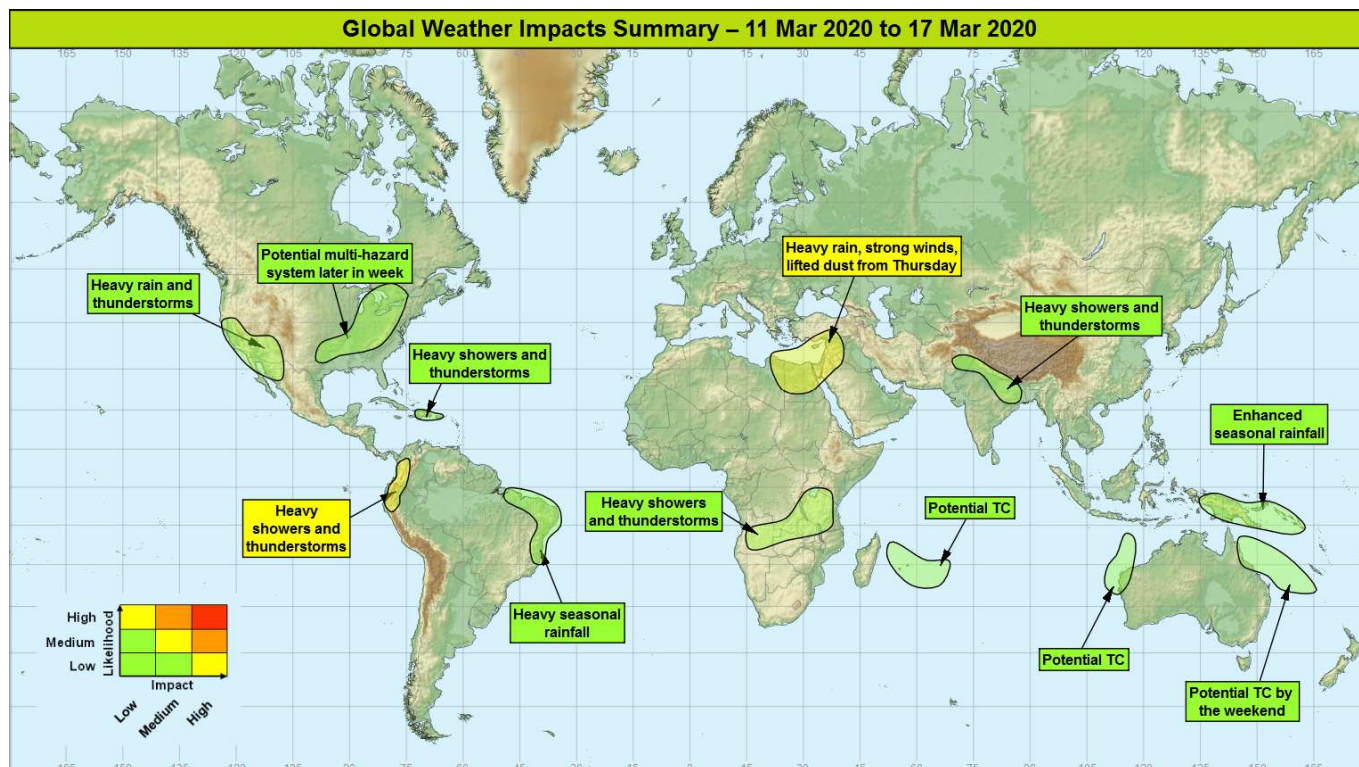


## Global Weather Impacts – Wednesday 11<sup>th</sup> to Tuesday 17<sup>th</sup> March 2020

Issued on Wednesday 11<sup>th</sup> March 2020

### HEADLINES

- Very unsettled over the eastern Mediterranean and adjacent countries from Thursday.
- 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 which may impact land:*

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

##### Weather

A weak tropical low pressure area located to the northeast of Madagascar is likely to slowly track southeastwards through the next week. The system may well strengthen to become a tropical cyclone later this week, potentially affecting Mauritius and/or Reunion from Friday. There is still significant uncertainty regarding the intensity of this potential system but it does bring an increased risk of damaging winds and, more likely, torrential rainfall.

##### Discussion

Consistent signal from NWP a gradual development of the tropical low as it heads SE through the next few days. The trend in recent runs has been away from a significant tropical cyclone, although it still brings at least a threat of torrential rain.

##### Expected Impacts

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



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.

### Coral Sea (northeast Queensland)

#### **Weather**

A tropical low has formed over the Cape York peninsula of northern Queensland from an area of heavy showers and thunderstorms. This low looks likely to become more organised over the next few days with the potential for it to develop into a tropical cyclone on Friday as it moves over the Coral Sea. 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 50-100mm to fall in places within a few hours during Wednesday and Thursday. If a tropical cyclone does form it will potentially bring damaging winds and intense rainfall. At this stage, its most likely track would see it steered southeastward between New Caledonia and the Australian coast.

