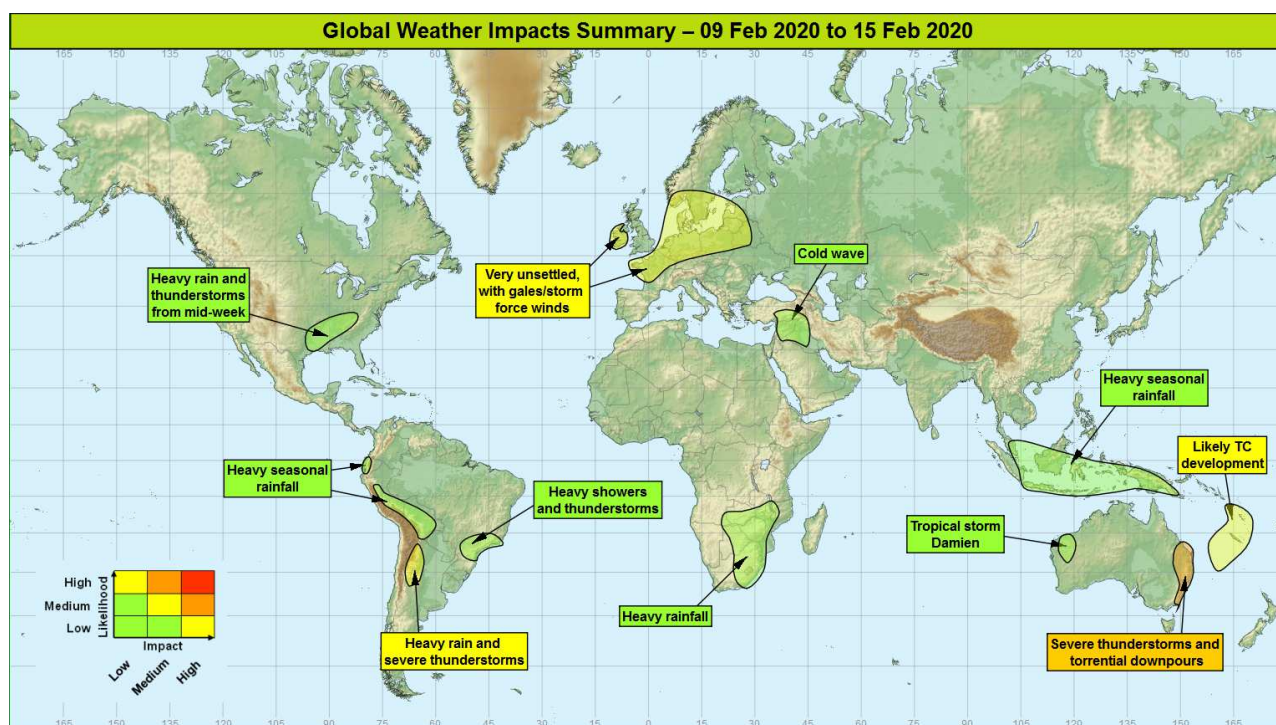


## Global Weather Impacts – Sunday 9<sup>th</sup> to Saturday 15<sup>th</sup> February 2020

Issued on Sunday 9<sup>th</sup> February 2020

### HEADLINES

- Large-scale windstorm unfolding for much of north-western Europe.
- Severe thunderstorms and flash flooding threat for eastern Australia through the next week.
- Risk of tropical cyclone impacts for Vanuatu and more particularly New Caledonia.



### DISCUSSION

#### Tropical Cyclones

##### Tropical Cyclone Damien

##### **Weather**

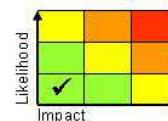
Tropical Cyclone Damien made landfall early Saturday on the north-west coast of Western Australia. This is a relatively sparsely populated area, with minimal impacts. Damien will weaken quickly through the rest of today (Sunday) as it continues south.

##### **Discussion**

Damien is now over land, and will continue to weaken as it pushes across the arid lands of Western Australia.

##### **Expected Impacts**

Flash-flooding is the most likely impact, though in a sparsely populated region.



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*The following area is being monitored for development:*

## **Southwest Pacific – Vanuatu and New Caledonia**

### **Weather**

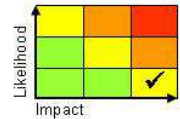
There is an increasing likelihood that the tropical depression centred to the north-west of Vanuatu will consolidate into a potentially major tropical cyclone in the next 12-18 hours. Regardless of development, enhanced rainfall (500-1000 mm) is expected across parts of Vanuatu and New Caledonia, with an increasing threat of damaging winds, this most likely across New Caledonia into next week.

