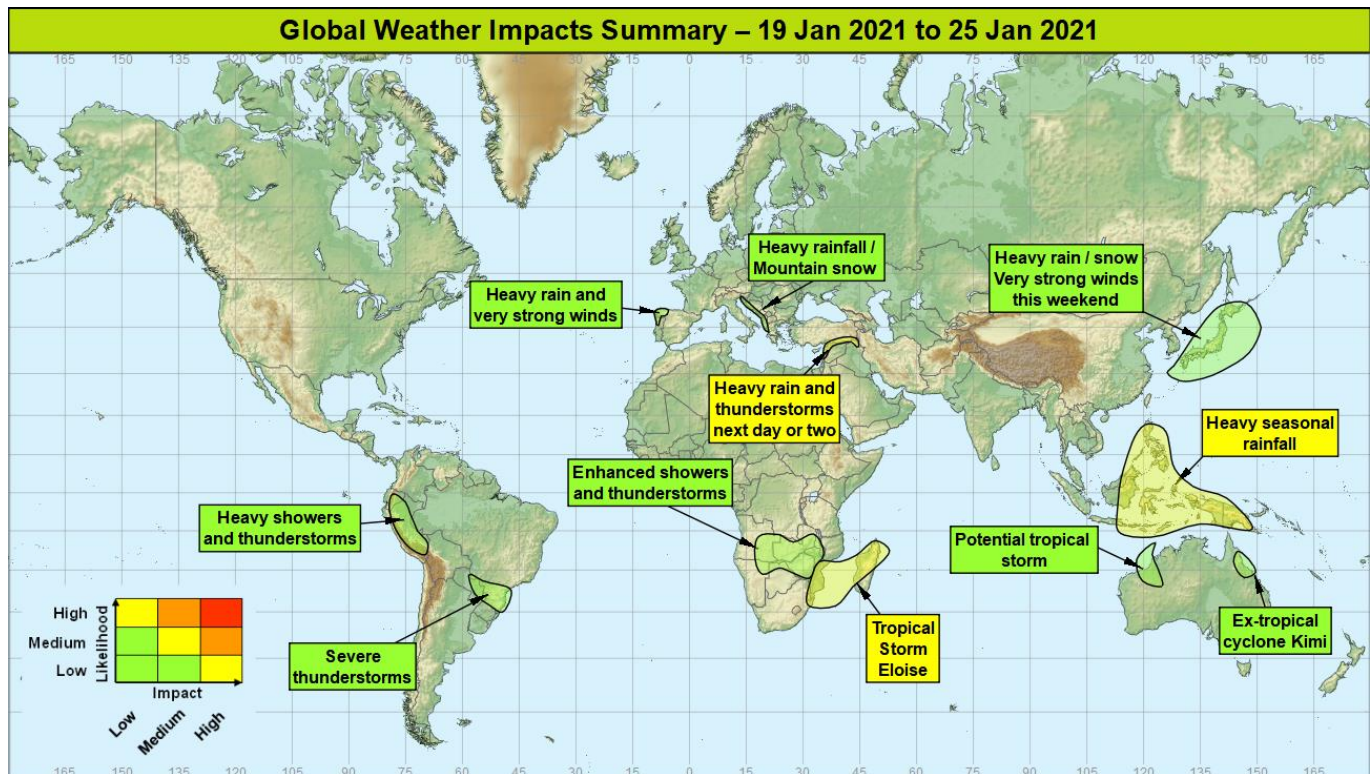


## Global Weather Impacts – Tuesday 19 January 2021 to Monday 25 January 2021

Issued on Tuesday 19 January 2021

### HEADLINES

- Tropical storm Eloise impacting Madagascar in the next few days, then parts of southeast Africa by the weekend.
- Heavy rain and thunderstorms in parts of the Middle East next day or two.
- Heavy seasonal rainfall for parts of Maritime Continent.
- Disturbed conditions for parts of Iberia and southeast Europe.



### DISCUSSION

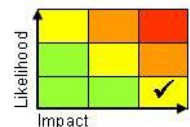
#### Tropical Cyclones

#### Tropical Storm Eloise (Madagascar, Mozambique, Eswatini and northeast South Africa)

#### Weather

Tropical Storm Eloise has become slow moving close to the northeast coast of Madagascar overnight. Landfall is likely today (Tuesday) with the system forecast to be a severe tropical storm (one category below tropical cyclone), sustained winds likely around 65mph. The strongest winds will impact the coast today, as Eloise will weaken as it moves inland. However heavy rainfall will likely be the biggest impact across Madagascar. Between Tuesday and Friday 200-400mm of rainfall is likely to fall across a large portion of the north of the country, this equivalent to the normal rainfall for the whole of January. Locally, totals in excess of 500mm are possible, especially over high ground. By Friday the system is expected to have crossed Madagascar and emerge across the Mozambique Channel. Here Eloise is expected to intensify once again to become a tropical cyclone as it tracks south along the coast of southern Mozambique through the weekend. Thereafter moving inland towards Eswatini and northeast South Africa will be a weakening system, but will still produce heavy rain (300-400mm).

