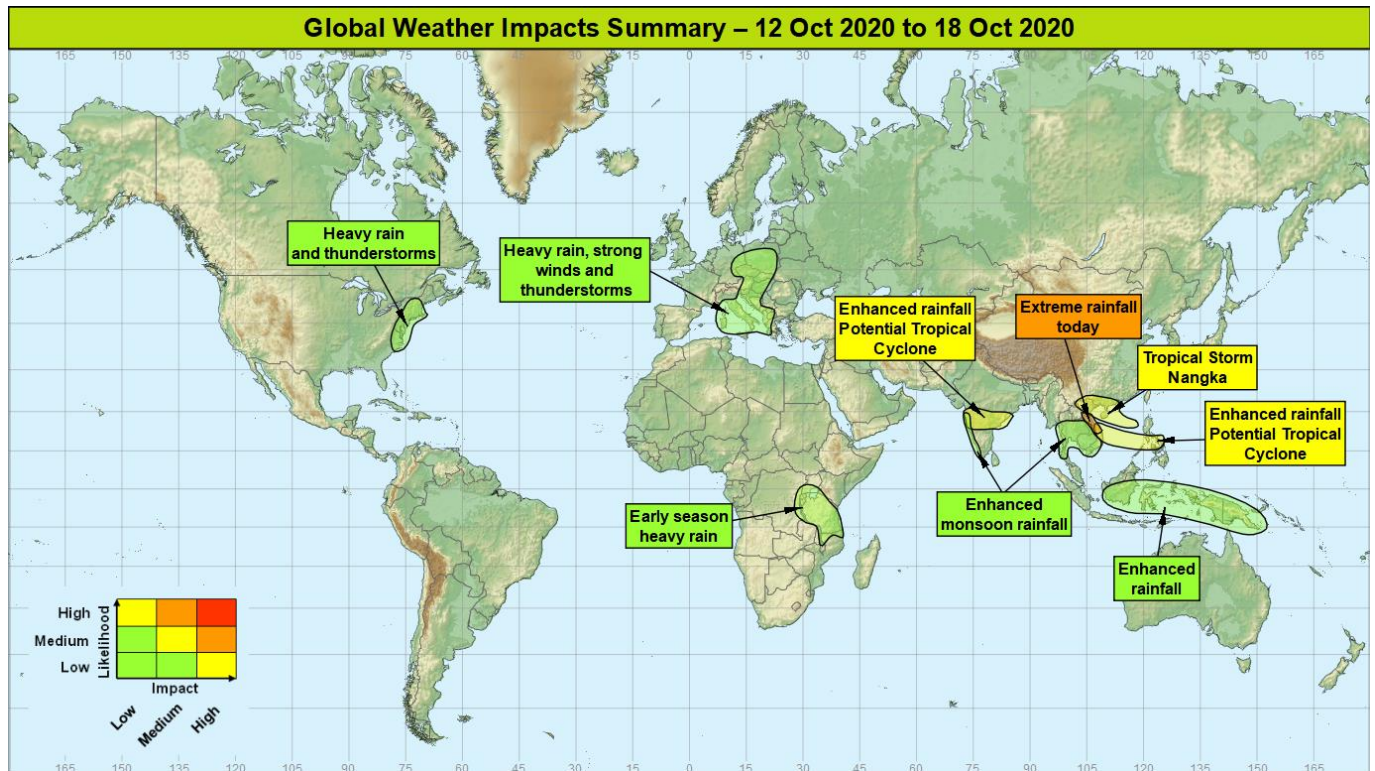


## Global Weather Impacts – Monday 12<sup>th</sup> to Sunday 18<sup>th</sup> October 2020

Issued on Monday 12<sup>th</sup> October 2020

### HEADLINES

- Extreme rainfall continues across Vietnam today before easing.
- 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.



