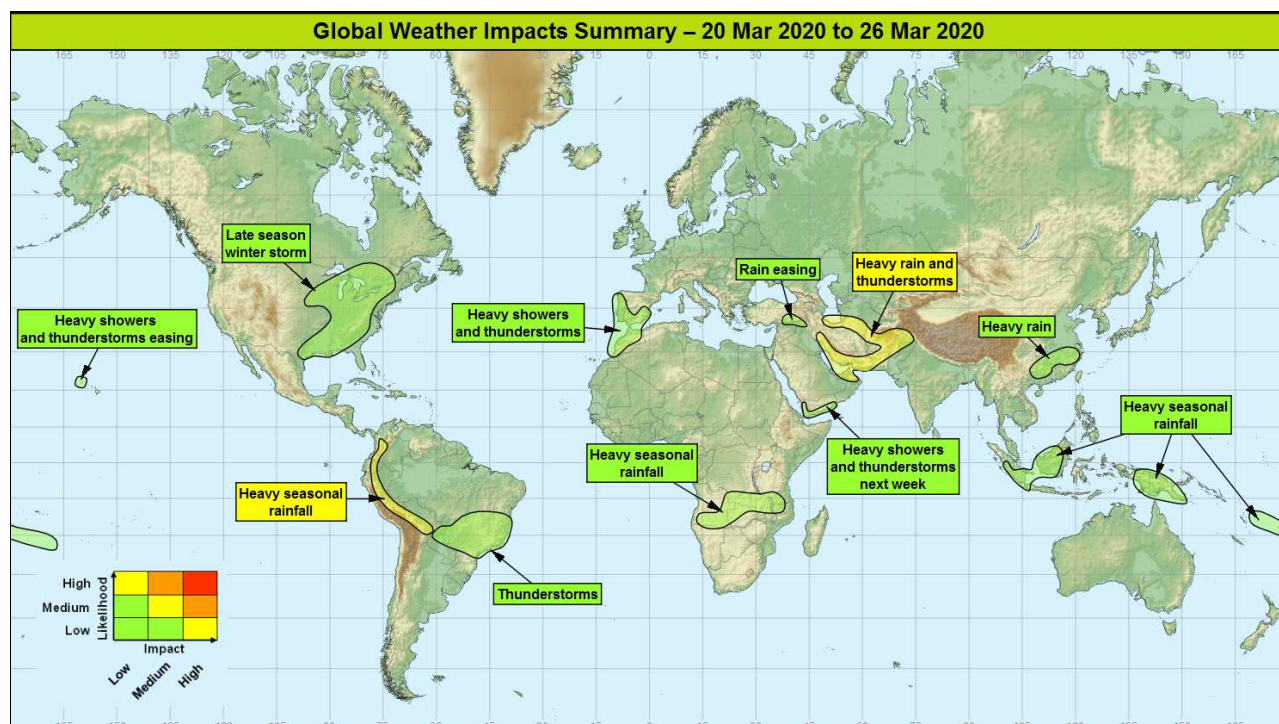


## Global Weather Impacts – Friday 20<sup>th</sup> to Thursday 26<sup>th</sup> March 2020

Issued on Friday 20<sup>th</sup> March 2020

### HEADLINES

- Heavy rain and thunderstorms transferring east across the Middle East into southwest Asia.
- Ongoing above average rainfall and landslide threat affecting the northern Andes.
- Late season winter storm affecting the eastern USA and southeast Canada.



### DISCUSSION

#### Tropical Cyclones

There are currently no named tropical cyclones expected to affect land over the next 7 days.

#### Europe

#### Iberia and Morocco

#### Weather

Scattered slow-moving heavy showers and thunderstorms are expected to continue across Portugal, southern and western parts of Spain and Morocco. Locally 40-60 mm of rainfall is possible in 6 hours which is equivalent to over the monthly average for southwestern Iberia (e.g. 36 mm in Seville).

#### Discussion

A trough disruption over the eastern Atlantic will consolidate into a cut-off low and engage a modest warm plume across southern and western Iberia and Morocco through the next few days, being reinforced by another trough disruption over the weekend. The weak steering flow will favour locally significant rainfall totals across the region.

#### Expected Impacts

Localised damage to property and infrastructure from flash flooding.



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**North America****USA east of the Rockies and southeast Canada****Weather**

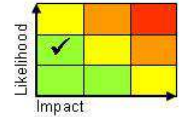
A disturbed spell of weather is ongoing across the eastern half of North America. Snow across the US Central Plains will ease during Friday morning (local time) with event accumulations of 10-15 cm. Further east, heavy rain and locally severe thunderstorms are expected to affect a wider region of the eastern USA and southeast Canada through to Saturday. A short-lived spell of cold conditions are expected to follow across northeast USA and eastern Canada. A further spell of unsettled weather is possible early next week affecting a similar region.

