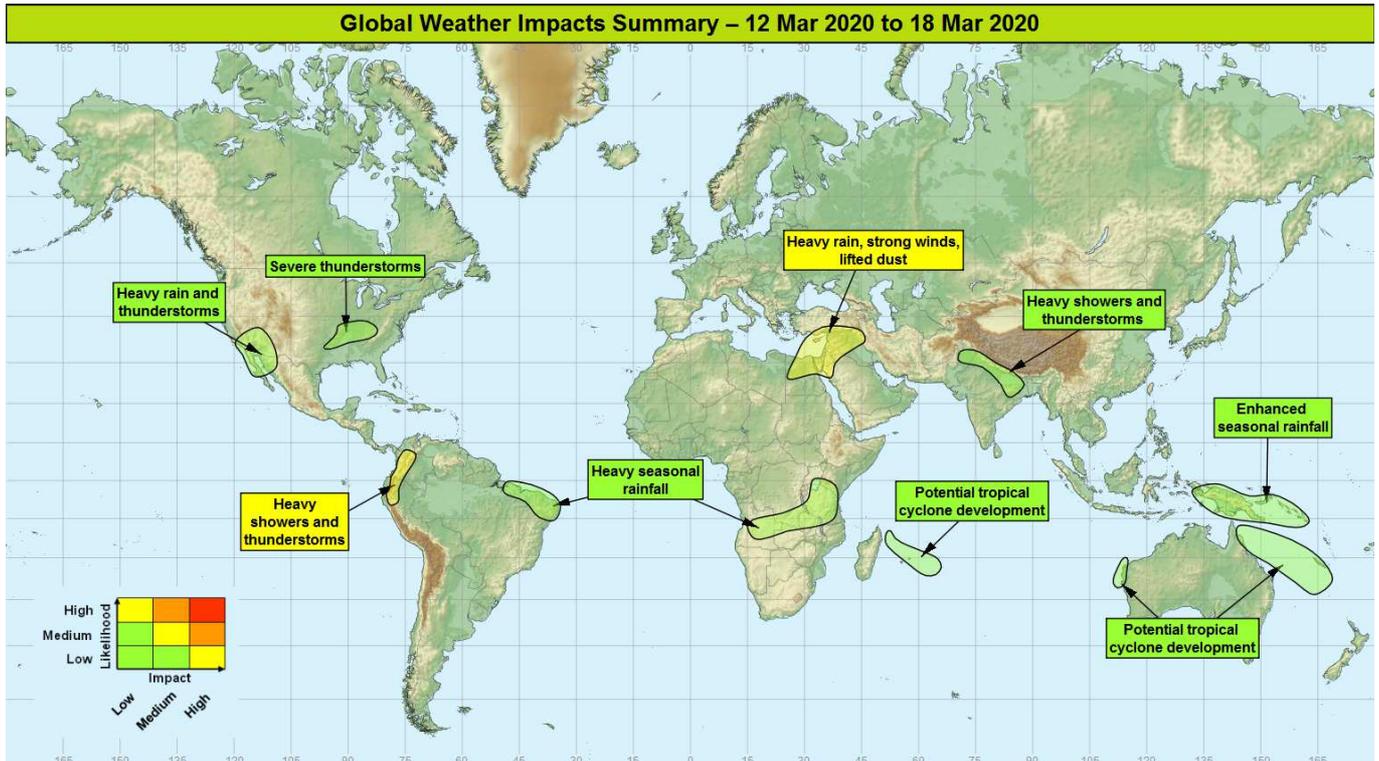


## Global Weather Impacts – Thursday 12<sup>th</sup> to Wednesday 18<sup>th</sup> March 2020

Issued on Thursday 12<sup>th</sup> March 2020

### HEADLINES

- Very unsettled over Egypt, eastern Mediterranean and Levant in the next few days.
- Further heavy seasonal rainfall for the northern Andes in South America.
- Potential tropical cyclone formation in the southwest Indian Ocean, Coral Sea and Timor Sea.



### DISCUSSION

#### Tropical Cyclones

There are currently no active tropical cyclones.

*The following areas are being monitored for potential tropical cyclone development that may impact land:*

#### Southwest Indian Ocean (La Reunion and Mauritius)

##### Weather

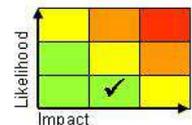
A weak tropical low pressure area currently located to the northeast of Madagascar is likely to slowly track southeastwards through the next week. There is an increasing likelihood that this system will become a tropical cyclone as it approaches Mauritius, with a lower risk for this to impact La Reunion early next week. There remains some uncertainty regarding the intensity of this potential system, and its future track, but it does bring an increased risk of damaging winds and, more likely, torrential rainfall.

##### Discussion

Consistent signal from NWP for a gradual development of the tropical low as it heads southeast through the remainder of the week although there is large spread in its trajectory southeast as it undergoes potentially rapid development over the weekend and early next week.