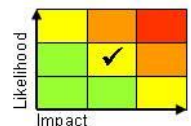
### Tropical Cyclones

#### Tropical Storm Nangka - South China Sea Weather

An organised cluster of thunderstorms over the South China Sea has strengthened into Tropical Storm Nangka over recent hours. Nangka is expected to track west-northwestwards over the next couple of days, tracking over or near Hainan before making final landfall 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 China), winds approaching Typhoon strength are possible. However, at this stage official guidance from JMA (Japanese Meteorological Agency) suggests Nangka will not reach typhoon strength.

#### Discussion

An upper low/inverted trough seen in recent days to have been cut-off from the mid-latitude flow and advected westwards across the northern sub-tropics is helping to provide organisation to convection which has developed in currently already favourable (La Nina background state) conditions. A fairly rapid passage across the South China Sea, despite favourable SSTs and vertical wind shear, seems likely to limit the degree of strengthening possible before weakening due to land interaction with Hainan. A re-intensification could occur as it emerges over the Gulf of Tonkin – and there is a chance that it could stay to the S of Hainan and become much stronger than current forecasts allow. A swathe of heavy rain on the W and N flanks of the system will affect N Vietnam, and S China, although the offshore flow on the S side of the cyclone will cause conditions to markedly improve over Central Vietnam where severe impacts are currently ongoing.



**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)

© Crown copyright 2020. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

## 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.

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

### Bay of Bengal

#### Weather

An area of enhanced showers and thunderstorms over the Bay of Bengal, associated with a tropical deep depression, will track eastwards today and could undergo sufficient development over the next 12 hours to be classed as a cyclonic storm (tropical storm equivalent) before crossing the northern Andhra Pradesh coastline. Enhanced rainfall is likely to be the primary hazard, with a swathe of 100-200mm, locally 300mm of rain expected across central India during the first half of this week before the system emerges over the Arabian Sea. Once over the Arabia Sea, most likely over the coming weekend, there is a chance that the remnants of this system will potentially re-strengthen into a tropical cyclone.

#### Discussion

A monsoon depression associated with an Equatorial Rossby Wave (ERW) is currently moving steadily westwards over the Bay of Bengal. SSTs and vertical shear are conducive to strengthening, but interaction with land will hamper development. Frequent heavy showers within a very high PWAT air mass 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. Some minor disruption/damage due to strong wind gusts around the coastal regions could occur.



### South China Sea

#### Weather

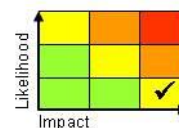
An area of showers and thunderstorms currently east of the Philippines may develop into a tropical cyclone as it crosses the South China Sea later this week. Regardless of development, this system is, after a short break in the wake of Nangka, is likely to re-intensify rainfall across central parts of Vietnam that have recently been significantly impacted by heavy rainfall.

#### 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. Further land/mudslides also likely.



*The following areas are being monitored with no land impacts currently expected:*

- **Chan-hom** to the south of Japan has now weakened into a tropical depression and will slowly meander over the NW Pacific whilst continuing to weaken.
- A tropical disturbance currently southwest of Mexico may undergo slight development over the next few days, but should stay away from land
- A tropical wave over the mid-tropical Atlantic is being monitored by the NHC, who currently give a 20% chance of development over the next 5 days. There is limited evidence to suggest this system will develop and if it does, the enhanced rainfall is most likely to be steered to the northeast of the Lesser Antilles.

**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)

## Europe

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

#### **Weather**

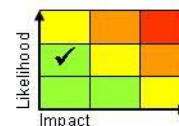
Heavy showers and thunderstorms are expected to continue across the Balkans and western Greece today, bringing frequent lightning, and 50-100mm of rainfall in a short space of time. Further west, a strong Mistral will bring strong winds with gusts approaching 60mph, leading to widely rough sea conditions potential minor coastal impacts for Sardinia. More widespread and persistent rain is then 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 is and will engage a number of high WBPT plumes being drawn NE from Africa/the Med, with the system today undergoing full cyclogenesis over Central Europe early tomorrow resulting in a deep Low over Poland and associated heavy rain/strong winds. The initial trough extension/disruption and associated Genoa Low has led to a strong Mistral developing to the rear of the initial WBPT plume, which will continue through today. The most severe impacts are likely to be across the Balkans, with a combination of severe thunderstorms today, followed by further heavy rain on Thursday lead 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

#### **Weather**

Tropical moisture associated with ex-Hurricane Delta continues to move northeastwards, with a further 50-75mm, locally 100mm of rainfall falling today on some coastal regions of northeast USA. 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 the far east of the USA, including the areas affected today. This could bring a further 50-100mm of rain in 24-36 hours. Typically this region will see 75-125mm through the whole of October.