**Discussion**

A major upper trough over the Rockies is driving cyclogenesis to the east, drawing a broad plume of Gulf of Mexico moisture northward across much of the eastern continental USA. A succession of shortwave troughs will continue to engage this warm plume, triggering deep convection within the warm sector whilst the frontal system will be prone to wave development as it transfers east Friday through Sunday. There is reasonable model agreement in a similar system developing through early next week.

**Expected Impacts**

Falling snow is leading to power interruptions and transport disruption. Flash flooding is the most likely impact, particularly in parts of southern and southeast USA due to saturated soils from antecedent rainfall over the past few months.

**Hawaii****Weather**

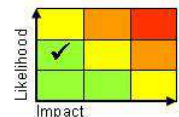
An area of low pressure west of Hawaii will result in further heavy showers and thunderstorms across the western islands of Kauai and Oahu on Friday. 25-50 mm of rain could fall in a few hours from these showers with event totals exceeding 100-150 mm in places, equivalent to the average monthly rainfall for March. Shower and thunderstorm activity will slowly ease over the weekend.

**Discussion**

The Kona Low responsible for heavy rain across parts of Hawaii will move slowly away from the islands through the next 24-48 hours reducing the frequency of heavy showers and thunderstorms across the western islands.

**Expected Impacts**

Risk of flash flooding continues across Kauai and Oahu on Friday where soil remains saturated due to recent heavy rain.

**Central America**

Nil significant.

**South America****Southern Colombia, Ecuador, Peru and northwest Bolivia****Weather**

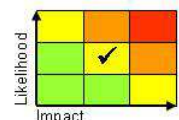
Enhanced shower and thunderstorm activity will continue across the northern Andes at times through the next week, with a peak in activity expected through Friday to Sunday. Rainfall accumulations could reach up to 250 mm in places, which would represent more than the average for the whole of March.

**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.

**Expected Impacts**

Ongoing threat of flash flooding and landslides in a region where the ground is already saturated from recent above average rainfall.



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**Paraguay and southern Brazil****Weather**

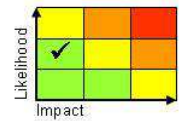
An active cold front will move north from southern Brazil and northern Paraguay into eastern parts of Brazil through the remainder of the week. This will be accompanied by a combination of heavy rain and locally severe thunderstorms capable of producing frequent lightning, strong winds and large hail. Some locations could see 75-150 mm in a few hours.

**Discussion**

The South Atlantic Convergence Zone (SACZ) will transfer north and become more active as forcing from a series of upper troughs associated with a north shifting jet engages the SACZ.

**Expected Impacts**

Heavy rain is likely to trigger flash flooding with multiple hazards from severe thunderstorms including localised property/infrastructure damage and risk to life. Localised property and infrastructure damage from lightning, strong winds and hail possible too.

**Africa**

**Morocco** – See *Europe* section.

**Namibia, southeast Angola, Zambia, Malawi, northwest Mozambique and southern Tanzania****Weather**

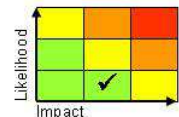
Scattered heavy showers and thunderstorms are expected to affect a broad region of central southern Africa through the next week. These could produce locally 50-75 mm of rainfall in a few hours with a few locations likely to receive 200-250 mm over the next 7 days. The heaviest rainfall is expected to be along a line from southwest Angola to the Tanzania/Mozambique border.

**Discussion**

The emergence of the MJO across Africa over the next week is expected to result in an increase in shower and thunderstorm activity across this region over the next week.

**Expected Impacts**

Increased risk of surface water and riverine flooding from heavy rainfall, particularly in southern Tanzania where impacts from flooding have already been reported. Areas of Angola (Cuanza Sul, Malanje and Luna Sul) which experienced recent heavy rainfall are likely to be spared significant rainfall.

**Middle East**

**UAE and northern Oman** – See *Asia* section.

**Southeast Turkey, northeast Syria and northern Iraq****Weather**

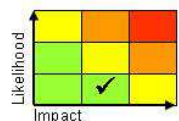
Whilst the persistent heavy rain experienced across the region has eased compared to earlier in the week, further scattered heavy showers and thunderstorms are expected on Friday before becoming largely dry over the weekend. This could lead to a further 20-40 mm falling in some locations over the next 24 hours.

