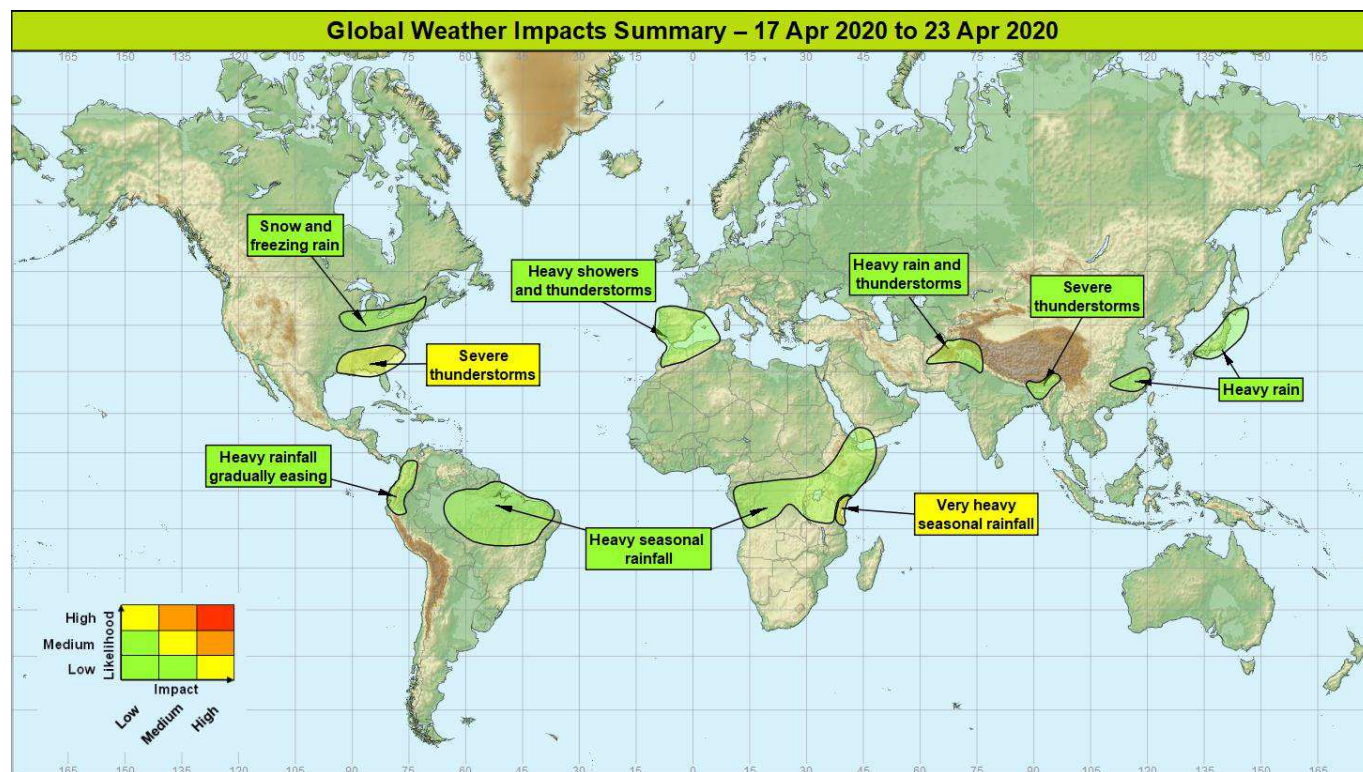


## Global Weather Impacts – Friday 17<sup>th</sup> to Thursday 23<sup>rd</sup> April 2020

Issued on Friday 17<sup>th</sup> April 2020

### HEADLINES

- Heavy seasonal rainfall affecting parts of Tanzania and Kenya over the next few days.
- Significant outbreak of severe storms expected across SE US this weekend.



### DISCUSSION

#### Tropical Cyclones

No tropical cyclone activity that could impact land is expected over the next 7 days.

#### Europe

#### Iberia, northern Morocco and northern Algeria Weather

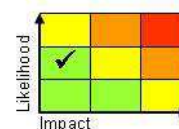
Heavy showers and thunderstorms will continue to affect this region through the weekend and into the early part of next week. The focus of the heaviest rainfall is likely to shift from Portugal and western Spain to eastern Spain and parts of northern Africa over the weekend. Storms may produce 50-75, locally 100 mm of rainfall in 6-12 hours. Frequent lightning strikes will also be likely, with strong winds and a lower likelihood of large hail.