#### **Discussion**

The remnants of Delta will come up against a blocking high within the very cold air across eastern Canada over the next day or two, 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

**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)

© Crown copyright 2020. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.



## Africa

### Tanzania and parts of adjacent countries

#### **Weather**

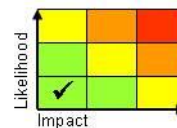
Early seasonal heavy rainfall in the form of daily heavy showers and thunderstorms is expected across this area over the coming week. Most areas will avoid the heaviest downpours but there is still the potential for 100-150 mm to build up in places over the next few days. Thunderstorms may also bring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

As 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 result in impacts to fishing activities.



## Middle East

Nil

## Asia

### Philippines, China, Vietnam, India

See *Tropical Cyclones*.

### Central Vietnam

#### **Weather**

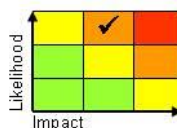
A continuation of the exceptionally heavy and persistent rainfall that has affected this region over the past few days is expected. A further 300 to very locally 500mm of rain is possible, before conditions improve markedly through Tuesday.

#### **Discussion**

The monsoon remains in a very active phase across this region, enhanced by a cold NE'ly surge flooding southwards across the South China Sea. This region has experienced severe flooding in reportedly the heaviest October rains for 63 years, and this is likely to continue/increase through today. However, the expected development of TD-93W will serve to markedly reduce the monsoon flow across this region, taking the focus further north from Tuesday and through the middle of the week, bringing a break to the monsoon rain here. A further tropical system could begin to increase rainfall across this region later this week (see tropical cyclone section).

#### **Expected Impacts**

Continuation of flash/river flooding, potential development of new flooding and increased risk of devastating land/mud slides.



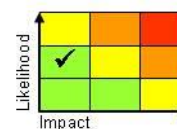
### West/southwest India

#### **Weather**

Following an easing of monsoon rainfall today, heavy showers and thunderstorms look likely to become increasingly frequent once again across this region Tuesday through Thursday, and possibly Friday. Most places will see 100-200mm building up through the next 5 days, but some parts of the western Ghats could see in excess of 500mm, and very locally 800-1000mm (between 3 and 5 times the average October rainfall).

#### **Discussion**

Enhanced and persistent moist W to SW'ly flow across the region will be temporarily disrupted today, as a monsoon depression arriving over eastern India produces 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.



**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)

© Crown copyright 2020. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

## 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

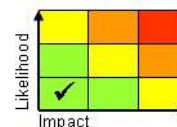
Enhanced showers and thunderstorms associated with an active period towards the end of the Southeast Asian monsoon could bring very locally 75-100mm of rain in a few hours, each day this week. Most areas will become generally dry however, with impacts very isolated, if at all.

#### 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.



### Indonesia and Papua New Guinea

#### Weather

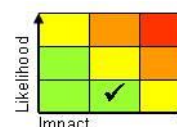
More frequent than usual showers and thunderstorms are expected during the next week over this region. Some places could receive 75-100mm in 6-9 hours, and overall widely 50-100mm will fall across the region.

#### 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, but overall the region will be drier than average for the time of year, with the focus of the heaviest rainfall further south. Temperatures will also be a little above average as a result, with maxima in the low to mid 30s of Celsius.

### 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: 120750 UTC

Meteorologists: D J Harris / Chris Bulmer

Global Guidance Unit

**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)

© Crown copyright 2020. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.