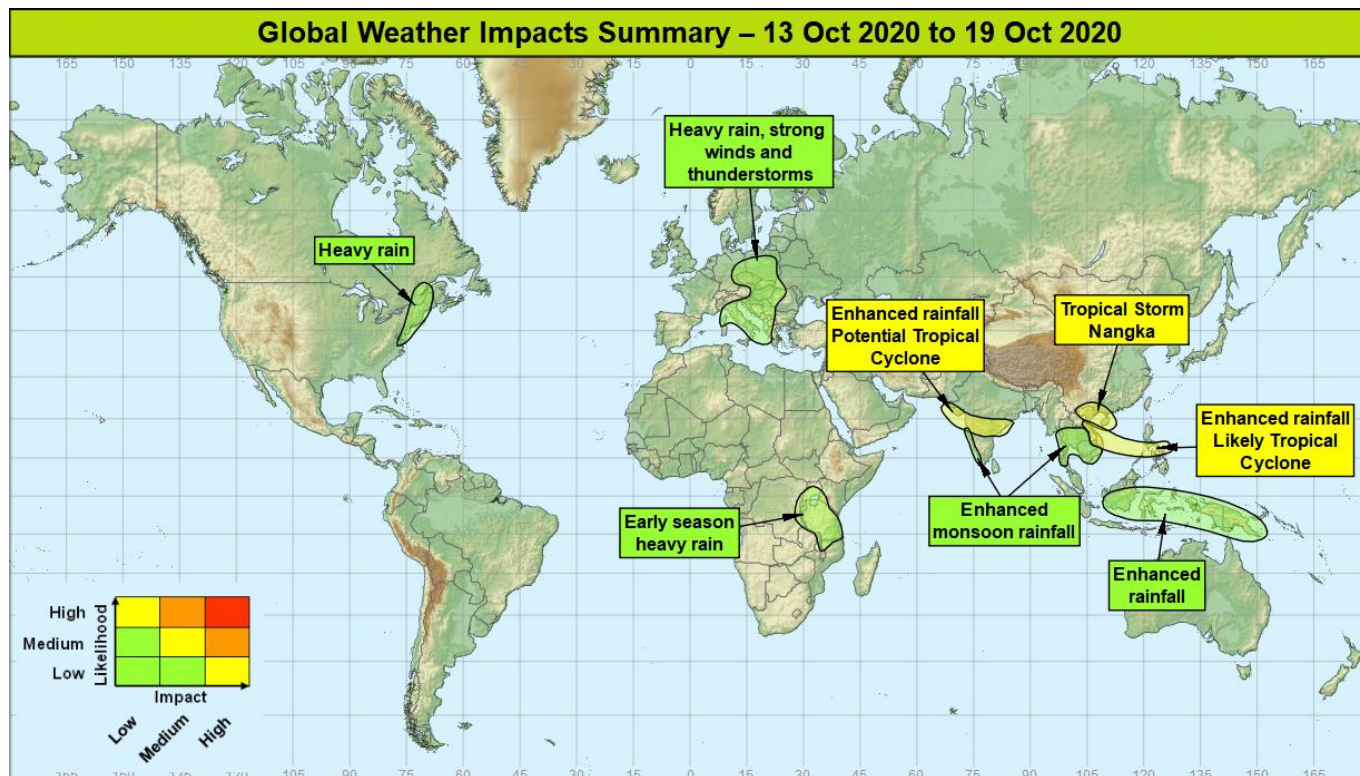


## Global Weather Impacts – Tuesday 13<sup>th</sup> to Monday 19<sup>th</sup> October 2020

Issued on Tuesday 13<sup>th</sup> October 2020

### HEADLINES

- Tropical Storm Nangka over the South China Sea expected to impact northern Vietnam and southern China.
- Enhanced rainfall and further potential tropical cyclone developments over south and southeast Asia.



### Tropical Cyclones

#### Tropical Storm Nangka - South China Sea

##### Weather

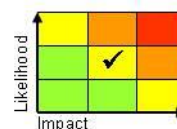
An organised cluster of thunderstorms over the South China Sea formed into Tropical Storm Nangka yesterday. Nangka which is now close to the southeast of Hainan is expected to continue west-northwestwards over the next couple of days. After tracking across Hainan today, final landfall is expected over northern Vietnam during Wednesday. As well as bringing large amounts of rainfall (200-400mm along its path and also into the far south of mainland China) strong winds can be expected although it looks unlikely to reach typhoon strength.

##### Discussion

Interaction with Hainan will limit any further development today and may cause the storm to temporarily weaken. A re-intensification could occur as it emerges over the Gulf of Tonkin although as the system should soon reach land again a typhoon looks unlikely. Tonkin expected to make landfall over N Vietnam and the change to an offshore flow on its S'ern flank is helping to ease rainfall over central Vietnam which has seen copious amounts of rain over recent days.

##### Expected Impacts

Flash flooding, and landslides from heavy rainfall are likely. There is a lower likelihood of damage/disruption from strong winds and a dangerous coastal surge along with large waves.



