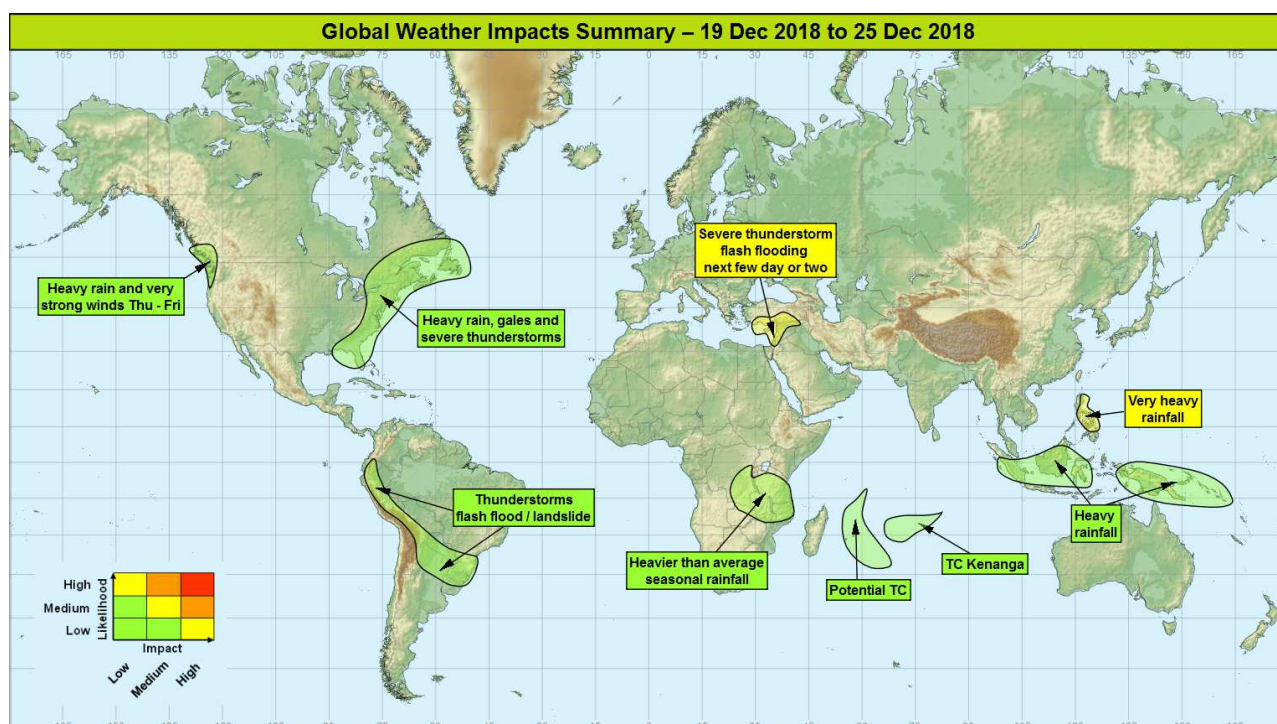


## **Global Weather Impacts – Wednesday 19<sup>th</sup> December to Tuesday 25<sup>th</sup> December 2018**

Issued on Wednesday 19<sup>th</sup> December 2018

### HEADLINES

- Unsettled in parts of southeastern Europe, eastern Mediterranean, Levant and northern Iraq today.
- Heavy rainfall in parts of the Philippines through much of the coming week.



### DISCUSSION

#### Tropical Cyclones

##### Tropical Cyclone Kenanga

#### **Weather**

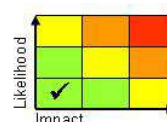
Tropical Cyclone Kenanga was located near 16S 83E at 0000 GMT, moving southwest at 7 mph. Kenanga now has estimated sustained winds of 100-105 mph, and is likely at peak intensity. This system is expected to stay well away from land throughout its life cycle as it gradually tracks southwestwards and slowly decreases in intensity during the next week.

#### **Discussion**

Kenanga will move over cooler waters during the next 3 or 4 days which will result in a slow weakening. This system could interact with another tropical system by the weekend, possibly, inducing a Fujiwhara interaction which will likely impact the track of both systems and further weaken Kenanga.

#### **Expected Impacts**

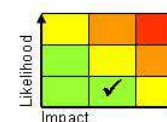
No significant impacts expected based on its current forecast track.



#### Potential Tropical Cyclones

##### Southern Indian Ocean

#### **Weather**



This forecast may be amended at any time

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There are increasing indications that a tropical cyclone will develop in the southern Indian Ocean today (Wednesday). If a storm does develop, the likely track will be close to (probably just to the northeast of) Mauritius and Reunion between Friday and Sunday, though interaction with Kenanga to its east will make forecasting the track tricky. 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 a small probability of tropical storm force winds (39-73 mph sustained winds) for a time, especially for Mauritius.

## Discussion

A cluster of thunderstorms have become more organised in recent days due to the influence of the southern portion of a Rossby Wave couplet. All models predict strengthening to tropical cyclone intensity through the next 24 hours or so with a track just to the northeast of Mauritius, although there are some timing differences for this system, perhaps due to the influence of Kenanga to the east, as well as a marked mid-latitude trough to the south.

