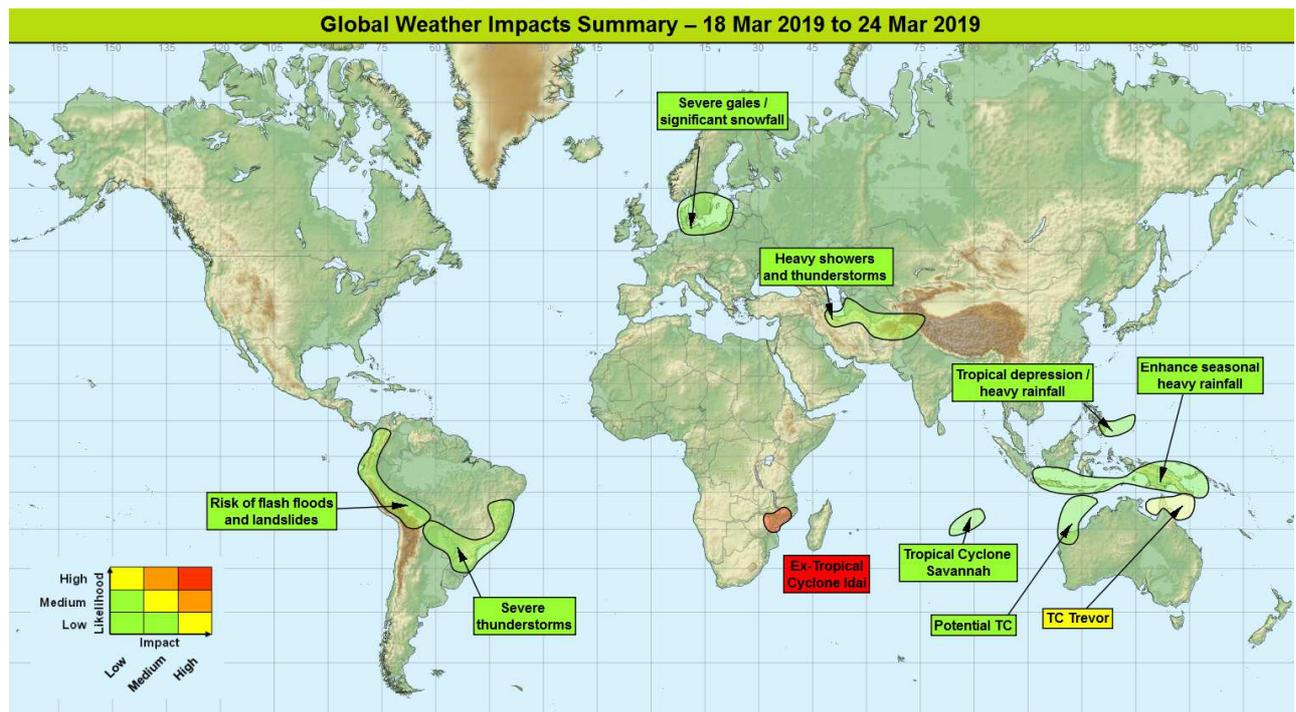


## Global Weather Impacts – Monday 18<sup>th</sup> to Sunday 24<sup>th</sup> March 2019

Issued on Monday 18<sup>th</sup> March 2019

### HEADLINES

- Torrential rainfall associated with Ex-Idai continues over parts of Mozambique, eastern Zimbabwe and southern Malawi.
- Tropical cyclone Trevor will affect northern Queensland later this week, bringing heavy rain and a risk of flooding.



### DISCUSSION

#### Tropical Cyclones

**Ex-Tropical Cyclone Idai** - See *Africa* Section below.

#### Severe Tropical Storm Savannah (Southwest Indian Ocean)

##### Weather

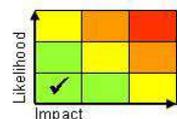
Severe Tropical Storm Savannah was around 2500 Km northwest of Australia this morning and has continued to weaken. Savannah is expected to continue southwest and remain over open waters in the Indian Ocean over the coming days whilst slowly weakening.

##### Discussion

Good model agreement that Savannah will remain well away from land with the likelihood that Savannah is now in its most intense phase.

##### Expected Impacts

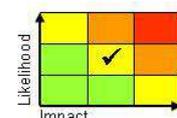
None expected.



#### Tropical Cyclone Trevor (NE Australia)

##### Weather

Tropical Cyclone Trevor formed over the Coral Sea on Sunday and is expected to move west-southwestwards over the next two days. Trevor is likely to intensify to a category 3 cyclone before making landfall over the Cape York Peninsular region of Queensland, Australia on Tuesday or Wednesday, to the south of Lockart River.