This forecast may be amended at any time

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

VPN: n6225 4319 Email: [GGU@metoffice.gov.uk](mailto:GGU@metoffice.gov.uk)

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*The following areas are being monitored for potential impactful tropical cyclone development:*

**Bay of Bengal****Weather**

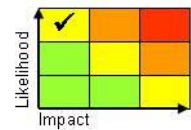
A depression now over the northern Andhra Pradesh coastline will continue westwards whilst weakening through the next few days. Enhanced rainfall is likely to be the primary hazard, with a swathe of 100-200mm, locally 300mm of rain expected across central India over the next 2 or 3 days. Later in the week the system will emerge over the Arabian Sea. Once over the Arabian Sea there is a good chance that it will strengthen again with a tropical cyclone potentially forming. This looks most likely to occur during Friday and over the weekend.

**Discussion**

A monsoon depression associated with an Equatorial Rossby Wave (ERW) will continue to bring frequent heavy showers within the very high PWAT air mass. This will realise high hourly and daily totals, bringing flash flooding to this region and a threat of river flooding later on. One mitigating factor is that, despite the monsoon having generally been active, much of this region has seen below or around average rainfall over the past month.

**Expected Impacts**

Flash flooding will be the primary hazard, with very localised threat of lightning. Increased risk of tropical cyclone impacts (strong winds and dangerous coastal conditions) for Arabian Sea coasts over the weekend.

**South China Sea****Weather**

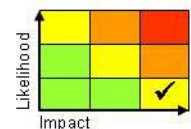
An area of showers and thunderstorms currently east of the Philippines may develop into a tropical cyclone as it crosses the South China Sea later this week. Regardless of development, this system is, after a short break in the wake of Nangka, is likely to re-intensify rainfall across central parts of Vietnam. This has the potential to bring rainfall totals of 300-500 mm between Friday and Sunday across areas which have seen recent excessive rain and flooding.

**Discussion**

A cluster of showers and thunderstorms associated with another ERW will cross the Philippines mid-week, before emerging over the South China Sea where conditions may be more conducive to tropical cyclogenesis. The multi-model ensemble signal for such a development is currently rather weak, but what signal there is has consistently been further S than that from TD-93W. This means that, regardless of development, an uptick in rainfall is expected across parts of central Vietnam, with anomalous easterly flow developing and bringing tropical moisture into an area that has currently experienced severe rainfall.

**Expected Impacts**

Localised flash flooding possible across Luzon and the Visayas (Philippines) mid-week, with more significant flash and river flooding probable across central Vietnam later this week and over the weekend. Further land/mudslides also likely.

**Tropical Atlantic****Weather**

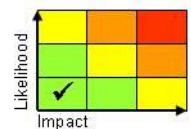
There is a small chance (rated at 30% by NOAA NHC) that an area of heavy showers and thunderstorms to the east of the Lesser Antilles will become more organised over the next or two allowing a tropical storm to develop. So whilst strong winds look unlikely northern parts of the Lesser Antilles look likely to see an increase in shower and thunderstorms activity during Thursday and Friday with some places potentially seeing 50-100 mm of rainfall.

**Discussion**

A disorganised area of convection associated with an AEW is moving west towards the Lesser Antilles. SSTs are sufficiently high (~28-29C) but vertical wind shear should gradually increase over the next day or so making the area environment hostile to development.

**Expected Impacts**

Small increase in the risk of flash flooding.



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The following area is being monitored with no land impacts currently expected:

- A tropical disturbance (the remnants of Norbert) currently southwest of Mexico may undergo slight development over the next few days, but should stay away from land.

## Europe

### Central Mediterranean, Balkans, and parts of Central Europe.

#### **Weather**

Widespread and persistent rain is expected to develop northwards across parts of Central Europe, again accompanied by increasingly strong to gale force winds by mid-week. 50-75mm in 24 hours could fall across parts of Poland and Germany. On Thursday, another episode of heavy showers and thunderstorms will see large amounts of rain resuming across the Balkans in particular, before conditions generally ease later in the week.

#### **Discussion**

Persistent and at times sharp troughing across Central Europe will continue to engage a number of high WBPT plumes being drawn NE from Africa/the Med, with the system today undergoing full cyclogenesis over Central Europe resulting in a deep low over Poland and associated heavy rain/strong winds. The most severe impacts are likely to be across the Balkans, with a combination of severe thunderstorms from yesterday, followed by further heavy rain on Thursday leading to totals exceeding 300mm in a few spots.

#### **Expected Impacts**

Flash flooding and landslides are possible, particularly across the Balkans. Damage and disruption from frequent lightning and large hail looks possible in the vicinity of the Central Mediterranean. Minor river flooding looks possible further norther across Central Europe. Disruption from strong winds, particularly to marine transport, and dangerous coastal conditions from large waves.



## North America

### Northeast USA and southeast Canada

#### **Weather**

Tropical moisture associated with ex-Hurricane Delta continues to move northeastwards, with a further 50-75mm, locally 100mm of rainfall falling today and tomorrow across the east of this region. After something of a respite mid-week, a further band of heavy rain, with possible thunderstorms looks likely to become slow-moving more broadly over northeast USA and southeast Canada by Friday. This will include some the areas which will have seen heavy rain from ex-Delta. This could bring a further 50-150mm of rain in 24-36 hours. Typically this region will see 75-125mm through the whole of October.

