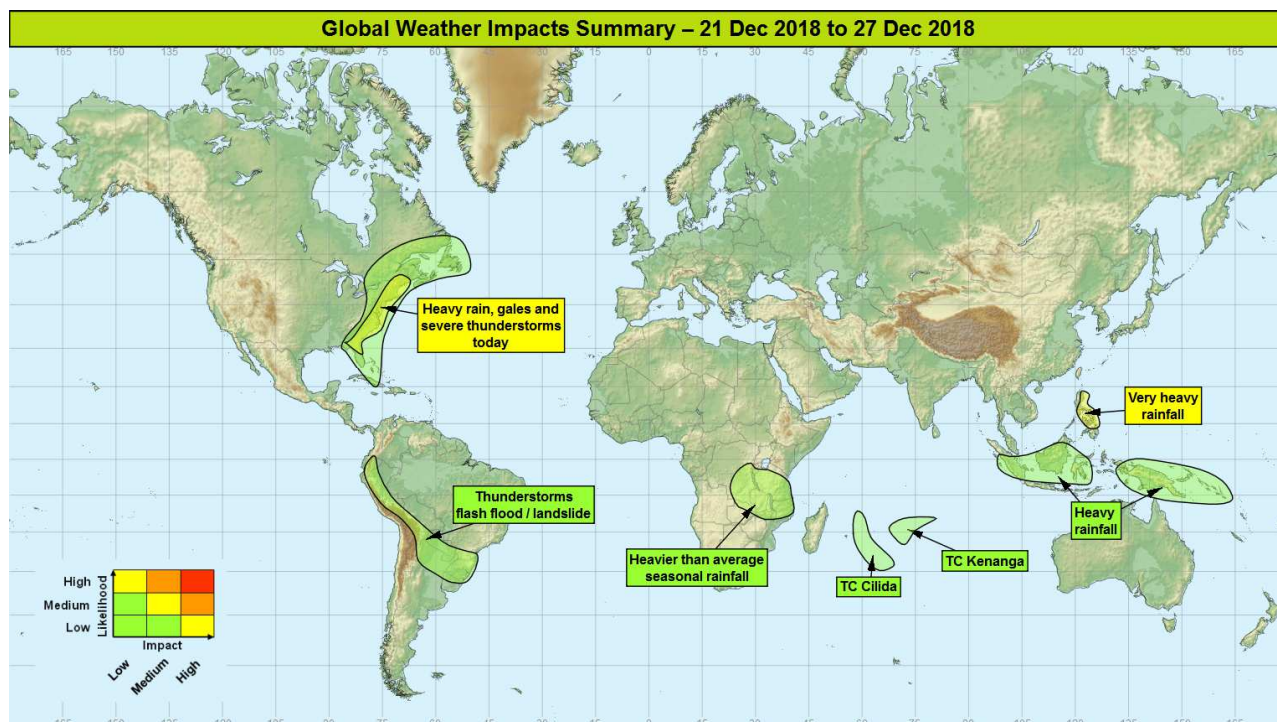


## **Global Weather Impacts – Friday 21<sup>st</sup> December to Thursday 27<sup>th</sup> December 2018**

Issued on Friday 21<sup>st</sup> December 2018

### HEADLINES

- Heavy rainfall in parts of the Philippines through much of the coming week.
- Large storm system bringing heavy rain and gales to the eastern USA and southeastern Canada.
- Intense Tropical Cyclone Cilida likely to pass just east of Mauritius this weekend.



### DISCUSSION

#### Tropical Cyclones

#### Tropical Cyclone Kenanga (Southwest Indian Ocean)

##### **Weather**

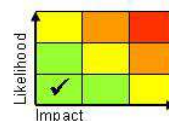
Tropical Cyclone Kenanga was located near 16.2S 80.4E at 0000 GMT, moving west at 5 mph. Kenanga is weakening, and now has estimated sustained winds of around 80 mph. This system is expected to stay well away from land throughout its life cycle as it gradually tracks southwestwards and continues to weaken. Dissipation of this system is expected early next week.

