflow will produce an active period of monsoon rainfall for this part of India through much of the next week.

### Expected Impacts

Increased likelihood of flash flooding and landslides.



## Parts of Malaysia, Indonesia and Papua New Guinea

### Weather

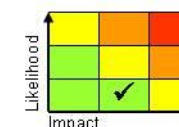
Above average rainfall will continue across this region in the form of heavy showers and thunderstorms. These will be capable of locally bringing 50-100 mm of precipitation in a short duration, with some locations likely to see 150-250 mm through the coming days. Average precipitation accumulations at this time of year across this region is around 250 mm per month.

### Discussion

Strong and consistent signal from NWP for enhanced rainfall across this region no doubt aided by positive SST anomalies of 1 to 2C. In addition, a Kelvin Wave is expected to move east across the area over the coming few days.

### Expected Impacts

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



## Taiwan – see Tropical Cyclones section

## Australasia

### Eastern Australia, including Sydney and Brisbane

### Weather

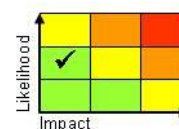
Some very unsettled weather is likely across this part of Australia in the next 2 or 3 days, as a winter storm develops just offshore. Strong winds, with gusts of 40-50 mph, along with heavy rain is likely. Around 50-100 mm of rain is likely, which is close to a month's worth of rainfall for July in this area (normally 80-100 mm across the area).

### Discussion

A deep area of low pressure is signalled to develop off the east coast of New South Wales. The development is likely to draw warm, tropical air south into the system, leading to some heavy rainfall, as well as strong winds. The system is likely to affect these areas until Tuesday, at which point it should start to clear.

### Expected Impacts

Heavy rain, flash flooding over hillier interior areas. Rough seas.



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**Additional Information****Cox's Bazar, southeast Bangladesh**

Through the next few days, above average rainfall is expected in this region due to more frequent and intense showers and thunderstorms. This will result in a higher threat of flash flooding and landslides. Thereafter the shower and thunderstorm activity to reduce to near or even slightly below-average, reducing the flash flood and landslide likelihood. However, an increase in shower and thunderstorm activity is likely next weekend.

**Yemen**

Throughout the coming 7 days showers or thunderstorms will be fairly well scattered and mostly fairly short lived (5-10mm of rainfall per day typically, locally 15-20mm in the SW for a time this week). So the threat of any significant weather impacts in Yemen through the next week is low.

**Sudan/South Sudan**

Rainfall activity is expected to be above average over the coming week across South Sudan and the far south of Sudan (especially through the next few days and again this weekend) due to more frequent/widespread heavy showers and thunderstorms across the region. Over the next week the wettest spots could see 125-175 mm accumulate, which is around the average rainfall for the whole of July. So there will be a higher likelihood of flash flooding than usual.

**USA and southeast Canada**

The heatwave conditions in the southwest of the USA (where temperatures records could be broken in the coming days) is expected to gradually extend east and north through this week to affect much of the continental USA by the end of the week, then southeast Canada through the weekend. Temperatures in this heatwave will be 10 degrees Celsius above the average July maxima, with accompanying warm nights. These conditions will result in severe heat stress conditions.

**Issued at:** 130710 UTC**Meteorologist:** Brent Walker / Paul Hutcheon**Global Guidance Unit**

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