#### **Discussion**

The remnants of Delta has come up against a blocking high within the very cold air across eastern Canada leading to a persistent and very moist SE'ly flow into parts of NE US, bringing frequent heavy showers and thunderstorms. Later in the week, a marked trough extension will drive a deepening area of low pressure across the Great Lakes area, eventually dredging up a further plume of warm air which will become the focus for a decelerating area of heavy rain and thunderstorms over a similar area as the pattern continues to amplify.

#### **Expected Impacts**

Rainfall is likely to result in some river and flash-flooding.



## Central America and Caribbean

Nil

## South America

Nil

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## Africa

### Tanzania and parts of adjacent countries

#### **Weather**

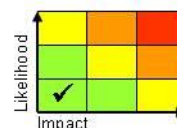
Early seasonal heavy rainfall in the form of daily heavy showers and thunderstorms is expected across this area over the coming week. Most areas will avoid the heaviest downpours but there is still the potential for 100-150 mm to build up in places over the next few days. Thunderstorms may also bring the additional hazard of localised strong, gusty winds.

#### **Discussion**

An ERW moving west across this region will help enhance rainfall over the coming days.

#### **Expected Impacts**

The enhanced rainfall comes ahead of the typical start of the wet season thus reducing this likelihood of flash flooding although this can't be ruled out. The heaviest downpours and associated strong winds gusts are likely to be focused around the African Great Lakes (especially Victoria, Tanganyika and Malawi) which could disrupt maritime activities.



## Middle East

Nil

## Asia

### Philippines, China, Vietnam, India

See *Tropical Cyclones*.

## Southwest India

#### **Weather**

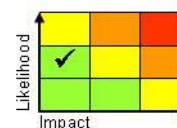
Following an easing of monsoon rainfall yesterday, heavy showers and thunderstorms look likely to become increasingly frequent once again across this region through the rest of this week. Most places will see 100-200mm building up through the next 4 days, but some parts of the western Ghats could see in excess of 500mm. For context, average rainfall for the whole of October is between 100 and 200 mm across this area but the forecast rainfall amounts are fairly typical for active phases during the monsoon season.

#### **Discussion**

Enhanced and persistent moist W to SW'ly flow across the region has been temporarily disrupted, as a monsoon depression arriving over eastern India produced an offshore component to the wind in the west. As this depression continues west, eventually the flow will back around to an onshore direction, with enhanced monsoon winds and rainfall resuming. The largest totals will be heavily orographically modulated, and in the north of this region, exacerbated by the passage of the depression directly overhead later in the week.

#### **Expected Impacts**

Enhanced threat of flash flooding and landslides, especially coming at the end of an active monsoon season.



## South Vietnam, Laos, Cambodia, Thailand, south Myanmar

#### **Weather**

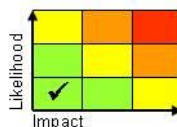
Enhanced showers and thunderstorms associated with an active period towards the end of the Southeast Asian monsoon could bring very locally 75-100mm of rain in a few hours, each day this week. Most areas will become generally dry however, with impacts very isolated, if at all.

#### **Discussion**

With all the activity elsewhere across the South-East Asian region, showers and thunderstorm activity will generally be below what we have seen over the past week or two. However, there remains a signal for above average ppn here, coinciding with an active monsoon combining with La Nina conditions.

#### **Expected Impacts**

Very isolated flash flooding, and risk of very localised landslides, given that antecedent conditions over the past 7 days have widely been much wetter than average.



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**Indonesia and Papua New Guinea****Weather**

More frequent than usual showers and thunderstorms are expected during the next week over this region. Some places could receive 75-100mm in 6-9 hours, and overall widely 50-100mm will fall across the region.

**Discussion**

The La Nina background state makes showers and thunderstorms more likely to be frequent across the Maritime Continent, which has support from model output. Monthly anomalies across this region are generally positive too, particularly across Sulawesi, making impacts more likely than usual.

**Expected Impacts**

Localised flash flooding in places, and increased risk of landslides in higher terrain.

**Australasia**

Nil

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

There is a very low risk of an isolated shower or thunderstorm over the next few days. From Friday, there is a greater risk of heavy downpours from thunderstorms across southeast Bangladesh although at this stage it looks like the heaviest rain will remain offshore.

**Yemen**

The development of very isolated showers is possible over the Western Highlands. We are now well into the dry season, with most places expected to be dry throughout.

**Sudan/South Sudan**

Sudan expected to be dry, with the dry season (arriving in the south of the country through October) becoming established here. Daily showers and thunderstorms will continue across South Sudan, although to a lesser extent than recent weeks – weekly totals could approach 75mm in a few places.

**Issued at:** 130750 UTC

**Meteorologists:** Ele Hands / Chris Bulmer

**Global Guidance Unit**

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Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

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