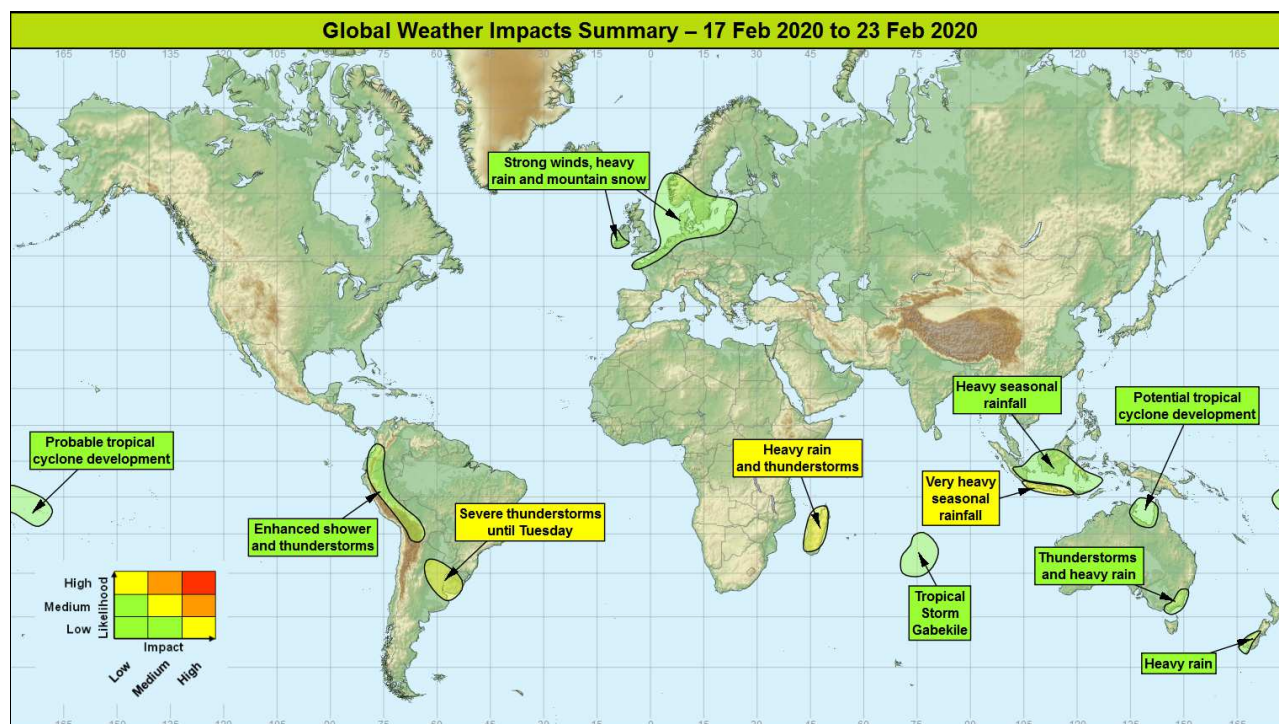


## Global Weather Impacts – Monday 17<sup>th</sup> to Sunday 23<sup>rd</sup> February 2020

Issued on Monday 17<sup>th</sup> February 2020

### HEADLINES

- Further heavy rain and thunderstorms for much of Madagascar.
- Severe thunderstorms across parts of South America until Tuesday.
- Locally very heavy shower and thunderstorm activity across Indonesia.



### DISCUSSION

#### Tropical Cyclones

#### Tropical Storm Gabekile (Southwest Indian Ocean)

##### **Weather**

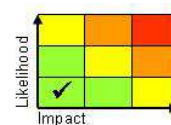
Gabekile formed on Saturday well to the east of Rodrigues Island and is expected to track southwards and remain over open water. Gabekile peaked in strength yesterday and is now gradually weakening and is likely to become a tropical depression overnight.

##### **Discussion**

Gabekile formed from the interaction of a passing convectively-coupled Rossby Wave and an area of enhanced convection. It is expected to track generally south and weaken, remaining away from any land.

##### **Expected Impacts**

Nil.



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

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The following areas are also being monitored for potential tropical cyclone development over the next week:

## **Southwest Pacific Ocean**

### **Weather**

There is a fairly high likelihood of a tropical cyclone developing near Fiji and/or American Samoa over the next few days before moving southeast. This has the potential to bring damaging winds and/or torrential rain to some of the Pacific Islands in the highlighted area including Tonga and Samoa, American Samoa and Niue.