#### Discussion

The vortex driving the current activity across western Iberia will drift a little north, allowing a sharp upper trough to move east which will interact with a high WBPT plume moving north from N Africa, allowing in widespread deep convection to break out. Forecast profiles show modest CAPE (around 500-1000 J/Kg) and so the highest likely impact will be flash flooding. Much of the activity later this weekend likely from elevated instability. Profiles show sufficient shear to allow for some organised and long lived storms.

#### Expected Impacts

Enhanced threat of flash flooding. Potential impact from frequent lightning, especially over the weekend.



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## North America

### South-Eastern USA

#### **Weather**

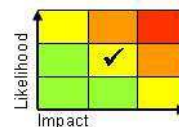
Severe thunderstorms are likely to affect southern parts the USA from Texas eastwards from Saturday to end of Monday next week. These storms are likely to be capable of producing 50-100, possibly 150 mm of rainfall in a few hours, with large hail, damaging winds, and significant tornadoes all probable hazards.

#### **Discussion**

A shortwave trough running east in the south shifted jet is likely to engage a plume of moist, tropical air across the south-eastern USA from Sunday through to Tuesday and generate severe convection in the region. Forecast profiles offer over 2000 J/kg CAPE, 40-50 mm PWAT and marked shear supporting severe and potentially organised convection.

#### **Expected Impacts**

Flash flooding is likely. Damage to/destruction of property and crops from large hail and/or strong winds are possible should these storms affect populated areas.



### Central/NE US and S Canada

#### **Weather**

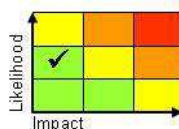
A swathe of snow, and locally freezing rain, is expected to run across this region over the next couple of days. This could produce around 10 locally 15 cm of lying snow in places, including a risk to Chicago and Detroit, although the major cities of the east coast are likely to avoid this.

#### **Discussion**

A frontal plume and area of low pressure driven along by a well-marked and mobile shortwave trough will generate a swathe of rain and snow on the northern edge as it abuts cold Canadian Arctic air. Profiles mainly indicate snow, but a marginal freezing rain risk exists along a narrow line within the broader precipitation area.

#### **Expected Impacts**

Predominantly impacts to transport, especially aviation with some impacts possible at Chicago for example.



## Central America

Nil.

## South America

### Much of Ecuador, northern Peru and western Colombia

#### **Weather**

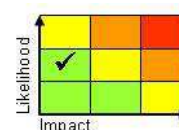
Heavy showers and thunderstorms will continue although by this weekend, showers will begin to ease and reduce in extent, and into next week conditions should become much drier. A further 100-250mm of rainfall is likely to fall in places. This represents locally more than double the average rainfall for parts of this region which have been very wet over recent weeks and months.

#### **Discussion**

With the MJO now across Western Africa rainfall amounts and extent are likely to continue to ease over the coming days.

#### **Expected Impacts**

Threat of further landslides and flash flooding, particularly in areas where the terrain is steep.



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## Brazil

### **Weather**

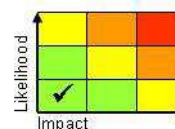
Further heavy rainfall is expected to affect large swathes of northern Brazil over the next week. Large areas are expected to see accumulations around 50-100mm with peaks of over 250mm. Whilst much of the rain will tend to fall in the sparsely populated Amazon basin, more populated regions in northeast Brazil will also be affected at times.

### **Discussion**

A south displaced and active ITCZ, mainly due to above-average SSTs in the tropical regions of the South Atlantic, will lead to enhanced convection across much of northern Brazil over the next week.

### **Expected Impacts**

Enhanced risk of landslides and flash flooding.



## Africa

### Central and eastern Africa, SW Arabian Peninsula

### **Weather**

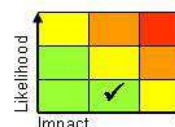
Fairly widespread showers and thunderstorms are expected large parts of tropical Africa through the coming week, with up to 50-75 mm falling in a few hours, and up to 150 mm accumulating in places through the next 7 days. The activity could well extend north-east to affect parts of Yemen where flash flooding has already been seen over the past week.

### **Discussion**

The progress of the MJO across Africa over the coming week is likely to lead to enhanced convection across the tropical part of the continent, with the ITCZ likely to become very active. The activity could extend into parts of Yemen where thunderstorms caused flash flooding in the capital Sana'a on Monday.