##### **Discussion**

Kenanga has been weakened by hostile atmospheric conditions, and soon cooler sea surface temperatures will aid this process. Kenanga could interact with Intense Tropical Cyclone Cilida (see below) by the weekend, possibly, inducing a Fujiwhara interaction which will likely impact the track of both systems and further weaken Kenanga. Dissipation seems likely early next week, Kenanga's remnant low likely to then be absorbed by Cilida.

##### **Expected Impacts**

No significant impacts expected based on its current forecast track.



This forecast may be amended at any time

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## Intense Tropical Cyclone Cilida (Southwest Indian Ocean)

### **Weather**

Cilida strengthened quickly through Thursday, and at 0000 GMT was located close to 14.2S 58.2E, roughly 400 miles north of Mauritius. Mean speeds around the centre are around 110 mph. Potential interaction with Kenanga could make forecasting the track of Cilida difficult. However there remains good model agreement for it to pass just to the east of Mauritius this weekend. There is a possibility of up to 100-150 mm of rain in 24-36 hours from this system, which would be equivalent of the average December rainfall. There is also potential of tropical storm force or perhaps hurricane force winds for a time, especially for Mauritius.

### **Discussion**

Cilida has strengthened rapidly through the past 24 hours, this despite moderate vertical wind shear. Conditions remain favourable for further strengthening for around another 24 to 36 hours. The multi-model ensemble still shows Cilida passing to the east of Mauritius during Saturday or Sunday, steered by a break in the subtropical ridge, and perhaps influenced by Kenanga to the east. There is a degree of spread as to just how close the system gets to Mauritius, with EC and GFS favouring a closer approach than GM. At this stage a direct hit on the island looks unlikely, although the latest official track from RSMC La Reunion takes the centre of the storm within 100 miles of the east coast of Mauritius.

### **Expected Impacts**

There is a low probability of destructive winds and a slightly higher likelihood of flash flooding to the islands of Mauritius, with an even lower likelihood of impacting Mauritius. Large waves and swells are likely to affect the islands through the coming days.



### **Europe**

Nil significant.

### **North America**

#### **Eastern, south-eastern United States and south-eastern Canada, Cuba and The Bahamas**

### **Weather**

A complex area of low pressure will bring a period of disturbed weather to much of the eastern USA and SE Canada through Friday into Saturday. This will be followed by a plunge of Arctic air, which will sweep south across the Great Lakes and into New England by the weekend. Widespread, heavy rain is likely, with many areas seeing 30-50 mm of rainfall. Parts of the Eastern Seaboard of the USA and Nova Scotia in Canada could see as much as 100-150 mm from this system. There is a risk of embedded severe thunderstorms producing torrential downpours, large hail and perhaps even the odd tornado. As cold air tucks into the rear of the system late in the week, parts of southern Ontario and Quebec could see temporary blizzard conditions. Gales or severe gales will also develop in association with the storm. The trailing cold front is an active feature, bringing a band of intense rainfall, thunderstorms and gusty winds across Florida, Cuba and The Bahamas today.

### **Discussion**

Strong forcing on the forward side of an upper trough phased in with WBPT in excess of 18°C forced cyclogenesis over the southeastern USA. The resulting low pressure is then signalled to deepen some 15-20 hPa (bottoming out around 985 hPa) in 36 hours as it is picked up by strong SSW'ly upper flow and steered NNE across the E of the US and into Canada.

### **Expected Impacts**

Flash flooding is possible in this region, with large hail in the south associated with severe storms. Very strong winds could also produce some impacts, with significant snowfall for parts of southeastern Canada. For context, many places across the east of the United States, particularly in Virginia and the Carolinas, have already had the wettest year on record (Washington D.C having reported 1558 mm up to the end of last week). Disruption to travel seems likely, including aviation. Risk of disruption to power supplies.