##### Expected Impacts

Risk of flash flooding, with a lower likelihood of damaging winds.



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## Coral Sea (Northeast Queensland)

### Weather

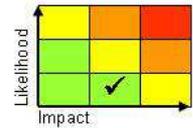
An area of heavy showers and thunderstorms has organised into a tropical low east of Cape York Peninsula, northern Queensland over the last 24 hours. It is likely that this system will intensify as it moves southeast across the Coral Sea on Friday to become a tropical cyclone. Ahead of this potential formation, enhanced shower and thunderstorm activity is likely near the coastal fringes of Queensland. Whilst not all areas will see the heaviest rain there is the potential for 50-100 mm to fall in places within a few hours Thursday. At this stage, the most likely track for any tropical cyclone is southeastwards somewhere between New Caledonia and the Australian coast. There is a low probability for this to fringe very close to New Caledonia on Sunday. Damaging winds and intense rainfall will be associated with this tropical cyclone.

### Discussion

The weak MJO will move from over the Maritime Continent and into the Pacific in the next few days. This is likely to provide the trigger for a tropical cyclone development across the Coral Sea. Another factor in favour of a tropical cyclone development is the sea surface temperatures are around 2 degrees Celsius above average at the moment.

### Expected Impacts

There is the potential for flash flooding, damaging winds and coastal storm surge flooding.



## Timor Sea (Northwest Australia)

### Weather

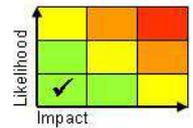
There is the low probability for a tropical cyclone to develop close to the far west of Australia today, then hug the coast as it tracks south on Friday and into the weekend. If a system forms, it is not expected to be an intense cyclone, though heavy rain is expected along its track. Potentially 60-100 mm of rain may fall in a day or so near the coastal fringes.

### Discussion

An ERW has triggered convection over the Timor Sea in the last few days forming a shallow tropical low. This has tracked south into an area of low vertical wind shear and high SSTs which makes development more favourable. One common theme from NWP output is its likely track will take this system south along the coast of west of Australia.

### Expected Impacts

Small risk of flash flooding and damaging winds.



## Europe

Turkey and Cyprus – See *Middle East* section.

## North America

### Southwest USA and far northwest of Mexico

#### Weather

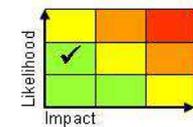
Further heavy showers and thunderstorms are likely to affect the normally arid regions of southwestern USA and the far northwest of Mexico today and Friday. Up to 100 mm could accumulate in a few places, which is up to three times the average March rainfall.

#### Discussion

A Pacific cut-off upper vortex will interact with a high WBPT plume moving north from Mexico to generate areas of heavy showers and thunderstorms. The vortex will tend to relax as it transfers east. The heaviest rain is likely to be over southern California, but desert regions further inland, including cities such as Las Vegas and Phoenix, could also have some unusually heavy rainfall.

#### Expected Impacts

Flash flooding is the main impact, which could affect major cities in the area.

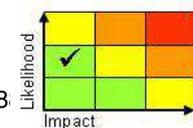


### Mid-Mississippi, Ohio and Tennessee Valleys, USA

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## Weather

Severe thunderstorms with tornadoes, large hail and strong winds are likely across parts of the mid-Mississippi, Ohio and Tennessee Valleys through Thursday afternoon and evening. Isolated severe storms will also be possible in parts of the Arklatex and Ozarks.

## Discussion

An upper-level trough will move eastward across the Great Plains today as a mid-level jet moves across the central Plains and upper Mississippi Valley. Increasing low-level moisture ahead of a cold front will lead to the development of an east to west corridor of instability by this afternoon. Thunderstorms are forecast to first develop across south-central Missouri this morning and spread eastward into western Kentucky and northwest Tennessee by early to mid-afternoon. The instability combined with strong deep-layer shear will be favourable for severe storms.

## Expected Impacts

Severe storms will be capable of producing localised flash flooding, property and infrastructure damage from large hail, strong winds and tornadoes.

## Central America

Nil significant.

## South America

### Colombia, Ecuador and Peru

#### Weather

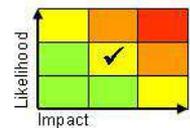
Enhanced shower and thunderstorm activity will continue across the northern Andes through the next 7 days. Rainfall could reach 250-350 mm in places, which would represent more than the average for the whole of March.

#### Discussion

Northerly flow across Central America is expected to continue, leading to stronger than normal convergence along the ITCZ that will be south-shifted compared to climatology, bringing enhanced precipitation to this region. This continues the trend of above average precipitation in recent weeks making impacts more likely.

#### Expected Impacts

Ongoing enhanced threat of flash flooding and landslides.