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

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## Discussion

With low to moderate shear and the warm waters there is good agreement from models that Trevor will continue to deepen during Monday.

## Expected Impacts

Torrential rainfall is likely to be the main hazard with 300-400mm likely over a two to three period as Trevor crosses the Peninsular. This will cause flash flooding and river flooding.

## The following areas are being monitored for Tropical Cyclone development:

### Philippines

#### Weather

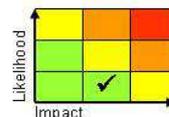
A tropical depression in the western Pacific will continue west across the southern Philippines on Monday. This system is unlikely to become a tropical cyclone, but may bring some heavy rainfall to parts of the Philippines on Monday and Tuesday.

#### Discussion

A combination of marginal sea surface temperatures and increasing upper level shear are likely to restrict further development of this system as it heads west across the Pacific. Models are in good agreement for it to reach the southern Philippines early next week.

#### Expected Impacts

The main impacts are likely to be enhanced rainfall across eastern parts of the central and southern Philippines, most likely on Monday. This could give some flash flooding.



### Timor Sea and NW Australia

#### Weather

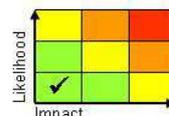
An area of enhanced convection over the Timor Sea is expected to develop into a tropical storm over the next few days and then move southwest to affect parts of the northwest Australia – north of Carnarvon.

#### Discussion

The area of deep convection over the Timor Sea is associated with an Equatorial Rossby Wave. As this moves slowly southwest over warm waters and low shear it is likely to develop into a tropical storm. NWP models are consistent in this development but show large spread over where it may make landfall.

#### Expected Impacts

Given the very sparse population in this part of Australia the impacts are expected to be low.



### Europe

#### Northwestern Europe

#### Weather

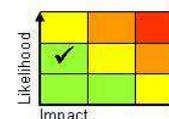
The recent spell of often very wet and very windy conditions across north-west Europe will continue on Monday across Denmark and perhaps southern Sweden with severe gales likely around coasts and gales inland. In addition, there will be some significant falls of snow across parts of Scandinavia. By Tuesday, a build of pressure from the south-west should bring the very disturbed weather to an end.

#### Discussion

The low which crossed the British Isles on Saturday continued to deepen as it crossed the North Sea, and will be moving across southern Sweden on Monday morning. The low will then fill slowly as it drifts east across the Baltic Sea producing a lengthy spell of gales, perhaps severe gales likely across Denmark and southern Sweden. An amplification of the upper pattern across The Atlantic should bring an end to the disturbed weather.

#### Expected Impacts

The main impacts are likely to be wind related, so disruption to travel, especially aviation and marine seems likely. There is a lesser risk of disruption to power supplies from fallen trees as well as damage to buildings. Snowfall is likely to cause some disruption across parts of Scandinavia with significant drifting likely in the strong winds.



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

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## North America

Nil significant.

## Central America and Caribbean

Nil significant.

## South America

### Northern Andes region (Colombia, Ecuador, Peru and Bolivia)

#### **Weather**

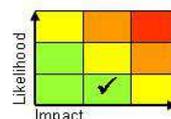
Heavy showers and thunderstorms are expected to continue to affect the northern Andes region for the next week. Rainfall accumulations will vary by location due to the showery nature of the rainfall, but locally a further 200-300 mm of rain is possible through the week.

#### **Discussion**

Along the Pacific coastline north of NE Peru there are positive SST anomalies, and these indicate a weakening of trade winds and the Humboldt Current in this region. This setup allows sea breezes to draw moist oceanic air to the usually dry western Andes, with an unusually high frequency of heavy showers and thunderstorms occurring here.

#### **Expected Impacts**

Flash flooding and landslides remain an ongoing threat in the mountainous areas, as well as downstream river flooding. With much of this region now preconditioned by previous rainfall, further heavy rain will produce some additional impacts. Over recent weeks there has already been significant damage to infrastructure from flooding, with homes, bridges and roads destroyed.



### Paraguay, southern Brazil, Uruguay and far northeast of Argentina

#### **Weather**

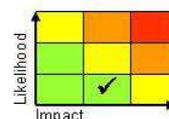
Further bouts of showers and thunderstorms are expected to affect the region over the next few days. Thunderstorms will produce strong winds, large hail and a risk of tornadoes. Rainfall totals of 100-150 mm are possible in a few hours in places. The heaviest and most frequent rainfall looks likely to be over Paraguay on Monday and Wednesday with rainfall accumulations of 250 to 300 mm possible in places. Concepcion in central Paraguay recorded 105 mm on Saturday; Coronel Oviedo had 103mm on Sunday.