### **Central America and Caribbean**

**Cuba and Bahamas** – see *North America* section.

### **South America**

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## Uruguay, northern Argentina, far south of Brazil, Bolivia, Peru and Ecuador

### Weather

An area of severe thunderstorms will transfer north from Uruguay and northern Argentina into Paraguay and southern Brazil through the next 3 to 4 days. Around 100 mm of rain could fall locally in 24 hours with large hail, frequent lightning and tornadoes possible. Bolivia, Peru and Ecuador will see heavier than usual monsoon rainfall this coming week, resulting in up to 300 mm of rainfall in places which is over a month's worth of rain.

### Discussion

An active pulse of the South Atlantic Convergence Zone (SACZ) will slowly transfer north through the next 3 to 4 days. As repeated plumes of tropical moisture are drawn south, organised and very deep, vigorous convection is likely to develop, particularly along the south of the plume. Significant CAPE and vertical wind shear is present on forecast profiles, offering potential for large hail, gusty winds, and a few tornadoes. The pulses of the SACZ will feed north to enhance monsoon rainfall further north at times.

### Expected Impacts

Flash flooding is likely, with an enhanced threat of landslides. Damage to infrastructure and property from large hail and lightning strikes also possible.



## Africa

Reunion and Mauritius – see *Tropical Cyclones* section.

## Southern Tanzania, northern Mozambique, Malawi, much of Zambia, southeast Democratic Republic of Congo

### Weather

Heavier than usual seasonal rainfall is expected to accumulate through the next few days, with as much as 200 mm of rainfall likely in places. This would be around the monthly average.

### Discussion

There is a strong model signal for heavier than climatological rainfall falling across this part of Africa during the next couple of days before activity decreases later this weekend.

### Expected Impacts

Enhanced likelihood of flash flooding and landslides compared to normal through the next few days.



## Middle East

Nil significant.

## Asia

### Philippines

#### Weather

Thunderstorm activity will be more widespread than usual across the Central Philippines through the next few days, with this activity then transferring north into the east of Luzon by the weekend. Up to 600 mm of rain could accumulate in a 3 day period, which is 2 or 3 times the average December rainfall.

#### Discussion

A marked Equatorial Rossby Wave will slowly transfer westwards across the Philippines through the next few days, enhancing the shower and thunderstorm activity.

#### Expected Impacts

Flash flooding and enhanced likelihood of landslides are the most likely impacts. The much heavier than usual rainfall could also produce river flooding too.

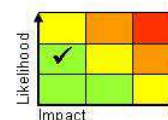


## Southern Sumatra, Borneo, Sulawesi

### Weather

Shower and thunderstorm activity is expected to become more widespread towards the weekend, persisting into the start of next week. Up to 100 mm of rain could fall in a 24 hour period, with up to 250 mm of rain accumulating by early next week. The average December rainfall in this region is between 150 and 450 mm.

### Discussion



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An enhanced cross-equatorial flow into the Java Sea will enhance the ITCZ in this part of Indonesia from Thursday, resulting in more widespread, intense thunderstorm activity than usual.

## **Expected Impacts**

Flash flooding and enhanced risk of landslides are the most likely impacts.

## **Eastern Indonesia, Papua New Guinea, Solomon Islands and Far North Queensland Weather**

Shower and thunderstorm activity is expected to be more widespread than usual through much of the next week. Up to 100 mm of rain could fall in a 24 hour period, with up to 250 mm of rain accumulating by early next week. The average December rainfall in this region is between 200 and 350 mm.

## **Discussion**

The presence of the MJO is expected to influence the convection in the region through the next week, resulting in heavier rainfall than usual.

## **Expected Impacts**

Flash flooding and enhanced likelihood of landslides are the most likely impacts.



## **Australasia**

**Papua New Guinea, Solomon Islands and Far North Queensland** – see *Asia* section.

## **Additional information**

Nil.

**Issued at:** 210740 UTC **Meteorologist:** Mark Sidaway

**Global Guidance Unit**

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

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