### **Discussion**

Models continue to signal the development of a tropical cyclone to the north-west of Vanuatu, out of a broad area of low pressure centred over this region currently. There remains some spread in model output, but the most likely track of any significant cyclone takes it close to or across New Caledonia. Thereafter (roughly from Wednesday on) divergence in model output increases markedly.

### **Expected Impacts**

Potential for very heavy rainfall across parts of Vanuatu and New Caledonia, leading to flash flooding and an increased risk of landslides. There is a risk of significant wind impacts for New Caledonia in particular, and associated rough seas could impact marine travel in the region.



## **Europe**

### **Northwest Europe**

#### **Weather**

A significant and widespread wind storm will affect much of north-west Europe over the next couple of days. Gusts of 50-60 mph are likely widely, with more exposed areas seeing gusts 75-85 mph. Heavy rain will also push from west to east.

#### **Discussion**

An Atlantic weather system will bring very strong winds across much of the area through Sunday and into the new week. Continuing very windy up to mid-week, with the potential for further stormy periods thereafter.

#### **Expected Impacts**

Severe gale to storm force winds will likely lead to some structural damage and impact on travel (especially aviation) in and out of the region. Heavy seas are also expected with large waves (impacting marine travel) and some coastal flooding.



## **North America**

### **Southern and south-eastern USA**

#### **Weather**

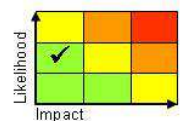
A developing area of low pressure is signalled to push from the Texas Panhandle, north-east toward the Great Lakes by the end of Thursday. This system is likely to bring some 200-250 mm of rain for areas to the south-east of this track. For context, this would be close to twice the February average for Memphis (Tennessee). Some strong winds, as well as severe thunderstorms/tornadoes are also likely.

#### **Discussion**

An area of high WBPT across the northern Gulf is signalled to be picked up by a major disrupting upper trough through the early to middle part of next week. There are (unsurprisingly) large model differences in the depth and track of the resulting surface low pressure system, but confidence in significant rainfall for some southern and south-eastern States is high enough for inclusion on this issue. With the trough likely to lead to marked wind shear/large CAPE, active thunderstorms, with a tornadic risk, look possible.

#### **Expected Impacts**

Flash and river flooding look like the most likely impacts, with severe thunderstorms and a few tornadoes also possible.



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**Central America** – Nil.

## **South America**

### **Brazil**

#### **Weather**

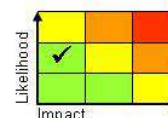
After some easing of conditions this weekend, further heavy showers and thunderstorms are likely to develop across eastern Brazil this coming week. There is the potential for 50-100 mm of precipitation to fall in a few hours, with some locations seeing as much as 200-300 mm. Rio de Janeiro (on the northeast edge of this zone) typically sees around 100 mm through the whole of February.

#### **Discussion**

After a lull in activity later this weekend, there is a signal for renewed activity next week as a cold front is driven north and engaged by the sub-tropical jet, then becomes slow moving. Forecast profiles show deep instability with PWAT of 50-60 mm, allowing for some torrential downpours

#### **Expected Impacts**

Renewed threat of flash flooding and landslides.



### **Peru, Bolivia, Ecuador**

#### **Weather**

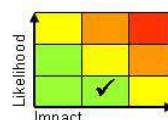
Heavier than usual shower and thunderstorm activity is expected to affect this region through much of the coming week, bringing up to 200-300mm of rain (up to twice the February average) in places.

#### **Discussion**

Good model agreement for this region continuing to see heavier than average rainfall through the coming week, especially over the Andes.

#### **Expected Impacts**

Increased threat of flash flooding and landslides, particularly in mountainous terrain.



### **Northern Argentina**

#### **Weather**

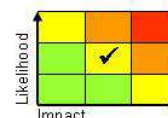
Severe thunderstorms are expected across parts of northern Argentina over the next 24-48 hours before easing into next week. In addition to the potential for up to 75 mm of rainfall in 6-12 hours these storms will produce additional hazards of hail, strong winds and frequent lightning.

#### **Discussion**

The strong sub-tropical jet is expected to interact with the monsoon plume. Strong vertical wind shear within the profiles signalling the potential for some severe storms, with accompanying hail and strong winds. The monsoon plume is expected to transfer west in the next few days, with the heaviest and most frequent showers most likely in the northwest of Argentina. Here, profiles widely support 2000-3000J/kg of CAPE.