### **Expected Impacts**

Flash flooding and some riverine flooding will become increasingly likely, as will landslides in mountainous terrain.



## Tanzania and Kenya

### **Weather**

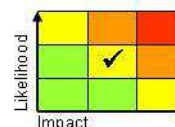
Coastal regions of northern Tanzania and the far south of Kenya are expected to have the heaviest rainfall across Africa with a further 300 mm possible in places by the end of Sunday. It is likely that parts of this region will see more than their average April rainfall accumulate within a 3 or 4 day period. For context, Dar Es Salaam has received 279.3 mm of rain in the first half of April, compared to its mean total of 265.7mm.

### **Discussion**

High SSTs off the coast of East Africa and an active MJO moving across the continent will lead to enhanced rainfall across the region, particularly coastal parts of Tanzania and Kenya. This region has been wetter than average for several months and additional rainfall is likely to generate impacts.

### **Expected Impacts**

Flash flooding likely impacting travel in the region, with some property flooding also possible.



**Northern Morocco and Algeria** – see *Europe section*

## Middle East

Nil.

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## Asia

### Afghanistan, far NW India and northern Pakistan

#### **Weather**

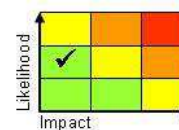
Further periods of locally heavy rainfall is expected in this region over the next two to three days. Widespread 25-50 mm of rainfall is expected, with as much as 100 mm possible over high ground, especially northern Pakistan. This is equivalent to more than a month's worth of rainfall in the wettest areas, and the rainfall could combine with seasonal snow melt to exacerbate the potential flooding.

#### **Discussion**

Disturbances embedded within the STJ will transfer east across this region through the next few days before an upper ridge brings more settled conditions next week. The associated upper forcing engaging the northern side of the warm plume to produce areas of rain and thunderstorms.

#### **Expected Impacts**

Flash flooding looks like the main threat in this region, but locally some dense lifted dust plumes are also possible across the desert regions.



### Bangladesh and northeast India

#### **Weather**

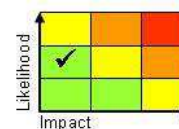
Severe thunderstorms are expected to continue across this region for another, producing intense rainfall (up to 50-75, locally 100 mm in just a few hours) along with the threat of large hail and tornadoes. This is now the peak season for severe storm impacts in this region and a few locations could well see over 300 mm of rainfall this week.

#### **Discussion**

Advancing upper troughs will engage a warm plume advecting up from the Bay of Bengal. This will result in forecast profiles that show very large CAPE (around 4000 J/kg) and marked vertical wind shear, especially in the lower atmosphere.

#### **Expected Impacts**

Flash flooding is likely along with, strong winds and large hail damage. Very localised tornadic damage is also possible along with impacts from frequent lightning.



## Japan

#### **Weather**

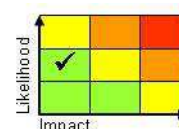
A further period of very windy and wet weather is expected on Friday night and into Saturday, producing a further 75-125 mm of rain (the average for the whole of April) rainfall. Gale force winds are also expected, mainly along the southern coasts, leading to some rough seas.

#### **Discussion**

An upper trough will interact with WBPT plume leading the cyclogenesis. The resulting a gradually deepening area of low pressure will track NE across the mainland, before clearing on Saturday night.

#### **Expected Impacts**

Threat of flash flooding with a lower likelihood of landslides. Lower likelihood of some wind damage or disruption. Rough seas.



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**Central China****Weather**

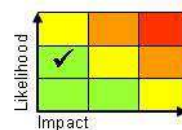
Pulses of enhanced rainfall with embedded thunderstorms are likely to develop across parts of central China and continue into next week. 50 to 75 mm of rainfall per day is possible, with 100-150 mm in places, equivalent to a month's rainfall, through the period of a few days.

**Discussion**

Upper troughs running east will engage the baroclinic zone across this region, generating pulses of activity. Forecast profiles support EMBD CB, with skinny cape and PWAT 40-45 mm likely to produce some intense downpours.

**Expected Impacts**

Flash flooding is likely the main impact from these events.

**Australasia**

Nil.

**Additional Information:**

Nil.

**Issued at:** 170800 UTC    **Meteorologists:** Mark Sidaway / D J Harris

**Global Guidance Unit**

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