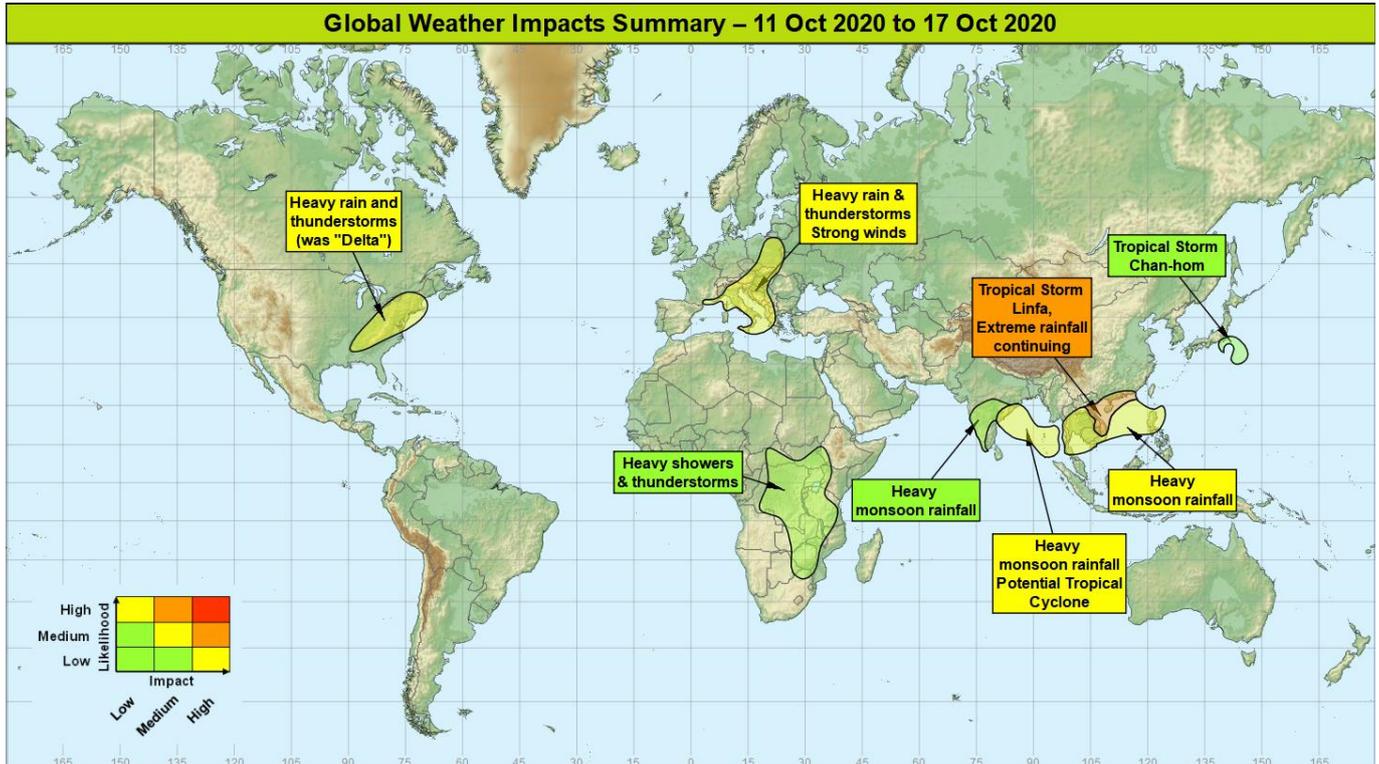


## Global Weather Impacts – Sunday 11<sup>th</sup> to Saturday 17<sup>th</sup> October 2020

Issued on Sunday 11<sup>th</sup> October 2020

### HEADLINES

- Vietnam, Laos and southern China experiencing extreme rainfall, partly asw Tropical Storm Linfa (17-W).
- Very heavy rainfall more widely impacting large parts of southern Asia.
- Hurricane Delta's remnants bringing heavy rain and thunderstorms to eastern USA.
- Heavy rain and thunderstorms over some parts of the Mediterranean and Europe.



### Tropical Cyclones

#### Tropical Storm Chan-hom (Western Pacific and Japan)

##### Weather

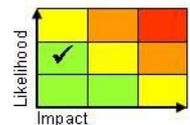
Chan-hom currently lies roughly 200 miles south of the mainland of Japan and is continuing to slowly weaken, with sustained winds of 50 mph at 0300 UTC. Chan-hom is expected to turn southeast through the next few days, away from land, and will not make landfall. Nonetheless, some large waves could affect the far southeast of Japan today, but it looks like the rainfall could be the most impactful element with the potential for up to a further 100 to 150 mm of rain to accumulate in the next couple of days, which is more the usual average October rainfall, and comes after yesterday's heavy rain in this area.