**Discussion**

Whilst the main frontal plume and associated heavy rain has cleared from the region, the cut-off low that drove the initial cyclogenesis will spawn open cell deep convection within the cold pool over the next couple of days. The slow-moving nature of showers and thunderstorms that do develop will lead to some locally high rainfall totals following some exceptional rainfall this week so far (110mm/24 hours in Mosul and 173mm/24 hours in Rabiah).

**Expected Impacts**

Further surface water and riverine flooding is possible with an increased likelihood of landslide and rockslides.



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**Yemen****Weather**

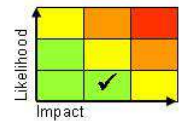
Shower and thunderstorm activity is expected to become more widespread through to the middle of next week across Western Highland and southern coastal areas. Some locations could see 20-30 mm in a few hours which would exceed the average monthly rainfall for most places.

**Discussion**

An upper trough extending across the Arabian Peninsula is likely to engage a plume of tropical moisture being drawn northward from Horn of Africa through to the middle of next week. This is expected to trigger more frequent shower and thunderstorm activity, particularly over highland areas compared to recent weeks.

**Expected Impacts**

Increased likelihood of flash flooding and an enhanced risk of landslides where terrain is steep. In addition these conditions often increase the risk of cholera attacks.

**Asia****Iran, Afghanistan, northern Pakistan, UAE and northern Oman****Weather**

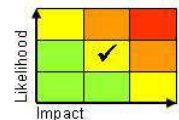
Two episodes of heavy rain and scattered thunderstorms are expected to affect the region during the next week. The first will affect Afghanistan and northern Pakistan through Friday and Saturday. A brief reprieve follows but will be followed by a further spell of disturbed weather from Sunday to Wednesday, initially across the Persian Gulf before moving northeast. Frequent lightning, large hail and strong winds with dense dust storms also likely. The heaviest rainfall is expected over higher ground of Iran, Afghanistan and northern Pakistan where 50-75 mm locally 150 mm is possible and is equivalent to the typical monthly rainfall for March.

**Discussion**

The Western Disturbance that was responsible for exceptionally heavy rain across parts of the Levant is now transferring east across southwest Asia. Once this departs, another trough disruption will occur across a similar region bringing a renewed threat of heavy rainfall, enhanced orographically over parts of Iran, Afghanistan and Pakistan as well as with embedded deep convection.

**Expected Impacts**

Surface water and riverine flooding (with a contribution from snow melt) and landslides look like the most likely impacts. Lightning and wind damage also likely, with dense dust storms possibly impacting on human health.

**Malaysia and western Indonesia****Weather**

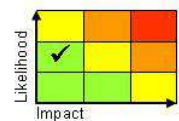
Shower and thunderstorm activity is expected to remain more widespread than normal through the next week with many places receiving 50-100 mm during this time, locally 250 mm in a few places. The heaviest rainfall is expected to occur over Kalimantan and the west coast of Sumatra.

**Discussion**

Convection along the ITCZ is expected to be more widespread as a Kelvin wave transfers east across the region over the next few days.

**Expected Impacts**

Increased risk of flash flooding, particularly in areas that have been affected by recent heavy rainfall e.g. West Java including Jakarta.



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### Eastern China

#### **Weather**

A spell of locally heavy rain is expected to develop across eastern China from Saturday. Whilst rainfall intensity should reduce on Sunday, further heavy rain and thunderstorms are possible are expected to affect a similar region early next week. During this period, up to 125-175 mm is locally possible, half of which may fall in under 24 hours, and would be equivalent to around the average March rainfall for this area.

#### **Discussion**

An upper trough is expected to emerge from the Himalayas and engage a plume of tropical air being drawn northward ahead of it across eastern China. Cyclogenesis will lead to an area of locally heavy rain developing across the region on Saturday. The baroclinic zone becomes slow-moving thereafter and prone to further engagement into early next week as shortwave upper troughs overrun it.

#### **Expected Impacts**

Localised flash flooding causing damage to property and infrastructure.



### Australasia

#### Papua New Guinea, Fiji and Tonga

#### **Weather**

Enhanced seasonal rainfall is expected across this region through the next 7 days due to more widespread thunderstorms activity. Up to 50-100 mm of rain could fall in just 12 hours, with event totals of up to 350 mm likely.

#### **Discussion**

The South Pacific Convergence Zone looks likely to be more active than usual through much of this week, partly in response to the southeastwards track of ex-Tropical Cyclone Gretel to the south.

#### **Expected Impacts**

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



### Additional Information

Nil.

**Issued at:** 200810 UTC    **Meteorologists:** Matthew Lehnert / Nick Silkstone    **Global Guidance Unit**

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