#### Discussion



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Eloise formed from the southern element of an equatorial Rossby wave pair that has been observed crossing the Indian Ocean over recent days. RSMC Réunion signal Eloise as a severe tropical storm prior to landfall today, but will moderate somewhat as it moves inland. There is generally high confidence for the track of Eloise through the rest of the week, though decreasing somewhat as the strengthening storm moves towards the southeast coast of Africa. The majority of forecast transfers a tropical cyclone towards Mozambique by Saturday, though there are a significant number of ensemble members curve this south and remain across the open water this weekend.

## Expected Impacts

Flash and riverine flooding. Landslides. Damaging winds especially near to the southern Mozambique coast where a storm surge of 2 to 3 meters is also possible.

*The following tropical cyclone has been named but is expected to remain over open water:*

## Tropical Cyclone Joshua

Tropical Cyclone Joshua has formed in the southeast Indian Ocean. It will track westwards over open water and is expected to dissipate today.

*The following area is being monitored for potential tropical cyclone development:*

## Timor Sea, Northwest Australia

### Weather

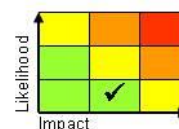
There are increasing signals for the development of a depression across the Timor Sea today and Wednesday. As this gradually drifts south-westwards the environment becomes conducive to intensify the system into a tropical cyclone close to the Northwest coast of Australia, probably close to Eighty Mile Beach. 200-250mm of rain would be associated with this feature along its track, and likely to make landfall towards the end of the week, before moving inland as decaying feature.

### Discussion

There is some significant uncertainties for the track and intensity of this system. Heavy rain, and perhaps very strong winds and rough seas would be associated with this potential storm, but as this would affect a sparsely populated area, little significant impacts expected.

### Expected Impacts

Flash and riverine flooding. Landslides. String winds and rough seas.



## Europe

### North-western Iberia

#### Weather

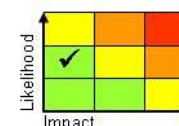
Heavy rain and strong winds are likely to affect north-western Iberia in the next 5 or 6 days as a series of Atlantic Systems drive mild, moist air in from the Ocean. Each event could bring 50 to 80 mm of rainfall in places, with one or two locations perhaps seeing in 150-200 mm of rainfall by early next week. This is roughly equivalent to the January average for this part of the world. In addition to rainfall it is possible severe gale or even storm force winds may affect the north-west coast of Spain and northern Portugal at times. The Portuguese Met Service (IPMA) have named the first system that affects the region today 'Gaetan'.

#### Discussion

A south shifted jet will drive development along a plume of higher WBPT air. As these systems develop they will drive strong winds and moist air into NW Iberia. A strong orographic component is likely as these winds intersect the mountainous terrain.

#### Expected Impacts

Flash and riverine flooding possible. Increased landslide risk. Damaging gusts of winds and large waves.



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## Adriatic Coast of The Balkans and Greece

### **Weather**

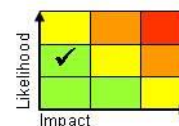
Heavy rainfall is likely to develop across this region by the end of this week. The highest totals are likely to affect the Adriatic coast of the Balkans and Greece where some places could see in excess of 200 mm over a period of 2 to 3 days, around the average January rainfall. On ground above 1200 m heavy snowfall is likely.

### **Discussion**

South shifted mobility will driver moisture laden air into these mountainous regions. Frequent heavy shows and thunderstorms will produce very large rainfall totals, especially across the Adriatic Coast of The Balkans and Greece.

### **Expected Impacts**

Potential for flash and riverine flooding. Avalanches and landslides may affect mountainous areas.



## North America

Nil

## Central America and Caribbean

Nil

## South America

### Ecuador and Peru

### **Weather**

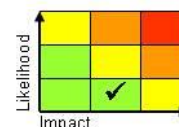
Frequent heavy showers and thunderstorms will affect this region through the next 7 days, with daily totals of 75-150mm possible. Overall totals this week may exceed 300mm, well in excess of the average rainfall for the month of January.

### **Discussion**

There is a strong model signal for the peak rainfall amounts to be further south than in recent weeks, allowing a drier period for western Colombia while focusing the peak rainfall accumulations across Ecuador and Peru. Heavy rainfall is also likely to the west in the western Amazon basin, but with fewer impacts likely here.

### **Expected Impacts**

Flash flooding. Enhanced risk of landslides.



## Southeast Brazil and eastern Paraguay

### **Weather**

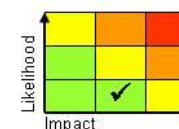
Severe thunderstorms and heavy rain are expected to be more frequent across the region in the next 2 or 3 days, before returning to a more normal rainfall pattern. Daily rainfall totals of 50-100mm are likely with some places seeing as much as 200-300mm by Friday. This well in excess of typical January rainfall (100-150mm). In addition to heavy rain, hazards such as hail, strong winds and lightning are also likely.

### **Discussion**

The active phase of the South American convergence zone across the region decreasing in the next few days. This as upper troughing to the south declines.

### **Expected Impacts**

Flash flooding. Increase threat of landslides. Possible power disruption and damage to crops and infrastructure.