## Expected Impacts

There is a low probability of destructive winds and a slightly higher likelihood of flash flooding to the islands of Reunion, and more especially Mauritius.

## Europe

### Southern Turkey, Cyprus, Levant and northern Iraq

#### Weather

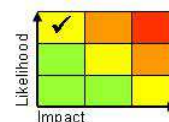
Spells of heavy showers and thunderstorms are expected to affect this part of southeastern Europe and into the Levant through the next few days. As much as 200 mm of rain could accumulate during this time, especially in southern Turkey, with up to 100-150 mm of rain possible in 24 hours. Large hail and frequent lightning also possible. Conditions will gradually improve from west to east during the weekend.

#### Discussion

A succession of marked upper troughs will drive areas of severe convection eastwards across southeastern Europe, the eastern Mediterranean and the Levant region at times through the next few days.

#### Expected Impacts

Flash flooding looks likely at times, with the possibility of crop damage from large hail and power disruption from frequent lightning.



## North America

### Eastern, south-eastern United States and south-eastern Canada

#### Weather

An area of low pressure will form along the Gulf coastline of the USA today (Wednesday), before deepening and tracking quickly northeast across much of the eastern United States, through Thursday and Friday. This will be followed by a plunge of Arctic air, which will sweep south across the Great Lakes and into New England by the end of the week and into 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. 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, whilst some severe thunderstorms likely for the Gulf Coast.

#### Discussion

Strong forcing on the forward side of an upper trough is expected to phase in with WBPT in excess of 18°C leading to marked cyclogenesis over the southeastern USA. The resulting low pressure is then signalled to deepen some 15-20hPa (bottoming out around 985hPa) 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 having reported 1558 mm up to the end of last week).



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

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**Far southwest of Canada, and extreme northwest of United States****Weather**

One more active Pacific weather system is expected to push across this region through Thursday and Friday, following on from several similar systems through the past week that have caused flooding impacts. This system is expected to produce up to 150-200 mm of rain (falling as snow on hills), but with only 25-50 mm likely in parts of Vancouver. The average December rainfall varies across this region, with the more sheltered areas like Vancouver and Seattle usually seeing around 150 mm, but with the more exposed western hills usually seeing around 400 mm. This system also looks likely to bring coastal storms and inland strong winds or gales for a time, with dangerous coastal water conditions expected.

**Discussion**

There is good model agreement for this event, with 80 kt gradient winds expected around the coast and 50 kt gradient winds inland likely to produce significant wind impacts. The heaviest precipitation will be locked up as snow over the western slopes of the Cascades and coastal mountain ranges as well as the high ground of Vancouver Island and across the Olympic Mountains. However, the already saturated ground will increase the likelihood of flooding and landslides.

**Expected Impacts**

Further flooding likely with an increased landslide threat. Very heavy mountain snowfall will increase the avalanche threat and will produce power and transport network impacts. Coastal flooding and wind damage is expected to be associated with this system, with an increased likelihood of inland wind damage affecting urban areas, perhaps including Vancouver and Seattle.

**Central America and Caribbean**

Nil significant.

**South America****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 5 or 6 days. Up to 150 mm of rain could fall 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 7 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**

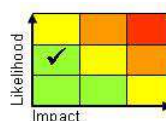
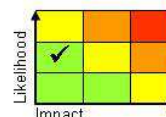
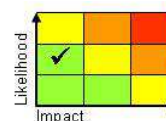
Flash flooding is likely, with an enhanced risk of landslides. Damage to infrastructure and property from large hail and lightning strikes also possible.

**Africa**

**Reunion and Mauritius** – see *Tropical Cyclones* section.

**Tanzania, northern Mozambique, Malawi, much of Zambia, southeast Democratic Republic of Congo****Weather**

Heavier than usual seasonal rainfall is expected to accumulate through the coming week, with as much as 200 mm of rainfall likely in places. This would be close to the monthly average occurring in a week.

**Discussion**

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

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There is a strong model signal for heavier than climatological rainfall falling across this part of Africa during the next week.

## Expected Impacts

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

## Middle East

**Western Levant region and northern Iraq** – see *Europe* section.

## 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 from 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 5 days, enhancing the shower and thunderstorm activity.

#### Expected Impacts

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



### Southern Sumatra, Borneo, Sulawesi

#### Weather

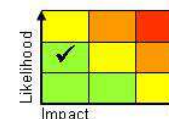
Shower and thunderstorm activity is expected to become more widespread towards the weekend, persisting into the start of next week. Up to 100 mm of rain could fall in a 24 hour period, with up to 250 mm of rain accumulating by early next week. The average December rainfall in this region is between 150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

#### Discussion

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 and Solomon Islands

#### Weather

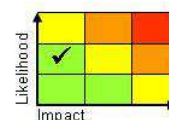
Shower and thunderstorm activity is expected to be more widespread than usual through much of the next week. Up to 100 mm of rain could fall in a 24 hour period, with up to 250 mm of rain accumulating by early next week. The average December rainfall in this region is between 200 and 350 mm.

#### 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 risk of landslides are the most likely impacts.



## Australasia

**Papua New Guinea and Solomon Islands** – see *Asia* section

## Additional information

Nil.

**Issued at:** 190800 UTC **Meteorologist:** Paul Hutcheon

**Global Guidance Unit**

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

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