### **Discussion**

There is a continuing signal for the development of one or more tropical cyclones in the southwest Pacific Ocean early next week as the MJO slowly migrates eastward. However, there continues to be significant differences across deterministic output regarding any system's intensity and track.

### **Expected Impacts**

Risk of damaging winds, flooding and high seas resulting in disruption to maritime transport.



## **Gulf of Carpentaria – Northern Australia**

### **Weather**

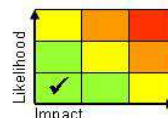
There is the potential for the development of a Tropical cyclone across the Gulf of Carpentaria, Northern Australia later this week. This has the potential to bring damaging winds and torrential rain (250-450 mm per day) to the region, though would fall across what is a sparsely populated area.

### **Discussion**

The monsoon across northern Australia is likely to go through an active period over the coming week as the MJO migrates eastward into the Western Pacific. This may be the catalyst for the formation of a tropical cyclone across the Gulf of Carpentaria later this week. There low confidence at this time for this development and any subsequent track.

### **Expected Impacts**

Risk of damaging winds, flooding and rough seas resulting in disruption to maritime transport.



## **Europe**

### **Much of northern Europe**

### **Weather**

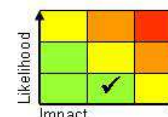
Continuing very unsettled with a further spell of very windy conditions across much of northern Europe this week. This is not anticipated to be a stormy as over the weekend (associated with Storm Dennis), but prolonged gales are expected around many coasts, locally severe at times. In addition heavy rainfall and high mountain snow is expected across much of the high ground in the region highlighted. With 100-200mm falling across parts of the Ireland, and 200-400mm across parts of Norway (falling as snow above 500 M elevation).

### **Discussion**

Storm Dennis is now filling quickly as it transfers towards Scandinavia today. However the very energetic positive NOA continues with a strengthening jet stream (~220 mph) across the Atlantic from mid-week. Various Atlantic weather systems will move from west to east across much of Northern Europe, with associated very strong winds, and some marked orographic rainfall and mountain snow.

### **Expected Impacts**

Some impacts to travel are expected with disruption to road, rail, sea and air transport. Winds may also be strong enough to cause more localised damage to structures and buildings.



## **North America**

Nil significant

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**Central America**

Nil significant.

**South America****Uruguay, northern Argentina and the far southeast of Brazil****Weather**

Heavy shower and thunderstorm activity is expected to continue through to Tuesday with thunderstorms likely to be severe in places, bringing a risk of torrential downpours. 50-125 mm per day is possible in the heaviest showers, with a risk of hail, frequent lightning and localised damaging wind gusts. There is potential for localised rainfall totals of 200 mm, which is almost double the February average rainfall in this region.

**Discussion**

A renewed pulse of the SACZ is forecast to affect the region, induced by renewed troughing in the sub-tropical jet. High precipitable water accompanied by high instability (locally up to 4000 J/kg SBCAPE) and vertical wind shear should lead to the development of further severe thunderstorms with the potential for these upscale into mesoscale convective systems.

**Expected Impacts**

Ongoing threat of flash flooding and landslides, particularly in mountainous terrain. Hail, lightning, and strong winds may disrupt transport and cause localised damage to homes and businesses. Isolated tornadoes are possible.

**Southern Colombia, Ecuador, Peru and Bolivia****Weather**

Shower and thunderstorm activity across the central and northern Andes will continue to be above average through the coming week. Precipitation totals could locally reach 150-250mm, which would represent the usual average for the whole of February across much of this region.

**Discussion**

Strong northerly flow across Central America will lead to stronger than normal convergence along to the ITCZ bringing enhanced precipitation to the north of this region. Further south convergence will be enhanced by a low level cold front pushing into the region in response to a developing southerly flow in the wake of a cyclogenesis offshore from the River Plate estuary. Precipitation across much of this region has been above average in recent weeks, with impacts reported across the media.

**Expected Impacts**

Ongoing enhanced threat of flash flooding and landslides across the region.