#### **Discussion**

A number of disturbances embedded within the subtropical jet are expected to lead to further episodes of severe convection along the South Atlantic Convergence Zone (SACZ). The environment will often be characterised by high CAPE and shear, supporting mesoscale convective systems and supercells.

#### **Expected Impacts**

Flash flooding and increased risk of landslides and fluvial flooding are likely. Severe thunderstorms will also cause some highly localised but potentially significant property and infrastructure impacts due to strong winds, hail and lightning damage.

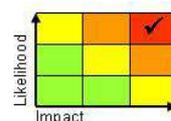


## Africa

### Central Mozambique, southern Malawi and eastern Zimbabwe

#### **Weather**

After making landfall close to Beira, Mozambique on Thursday evening, the remnants of Ex-Idai have remained slow moving across central Mozambique, eastern Zimbabwe and southern Malawi. Over the coming days exceptional rainfall is expected to continue across these areas with models suggesting a further 200-400 mm may fall in places (generally these areas see 150-300 mm of rainfall in a typical March). Whilst the highest rainfall totals looks likely occur through Monday and Tuesday, heavy rain is expected to linger in this area throughout the week. Through the week rainfall will turn increasingly 'showery' with severe thunderstorms likely to develop daily during the afternoon and evenings. The typical convective set-up is likely to give a few hours each morning of dry weather before daytime heating triggers new storms.



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## Discussion

The remnant moisture from this Ex-cyclone Idai will remain slow moving across this region for much of the coming week producing torrential and prolonged spells of rain. Models differ slightly as to where and how much rain will fall, although the border region between Mozambique and Zimbabwe looks most prone, along with southern Malawi. This region has already seen very heavy seasonal rainfall in recent weeks with severe and deadly flood impacts. So further very heavy rainfall will just exacerbate the situation. The full impacts from Idai are yet to emerge. With many roads and bridges impassable or completely destroyed reaching the worst affected areas is proving difficult. Through the week as Ex-Idai continues to break up rainfall will become increasingly convective with severe thunderstorms and potential MCS developments over central Mozambique.

## Expected Impacts

Further flash flooding and fluvial flooding of major river systems such as the Zambezi, Pungwe, Revue and Save will be affected. The impact Idai has already had on Mozambique is still to become clear with the worst affected areas proving difficult to reach. However it is likely that the country and population will be especially vulnerable at this time.

## Middle East

### Northern and Eastern Iran, Afghanistan, Turkmenistan, northern Pakistan

#### Weather

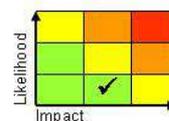
Areas of heavy rain, thunderstorms and in places strong winds will make eastward progress across this region through the next two days. 50 to 100 mm of rainfall is possible, perhaps 150 mm in places, this combined with snow melt over mountains. This latest disturbed weather follows recent heavy rain and flooding across this region which caused significant impacts across parts of Afghanistan especially.

#### Discussion

A potent upper trough will progress east today before disrupting and leaving a cut off vortex over Turkmenistan. A surface low is likely to form on the tip of a warm plume over Iran, with an intense feature expected over Turkmenistan. Heavy rain and thunderstorms will progress east, with models suggesting in excess of 100 mm likely across northern Iran and western Turkmenistan, perhaps northern Pakistan. While amounts across Afghanistan may be lower, given recent events here sensitivity is heightened.

#### Expected Impacts

Flash flooding is likely with a risk of landslides in mountainous areas. Following recent flooding in Afghanistan, further rainfall and snowmelt is likely to have a greater impact than normal here.



## Asia

### Central and eastern Indonesia and Papua New Guinea (see also Tropical Cyclone section)

#### Weather

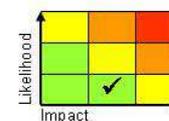
Above average rainfall is expected across many islands in this region through the next week. Whilst the heaviest downpours will be rather localised, they are likely to develop in a similar places each day with 100-150 mm of rain falling in 24 hours and some places likely to receive around 300 mm over the next week. In a typical 7-day period at this time of year, this region normally receives around 50-100 mm.

#### Discussion

The MJO, although weakening, will continue to help to organise and enhance convection across the region.

#### Expected Impacts

An increased likelihood of flash flooding and landslides leading to localised damage to infrastructure and property.



## Australasia

Papua New Guinea – See *Asia and Tropical Cyclone* section.

This forecast may be amended at any time

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**Far northeast of Australia** – See *Tropical Cyclones* section.

**NW Australia** - See *Tropical Cyclones* section.

**Additional information**

Nil.

**Issued at:** 180820 UTC **Meteorologist:** Neil Armstrong

**Global Guidance Unit**

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