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**Africa**

**Madagascar, Mozambique, Eswatini and northeast South Africa** – See *Tropical Cyclones* section

**Southern Africa****Weather**

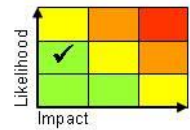
Heavy showers and thunderstorms will be more frequent than normal across parts of southern Africa north of 22S. Some thunderstorms are likely to be severe and accompanied by large hail, frequent lightning and strong winds. Daily rainfall totals of 50-100mm are possible with many areas likely to receive a month's worth of rainfall over the coming five days.

**Discussion**

Above average rainfall is a typical La Niña response across this region with a significant reduction in the environmental static stability, increasing the depth and frequency of convection. This is resulting in more frequent shower activity, especially within the moist mild tropical air across the region. In addition mid-latitude systems and upper features approaching from the south will further augment the heavy rainfall.

**Expected Impacts**

Flash flooding. Possible power disruption and damage to crops and infrastructure.

**Middle East**

**Parts of The Levant, southeastern Turkey, northern Iraq and Syria**

**Weather**

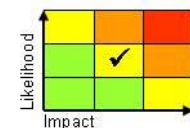
Further heavy rain and thunderstorms will continue to affect this region today. The heaviest rainfall is likely to be across the eastern Mediterranean coast, more especially the higher ground of the Lebanon and western Syria, plus along the border of Turkey and Iraq. Rainfall totals of 50-100mm is possible, with this following recent heavy rainfall across the region in the last few days, and falling as heavy snow over the mountains. The average January rainfall across the area is 100-250mm. The rain clearing the Levant coast later today, then Turkey and Iraq during tomorrow.

**Discussion**

A plunge of cold air across eastern Europe has resulted in a resulting baroclinic zone across the region in the last few days. This has led to periods of heavy precipitation and embedded deep convection. However the main upper forcing clearing away east and the frontal zone moving away southeast, reducing the activity over the region.

**Expected Impacts**

Flash and riverine flooding. Increased threat of landslides. Disruption to transport and utilities due to snow in areas mentioned above.

**Asia**

**Philippines, eastern Indonesia and Papua New Guinea, eastern Malaysia**

**Weather**

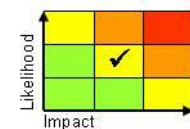
Heavy showers and thunderstorms will be more frequent than normal in the next 4 or 5 days. Daily rainfall totals may exceed 100mm in places, this potentially falling in just a few hours, with 200-300mm expected to have accumulated widely. Some places seeing as much as 400-500mm, with the east coast of Luzon particularly prone. Typical rainfall for January is in the order of 300mm.

**Discussion**

A combination of a La Niña background state, Equatorial Rossby Waves and a weak MJO moving in the Maritime Continent will contribute to a continuation of the above average rainfall seen over recent weeks.

**Expected Impacts**

Flash and riverine flooding. Enhanced threat of landslides especially across parts of Sulawesi which were recently impacted by a major earthquake.



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## Japan

### **Weather**

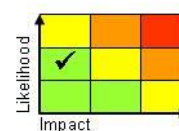
A deep depression is likely to track northeastwards very close to the south coast of Japan this weekend. This system will pose a threat of very heavy rainfall (75-150mm) in just 24 hours with up to 50cm of snow in places. Severe gales are also possible, with gusts up to 60mph, producing very rough seas.

### **Discussion**

A plume of tropical air will extend northwards just east of Taiwan later this week around the sub-tropical high pressure area. This plume will be engaged by a trough in the strong STJ by the weekend which will develop a deepening depression, with the upper troughing likely becoming more pronounced through the weekend with a contribution from the PFJ. This could deepen the depression even further and track it further north into Japan.

### **Expected Impacts**

Flash flooding, disruptive snowfall, damaging winds and dangerous maritime conditions possible.



## Australia

### Northern Queensland (Australia)

### **Weather**

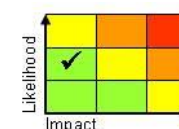
The remnants of Ex-tropical Cyclone Kimi continues to drift offshore northern Queensland between close to Townsville as a decaying tropical low. Although a decaying system further heavy rainfall is still associated with this feature, with areas of Queensland close to Cairns, seeing 100-200 mm, perhaps locally 300 mm in the coming 4 or 5 days.

### **Discussion**

Tropical cyclone Kimi weakened yesterday to become a tropical low. The remnants of the system are expected to begin tracking back towards the north-northwest in the coming few days whilst continuing to decay. At the same time an anomalously strong E'ly flow will bring more frequent than normal deep convection onto the coast of northern Queensland in the coming week.

### **Expected Impacts**

Flash and riverine flooding.



**Northwest Australia** – See *Tropical Cyclones* section

### Additional information

Colder than average conditions will affect much of western Russia and parts of eastern Europe for the next couple of days. Overnight minima of -20 to -30°C are likely, this 10-15°C below the typical January average. However, much milder air will push in from the west towards the end of the week, bringing temperature back to or above normal.

**Issued at:** 190800UTC

**Meteorologist:** Tony Wardle / Paul Hutcheon

**Global Guidance Unit**

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

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