##### Discussion

Chan-Hom has slowly moved north around the sub-tropical ridge during the past few days and is now being steered by southern limit of the mid-latitude jet and will track more quickly east as it weakens and becomes extra-tropical.

##### Expected Impacts

Flooding due to intense rainfall is the most likely impact, though as Chan-hom pulls away to the east, the risk of impacts will decrease.



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## **Tropical Storm Linfa (17-W) South China Sea, Vietnam, Laos and southern China**

### **Weather**

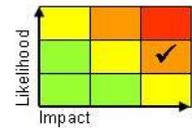
A tropical depression earlier formed in the South China Sea to the east of Vietnam (Tropical Depression 17-W), and has now been upgraded to a tropical storm and named “Linfa”, currently giving sustained winds of around 50 mph. This development is likely to track west or west-northwest into northern Vietnam early next week before dissipating. Regardless of the amount of development, the main impact will be from heavy rainfall that could produce up to 800 mm over parts of Vietnam. There is a lower risk of another tropical depression forming a little further north later in the week, and again rainfall looks to be the main issue.

### **Discussion**

An active period in the monsoon will affect these areas in the coming days, perhaps partly thanks to a fairly ill-defined but still-evident MJO/BSISO in the area. Hovmöller plots and W-H diagrams roughly indicate enhanced convection in this area, though signals are rather weak. Regardless of the development of the tropical storm, the main impact will be from heavy rainfall that could produce 300 to 400 mm in just a day or two early in the week, with parts of Vietnam seeing close to 800 mm by the middle of next week which is around twice the entire October average in this area. There is a lower risk of another tropical depression forming a little further north later in the week, and again rainfall looks to be the main issue – with some parts of southern China receiving 400 to 500mm by the end of the week.

### **Expected Impacts**

Some exceptional rainfall totals are expected in the coming days, especially over parts of Vietnam, so flooding due to intense rainfall is the most likely impact, with both flash and river flooding expected, along with enhanced landslide impacts to this region. There is a much lower likelihood of wind and storm surge impacts.



*The following areas are being monitored for significant tropical cyclone development in the coming days:*

## **Bay of Bengal, Andaman Islands and eastern India**

### **Weather**

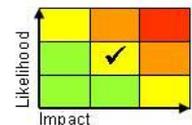
There is the potential for the development of a tropical cyclone in the Bay of Bengal this weekend, with any development likely to track west into eastern India on Sunday and then move across central India early next week. Any system looks likely to be weak in terms of wind, but there is the potential for around 200 mm of rain widely (up to twice the average October rainfall) in a short period of time, with a few spots in eastern India seeing up to 400 mm.

### **Discussion**

An Equatorial Rossby Wave could help influence the development of a tropical storm this weekend in the Bay of Bengal. All models produce this type of signal and for a westward track into eastern India. Again, regardless of development, in a very warm and moist airmass, some very heavy rain and thunderstorms are expected with PWAT values in excess of 70 mm.

### **Expected Impacts**

Flash flooding is likely in places, with some river flooding too, but with a lower likelihood of wind or storm surge damage.



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## Europe

### Areas around central Mediterranean including the Adriatic Sea, The Balkans, then parts of Eastern Europe next week

#### **Weather**

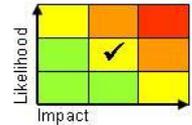
Areas of heavy showers and thunderstorms will develop in many parts of this region today and will continue to the middle of next week, with the most severe convection moving slowly east with time. Severe thunderstorms are also possible with up to 100 mm of rain falling in just 24 hours in some places along with a large hail, frequent lightning and strong winds threat. Gales or even severe gales are possible in places for a time, particularly in parts of the Mediterranean and Adriatic seas.

#### **Discussion**

The extension and partial disruption of an upper trough across central Europe will result in strong upper forcing engaging an existing baroclinic zone across this region. As well as activating the frontal system, it is also expected to destabilise the warm plume ahead of the front, and it is here that some of the most severe convection is likely. As well as the rainfall impacts, there will be development of a tight low pressure area that could produce 50kt gradients, with strong gusts not solely tied to deep convection. Additionally, the warm waters of the Mediterranean (still around 22°C in places) will contribute to high CAPE values, adding to the threat of severe storms. Tornadoes and waterspouts are possible.

#### **Expected Impacts**

Flash flooding and landslides are likely. Damage and disruption from frequent lightning and large hail looks possible. Increased chance early next week of impacts from strong winds including dangerous coastal conditions from large waves.