#### **Discussion**

The MJO will move from over the Maritime Continent and into the Pacific during the coming week. This is likely to provide the trigger for a tropical cyclone development in the Coral Sea by the end of the week. 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 (NW Australia)

#### **Weather**

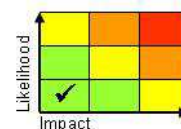
There is the potential for a tropical cyclone to form over the Timor Sea over the next couple of days before tracking south across the far west of Australia. If such a system forms, an intense cyclone looks unlikely to develop before it makes landfall. However, heavy rain is likely though with the potential for 60-100mm to fall in a day or so near the coastal fringes.

#### **Discussion**

An ERW has triggered convection over the Timor Sea forming a shallow tropical low. This is in an area of low vertical wind shear and high SSTs which makes development more favourable than current model output may be suggesting. One common theme from NWP output is its likely track will either be near to or across the far west of Australia, near Learmonth.

#### **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**

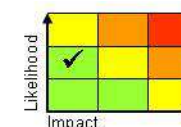
Heavy showers and thunderstorms are likely to affect the normally arid regions of south-western USA and the far northwest of Mexico until the weekend. Up to 100mm could accumulate in a few places, which is up to three times the average March rainfall.

#### **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. Whilst the heaviest rain is likely to be over southern California, 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.



**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)

## Southern Plains to Great Lakes USA and southeast Canada

### **Weather**

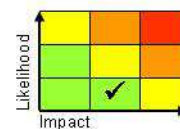
There is the likelihood of a multi-hazard system to develop east of the Rockies later in the week affecting the highlighted areas during Thursday and Friday. This brings the risk of heavy snow and freezing rain in the north of the area, with a threat of torrential rain and severe thunderstorms further south.

### **Discussion**

The vortex that will drive unusually heavy rainfall in the southwest of the USA is signalled to relax ENE across central parts of the US, engaging a warm plume to produce a multi-hazard system across the area by the end of the week. Sufficient shear, forcing and CAPE across the south of the area may lead to some severe thunderstorms

### **Expected Impacts**

Potential for disruptive winter hazards in the north, and flash flooding and severe storm hazards in the south, including a risk of tornadoes.



## Central America

### Hispaniola and Puerto Rico

### **Weather**

Heavy showers and thunderstorms are expected to be more frequent and intense than usual for the time of year during Wednesday and Thursday. Up to 150-250 mm of rainfall is possible in places, much of which is likely to fall in short periods. The average monthly rainfall in this region is between 50-100 mm.

### **Discussion**

A low latitude upper trough will continue to engage a cold front that has become slow-moving across the Caribbean. The result will be more frequent and intense shower activity than is usual across the region at this time of year.

### **Expected Impacts**

Increased risk of flash flooding.



## South America

### Colombia, Ecuador and Peru

### **Weather**

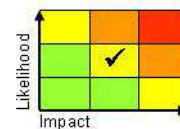
Enhanced shower and thunderstorm activity will continue across the northern Andes through the next 7 days. Rainfall could reach 250-350 mm in places, which would represent more than the average for the whole of March.

### **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.



**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.

## Eastern Brazil

### **Weather**

Heavy showers and thunderstorms will affect the region during this 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 to the north of the major cities of Rio de Janeiro and Sao Paulo.

### **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

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

**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, western Levant, Cyprus and southern Turkey

### **Weather**

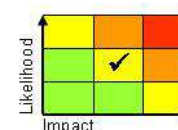
There is the potential for heavy showers and thunderstorms along with strong winds/blowing dust from Thursday as low pressure develops over Egypt, before transferring north-northeast into the eastern Mediterranean and Levant. A few places could see 25-50 mm of rainfall in just a few hours, with 80-100 mm building up over a couple of days. A few locations could see up to 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 an area of low pressure bringing strong winds, lifted/blowing dust and areas of elevated CB/TS activity. Models now agree on higher rainfall totals, with a low pressure around 990hPa signalled. The elevated nature of convection adds uncertainty however to the accumulations from showery precipitation in the region.

### **Expected Impacts**

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



**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)



### Asia

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

##### **Weather**

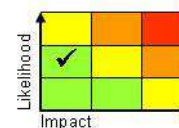
Heavy showers and thunderstorms will continue to slowly transfer eastwards from northern Pakistan to northern India/southern Nepal over the next few days. There is the potential for 50-75 mm of rain to fall in a couple of hours, and up to 100-150 mm in a few days for parts of northern Pakistan and northwest 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 expected to dig S, then SE across the Himalayas, activating a plume of warm, moist air, and bringing frequent/heavy showers/thunderstorms to the area.

##### **Expected Impacts**

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

#### Eastern Indonesia, Papua New Guinea and Solomon Islands

##### **Weather**

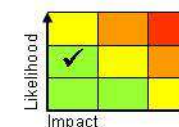
Enhanced seasonal rainfall is expected to continue across this region. Rainfall totals of widely 50-100 mm, and locally 200-300 mm are expected in frequent daily rounds of showers and thunderstorms.

##### **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.



**Australia** – see *Tropical Cyclones* section.

### Additional Information

Nil.

**Issued at:** 110740 UTC **Meteorologists:** Chris Bulmer / Laura Ellam

**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.