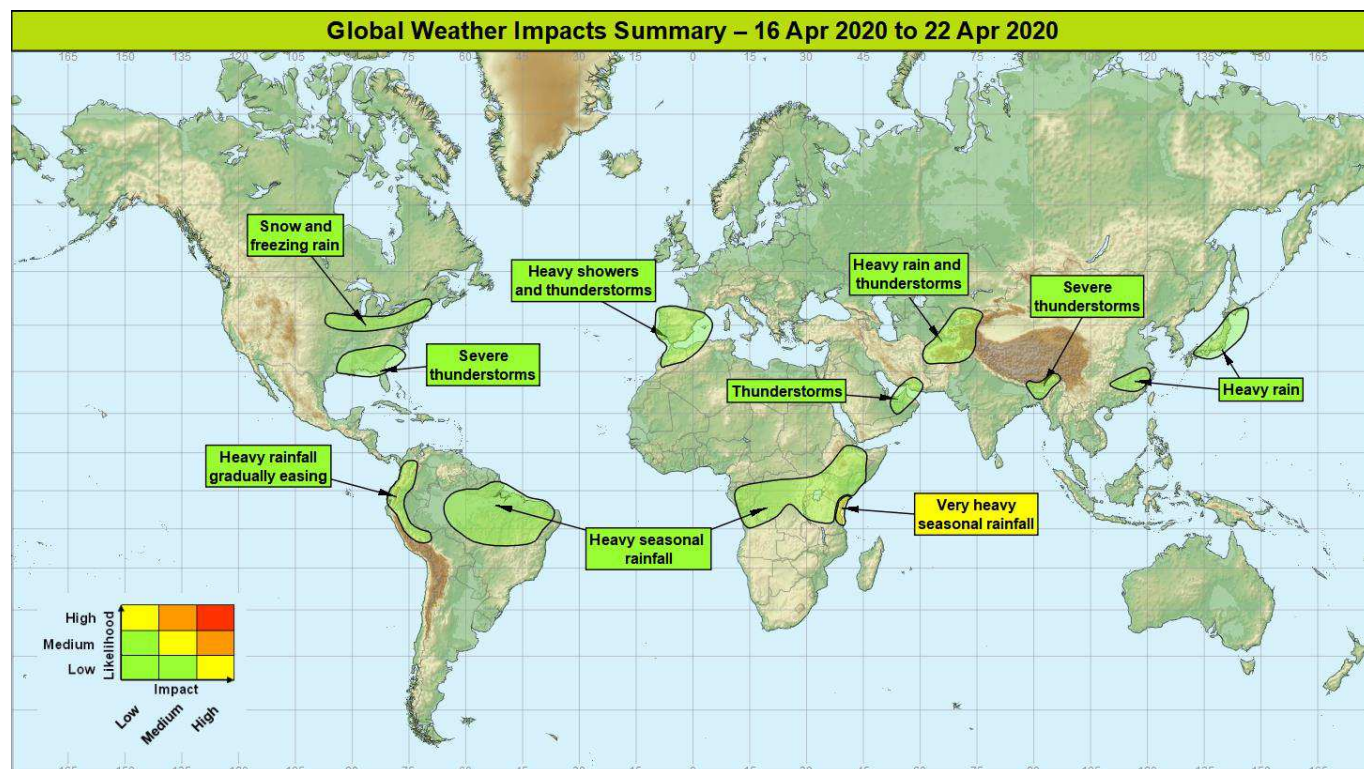


## Global Weather Impacts – Thursday 16<sup>th</sup> to Wednesday 22<sup>nd</sup> April 2020

Issued on Thursday 16<sup>th</sup> April 2020

### HEADLINES

- Heavy seasonal rainfall in central, and especially east, Africa.
- Severe thunderstorms across Bangladesh and northeast India at times.
- Heavy showers and thunderstorms across Iberia and northwest Africa at times.



### DISCUSSION

#### Tropical Cyclones

No tropical cyclone activity that could impact land is expected over the next 7 days. Ex-Jeruto is now weakening over the South-west Indian Ocean, offering no threat to land.

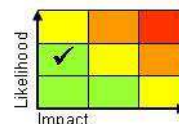
#### Europe

#### Iberia, northern Morocco and northwest Algeria

##### Weather

Heavy showers and thunderstorms will affect the region at times through the rest of this week. The heaviest and most widespread rainfall will initially be across western Spain and Portugal where up to 40 to 70 mm of rain could fall in just 3-6 hours. A second, more active period, then seems likely to affect northern Morocco, northwest Algeria and eastern Spain, including the Balearic Isles over the weekend and early next week. Around 50-75, locally 100 mm of rainfall in 6-12 hours is possible. Frequent lightning strikes will also be likely, with strong winds and a lower likelihood of large hail.

##### Discussion



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A cyclonic upper pattern is expected across this region through the rest of this week. Several upper troughs sweep NE over the coming days, enhancing convection in the west of the region. Over the weekend an upper vortex will interact with a high WBPT plume moving north from N Africa, allowing in widespread deep convection to break out. Both events produce fairly skinny CAPE profiles (around 500-1000 J/Kg) and so the highest likely impact in both events will be flash flooding. The first event will be surface rooted with reasonable vertical wind shear, with the second event more likely an elevated based CB event, but with some diurnal input and also reasonable wind shear. So organised deep convection looks likely in both events, with intense rainfall most likely, but with frequent lightning especially likely in the second event.