**Africa****Madagascar****Weather**

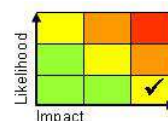
The remnants of ex-Tropical Storm Francisco will be the focus for heavy showers and thunderstorms through the coming week. Coastal eastern Madagascar and over the higher ground across the centre of the island is likely to see 50-100 mm per day, with locally 200-400 mm possible in places. Further inland, Antananarivo is likely to be less affected, but could see 100mm or so in the coming week, this approaching one third of the average precipitation for February.

**Discussion**

The moisture footprint and inherent instability left over from ex-Francisco is likely to act as the focus for further torrential downpours and thunderstorms through the coming week. Although the prevailing easterly flow will often focus rainfall across the northern and eastern parts, further tropical low activity in the Mozambique Channel later in the week will also enhance precipitation across the west of the island.

**Expected Impacts**

An enhanced risk of surface water and river flooding, as well as landslides in more mountainous regions.



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**Middle East**

Nil significant.

**Asia****Java to Nusa Tenggara and southern Sumatra****Weather**

A further increase in the frequency and intensity of heavy showers and thunderstorms across the region is expected over the coming days. These are signalled to be particularly enhanced across Java and the islands to the east. Between 150-250mm of precipitation is signalled in the wetter spots of the region, this would represent around half the average February rainfall for the region.

**Discussion**

Convergence will be enhanced along the ITCZ due to a marked cold surge across the South China Sea, with the convergence most likely peaking on Wednesday/Thursday. A well formed Borneo vortex will tend to lead to the surge manifesting as a northwesterly flow as it reaches Java (and the islands to the east), and in these situations Jakarta tends to avoid the heaviest precipitation.

**Expected Impacts**

A much increased threat of flash flooding and landslides.

**Parts of Indonesia****Weather**

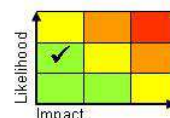
Increased frequency and intensity of heavy showers and thunderstorms across parts of Indonesia during the next week. Up to 100 mm of rain could fall in within a day (often over a shorter duration) in association with these thunderstorms.

**Discussion**

The ITCZ looks is signalled to become more intense in the next day or so due to a cold surge in NE'ly monsoon to the north. This enhanced low level convergence will increase the potential for more widespread and intense convection.

**Expected Impacts**

Enhanced threat of flash flooding and landslides.

**Australasia****Northern Australia and southwest Pacific**

See Tropical storm section.

**Victoria and New South Wales, Australia****Weather**

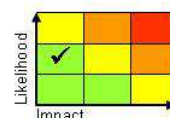
Further heavy showers and thunderstorms are expected to affect eastern Victoria (including Melbourne and bushfire affected regions of East Gippsland) and New South Wales in the next few days, mainly Tuesday. Localised rainfall accumulations of 40-60 mm are possible in a few hours, accompanied by strong winds and large hail.

**Discussion**

A plume of tropical origin will remain slow-moving across southeast Australia over the next few days and will be engaged by a disrupted upper trough. Forecast profiles continue to support the diurnal development of scattered thunderstorms with precipitable water of 35-40 mm.

**Expected Impacts**

Increased threat of surface water and river flooding, particularly as this follows a period of well-above average rainfall. Lightning and hail may also cause localised damage to property and infrastructure.



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## South Island, New Zealand

### **Weather**

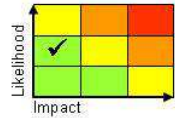
Further heavy rainfall is expected to affect the north coast of South island of New Zealand on Thursday and Friday. This is likely to be across the same areas that were affected by the remnants of Tropical Cyclone Uesi over the weekend. This will bring persistent, heavy rain across parts of the Southern Alps. 50-100mm will fall widely here on both days, with isolated totals of 100-150mm over high ground. Strong winds will accompany the rain.

### **Discussion**

An area of low pressure and its associated weather system will transfer from southeast Australia in the coming days to affect the South Island of New Zealand by Thursday. It is likely that this will impact the same areas affected by the remnants of tropical storm Uesi over the weekend. Associated strong winds will lead to a strong orographic component to the rain, with potentially some significant totals over the steep terrain on South Island.

### **Expected Impacts**

Rough seas could impact marine travel in the Tasman Sea. Flash flooding possible for New Zealand, although much of the rainfall probably falling in resilient areas. Also, an increased threat of landslides which could impact transport and/or damage buildings.



### Additional Information

Nil.

**Issued at:** 170940 UTC    **Meteorologists:** Tony Wardle / Nick Silkstone

**Global Guidance Unit**

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

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