## Northeast Brazil

#### Weather

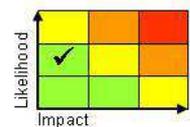
Heavy showers and thunderstorms will affect the region for much of the coming 7 days. Around 50-100 mm could fall within a few hours in places with a few locations having up to 300 mm in total for the seven-day period, equivalent to a month's worth of rain. The heaviest rain should remain well to the north of the major cities of Rio de Janeiro and Sao Paulo, with Natal and Fortaleza most likely to be impacted.

#### Discussion

The South Atlantic Convergence Zone (SACZ) will tend to weaken with the main activity across the region transferring north onto the ITCZ. This is likely to become more active at times due to several tropical waves moving through the ITCZ. Forecast profiles are very moist at depth (precipitable water around 65 mm), with relatively modest CAPE, suggesting high rainfall efficiency and the potential for large accumulations.

#### Expected Impacts

Heavy rain will bring an enhanced threat of flash flooding and landslides, particularly in mountainous terrain.



## Africa

La Reunion and Mauritius – see *Tropical Cyclones* section.

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**Egypt and Libya** – see *Middle East* section.

**Parts of central and eastern Africa**

**Weather**

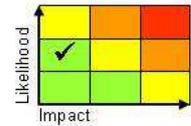
Heavy showers and thunderstorms are likely to affect a broad region of central and east Africa through the coming week. These could produce 50-75 mm of rainfall in a few hours, with over 200 mm through the week in places. This would represent the March average falling in the space of a few days.

**Discussion**

Increased activity along the south shifted ITCZ will lead to above average rainfall across this region. A sample of forecast profiles show over 3000 J/kg CAPE in places, so there is the potential for some severe storms to develop.

**Expected Impacts**

Increase risk of flash flooding should these thunderstorms affect a major population centre.



**Middle East**

**Libya, Egypt, Levant, Cyprus and southern Turkey**

**Weather**

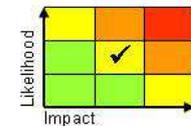
There is the potential for heavy showers and thunderstorms along with strong winds/blowing dust over northern Egypt today as a deep area of low pressure develops across the area. The strong winds, heavy rain and thunderstorms then transferring north-northeast into the eastern Mediterranean, the Levant and southern Turkey on Friday before largely dying away on Saturday. A few places could see 25-50 mm of rainfall in just a few hours, with 80-100 mm building up over a couple of days. A few locations could see up over 150 mm. The highest rainfall totals are most likely over northern Egypt and higher ground elsewhere. The average March rainfall in the area is around 50-100 mm. Strong winds are also likely, which could lift dense dust storms across the region.

**Discussion**

A complex interaction of an eastward travelling upper vortex and a northward surge of warm air across this region will produce a deep area of low pressure across northern Egypt today. This will bring strong winds, lifted/blowing dust and areas of elevated CB/TS activity to many parts of northern Egypt, eastern Med, coastal Levant and southern Turkey today and on Friday. The heaviest rain is expected across northern Egypt in the next 24-36 hours, but the elevated nature of convection adds uncertainty to totals.

**Expected Impacts**

Flash flooding is possible in places, with lifted dust potentially impacting human health and aviation in the region.



**Asia**

**Northern Pakistan, northern India and southern Nepal**

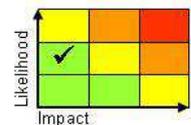
**Weather**

Heavy showers and thunderstorms will continue to slowly transfer eastwards from northern Pakistan to northern India/southern Nepal in the next few days. There is the potential for 50-75 mm of rain to fall in a couple of hours, and up to 100-150 mm in a few days for parts of northern Pakistan and northwest India. The average March rainfall is between 50 and 150 mm in this region. There is also potential for large hail, frequent lightning and strong, gusty winds within these thunderstorms.

**Discussion**

A portion of a mid-latitude upper trough is extending south, then southeast across the Himalayas, activating a plume of warm, moist air, and bringing frequent/heavy showers/thunderstorms to the area.

**Expected Impacts**



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Flash flooding likely in places along with damage to property and infrastructure from hail and/or strong winds. This region has already seen significant impacts from heavy rain, snow and flooding in recent days.

## Australasia

Australia and New Caledonia – see *Tropical Cyclones* section.

## Eastern Indonesia, Papua New Guinea and Solomon Islands

### **Weather**

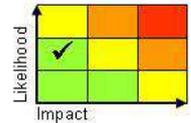
Enhanced seasonal rainfall is expected to continue across this region. Rainfall totals of widely 50-100 mm, and locally 200-300 mm are expected in frequent daily rounds of showers and thunderstorms

### **Discussion**

The active phase of the MJO is currently moving slowly through this region, providing a backdrop of enhanced convection and rainfall.

### **Expected Impacts**

Flash flooding possible in places. Also a risk of landslides in mountainous areas.



## Additional Information

Nil.

**Issued at:** 120810 UTC    **Meteorologists:** Tony Wardle / Matthew Lehnert

**Global Guidance Unit**

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