## North America

### Eastern USA (Ex- Delta)

#### **Weather**

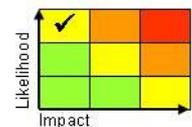
The remains of Hurricane Delta will continue to transfer northeast up across the east then northeast of the USA today and into the start of next week. The winds have decreased markedly now, but it will be the heavy rain and thunderstorms that will be the most impactful element, with up to 100-200 mm of rain possible in 24 hours as this ex-tropical system moves across the eastern part of the USA which usually sees 75-125 mm of rain through the whole of October.

#### **Discussion**

Increased vertical wind shear and land interaction rapidly weakened Delta yesterday after landfall, but the plume of very high WBPT and PWC associated with Delta's remnants is being engaged by the mid-latitude jet while becoming increasingly baroclinic, bringing a very wet spell of weather in its path with embedded convection in the warm plume. Some areas could see 150 to 200mm falling by early next week.

#### **Expected Impacts**

As the system heads northeast, the associated rainfall is likely to result in some river and flash-flooding.



## Central America and Caribbean

Nil

## South America

Nil

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## Africa

### Some central and southern parts of Africa (inc. northern South Africa)

#### **Weather**

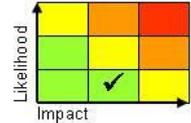
More widespread and heavier showers and thunderstorms are expected in this part of Africa through the next week. Not everywhere will see the heavy showers and thunderstorms, but where they do occur, up to 50-75 mm of rain could fall in a day, with a weekly rainfall accumulation of 150 mm possible in places.

#### **Discussion**

As the North Africa monsoon slowly retreats southwards towards the northern part of this area, we are likely to see an increase in convection in the southern portion of Africa in the coming days. All models show an increased thunderstorm and rainfall signal in central and southern parts of Africa through the next week in a very warm and moist airmass which has developed widely in recent days. A large-scale upper trough over South Africa with a weak thermal trough extending north over central parts of Africa will promote large scale uplift, and help to destabilise the atmosphere.

#### **Expected Impacts**

Flash flooding and landslides are possible.



## Middle East

Nil

## Asia

### Japan, as well as:

### Vietnam, Laos, southern China, Bay of Bengal, Andaman Islands and eastern India –

See *Tropical Cyclones* section.

### Parts of southwestern and central India

#### **Weather**

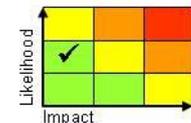
A period of heavy rainfall is expected this weekend into early next week due to heavier and more widespread showers and thunderstorms. In excess of 300 to 400 mm (up to twice the average October rainfall) could accumulate in the wettest places.

#### **Discussion**

An enhanced low level moist westerly flow thanks to a monsoon trough to the north, along with an orographic component will produce a period of deeper convection for the Western Ghats of India this weekend. The same trough will also be responsible for the enhanced rainfall over central India.

#### **Expected Impacts**

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



### Parts of Myanmar, Thailand, Laos, Cambodia and northern Philippines

#### **Weather**

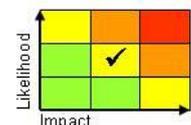
Another period of frequent and heavy thunderstorms associated with the monsoon is expected in the coming days.

#### **Discussion**

An active phase of the monsoon trough will bring enhanced rainfall to this area in the form of heavy showers and thunderstorms, which could be further enhanced by the stronger low-level flow as a result of the tropical depression which has formed east of Vietnam (See Tropical Cyclone section).

#### **Expected Impacts**

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



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**Australasia**

Nil

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**Additional Information**

**Cox's Bazar, southeast Bangladesh**

There will be the outside threat of a heavy shower or thunderstorm on almost any day next week, but with rainfall amounts generally below expectations for October, some days will be largely dry. That said, should any thunderstorms occur, there will be a very low likelihood of local flash flooding.

**Yemen**

The development of very isolated, heavy showers is possible over the Western Highlands, more especially in the south. Activity is expected to be around or below average for this time of year meaning many places will remain dry.

**Sudan/South Sudan**

The bulk of the shower activity will be seen in southern South Sudan through the next 7 days (See Africa section for full details). 25-50mm of rain per day possible from daily showers and thunderstorms, with a lower likelihood of 75-100mm at any one location over the course of the coming week, especially from Saturday. This is fairly typical for the rainy season which is now on the decline. Most of Sudan will be dry, although the South Sudan border region could see sporadic, locally heavy showers.

**Issued at:** 110600 UTC

**Meteorologists:** Chris Almond / Martin Young

**Global Guidance Unit**

**This forecast may be amended at any time**

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