### **Expected Impacts**

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

## **North America**

### **South-Eastern USA**

#### **Weather**

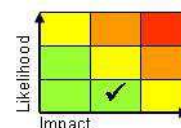
More thunderstorms, possibly severe, are likely to affect southern parts the USA from Texas eastwards from Saturday to end of Monday next week. These storms could be capable of producing 50-100, possibly 150 mm of rainfall in a few hours along with large hail, gusty winds and possibly the odd tornado.

#### **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 property and crops from large hail and/or strong winds are possible.



## **Central/NE US**

#### **Weather**

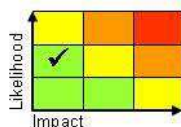
A swathe of snow, and locally freezing rain, is expected to run across this region over the next few days, bringing 10-15cm of snow quite widely.

#### **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, with aviation hubs in the air likely to be affected (eg Chicago, NE US).



## **Central America**

Nil.

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## South America

### Much of Ecuador, Peru and western Colombia

#### **Weather**

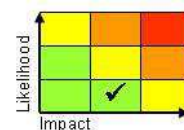
Heavy showers and thunderstorms will continue to be more frequent, widespread and intense than usual for the time of year over the next couple of days. By the weekend, showers will begin to ease and reduce in extent, and into next week conditions should become much drier. A further 100-250mm of rainfall is likely to fall across the area. 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**

The MJO has moved out of the region, with convection generally easing in its wake over the next couple of days. Until then further heavy rainfall is expected across the region, particularly in the north.

#### **Expected Impacts**

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



## Brazil

#### **Weather**

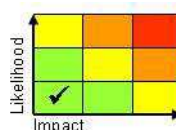
Further heavy rainfall is expected to affect large swathes of northern Brazil over the next week. Large areas are expected to see accumulations around 50-100mm with peaks of over 250mm. Whilst much of the rain will tend to fall in the sparsely populated Amazon basin, more populated regions in northeast 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. Convection will be further enhanced in the coming days as the MJO continues to move across the tropical Atlantic Ocean.

#### **Expected Impacts**

Enhanced risk of landslides and flash flooding.



## Africa

### Central and eastern Africa

#### **Weather**

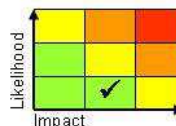
Fairly widespread showers and thunderstorms are expected large parts of tropical Africa through the coming week, with up to 50-75 mm falling in a few hours, and up to 150 mm accumulating in places through the next 7 days.

#### **Discussion**

The progress of the MJO towards and ultimately 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.

#### **Expected Impacts**

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



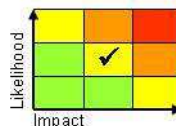
## Tanzania and Kenya

#### **Weather**

Coastal regions of Tanzania and Kenya are expected to have the heaviest rainfall across Africa with 200, locally 300 mm accumulating here from Thursday to 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 279.1 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 wet for several months and additional rainfall is likely to generate impacts.



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## Expected Impacts

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

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

## Middle East

### Areas around the southern Persian Gulf

#### Weather

Residual thunderstorm activity is likely to clear from the southern Persian Gulf through Thursday. Any storms are likely to be less severe than on Wednesday, but could still produce locally 20 mm of rainfall in a short period, gusty winds and frequent lightning.

#### Discussion

Activity on Thursday will likely ease markedly as upper forcing across the warm plume reduces. Forecast profiles become drier suggesting any activity will be isolated and high based.

#### Expected Impacts

The main impacts on Thursday may well be associated with gusty winds which could produce haboobs. Frequent lightning may impact power networks.



## Asia

### Afghanistan, Tajikistan and northern Pakistan

#### Weather

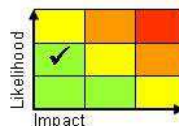
Further periods of locally heavy rainfall is expected in this region through the next week. Widespread 25-40 mm of rainfall is expected, with as much as 75 mm possible over high ground, especially northern Pakistan and north-eastern Afghanistan. This is almost equivalent to more than a month's worth 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 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

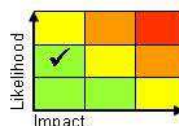
Severe thunderstorms are expected to develop across this region, producing intense rainfall (up to 50-75, locally 100 mm in just a few hours) along with the threat of large hail and tornadoes. This is now the peak season for severe storm impacts in this region.

#### 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.

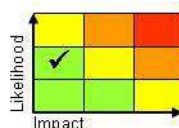


## Japan

#### 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



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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.

**Central China****Weather**

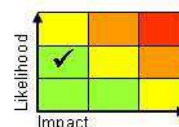
Pulses of enhanced rainfall with embedded thunderstorms are likely to develop across parts of central China from Friday onwards. 50 to 75 mm of rainfall per day is possible, with 100-150 mm in places, equivalent to a month's rainfall, through the period of a few days.

**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:** 160800 UTC    **Meteorologists:** Mark Sidaway / DJ Harris

**Global Guidance Unit**

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

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