#### **Expected Impacts**

Flash flooding looks likely, with a threat of severe storm impacts including frequent lightning, hail, strong wind gusts and an isolated tornado.



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## **Africa**

### **Parts of central/southern Africa**

#### **Weather**

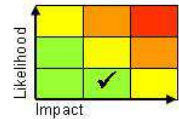
Showers and thunderstorms are expected to increase in frequency across this area over the coming days. 20-40 mm of rain per day is expected quite widely, but with isolated spots seeing 100 to 150 mm in heavy showers and thunderstorms. There is the potential for some locations to see 300 mm or more in total through the coming week, roughly 2 to 3 times the February average. Although much of this rainfall will be welcome, with the potential for this to fall in a short duration it may bring some impacts.

#### **Discussion**

The resident plume of warm tropical air across the area will interact with the predominately slightly cyclonic upper flow allowing the formation of heavy diurnal showers and thunderstorms each day. The heaviest rain should tend to migrate north next week, with drier weather developing further south.

#### **Expected Impacts**

Although much of the rainfall will be welcome across areas that have experienced rainfall deficits in recent times, some flash flooding is possible, especially in urban areas.



## **Middle East**

### **Eastern Turkey, Syria, Iraq, Lebanon, Jordan**

#### **Weather**

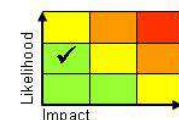
A very cold airmass will settle across the region over the next few days bringing temperatures some 10-15°C below normal, both by day as well as overnight. Widespread severe frost is likely.

#### **Discussion**

A storm system cleared east through Saturday, allowing a Pc airmass to quickly overspread the region. Ideal radiation conditions of clear skies, dry air, and light winds means some exceptionally low minima are likely.

#### **Expected Impacts**

Cold wave likely to have impacts for vulnerable population groups in the region unable to access adequate shelter and heating.



## **Asia**

### **Indonesia and Papua New Guinea**

#### **Weather**

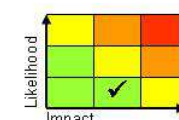
Pulses of enhanced showers and thunderstorms are expected across this region during the coming week. During this period up to 150-250 mm of rain is expected to fall in some spots, with up to 50-100 mm falling in just 6-12 hours in places. This is not atypical for the region, but this follows recent weeks where it has been very wet

#### **Discussion**

The main driver of the wetter than average signal looks to be an enhanced NE'ly monsoon phase across the South China Sea that enhances the convergence along the ITCZ that lies across much of Indonesia. The emerging MJO moving across the Maritime Continent and the late onset of the Australia monsoon is possibly allowing a more active ITCZ to currently sit at slightly more northerly latitude than usual. These factors enhancing the impacts of cold surges over Java in particular.

#### **Expected Impacts**

Flash flooding and a heightened risk of landslides are the principle hazards from this event; Jakarta has suffered multiple impacts from heavy rainfall over recent weeks, and appears to be at risk once more.



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## Australasia

### Eastern Australia

#### **Weather**

Heavy showers and thunderstorms are expected to persist along the eastern coast into next week. Storms will be capable of producing up to 100-200 mm of rain, with some significant totals likely in a few hours. Frequent heavy showers and the threat of severe thunderstorms will also extend further inland, with the potential for some locations seeing accumulations of up to 200 mm per day, and as much as 300-500 mm in total.

In addition to the rainfall there is the potential for damaging gusts of wind, large hail and frequent lightning.

#### **Discussion**

An upper vortex is expected to sit over south-eastern Australia through much of the next week, maintaining the very unsettled conditions. Profiles highlight the risk of heavy showers and thunderstorms along the coast with very moist, but skinny CAPE indicative of efficient rain producers, whilst inland profiles exhibit greater CAPE values with potential for hail/strong winds.

#### **Expected Impacts**

Significant flash flooding, especially in populated coastal areas, along with hail and wind damage, and a high risk of river flooding. Aviation and power networks could be disrupted by lightning damage.



### Additional Information

With unsettled weather and periods of rain across much of eastern and south-eastern Australia, many of the wildfires here have been significantly reduced in size, or extinguished altogether. For now, further sig impacts from wildfires and/or exceptional heat are not expected during this period.

**Issued at:** 090600 UTC    **Meteorologists:** Jason Kelly

**Global Guidance Unit**

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