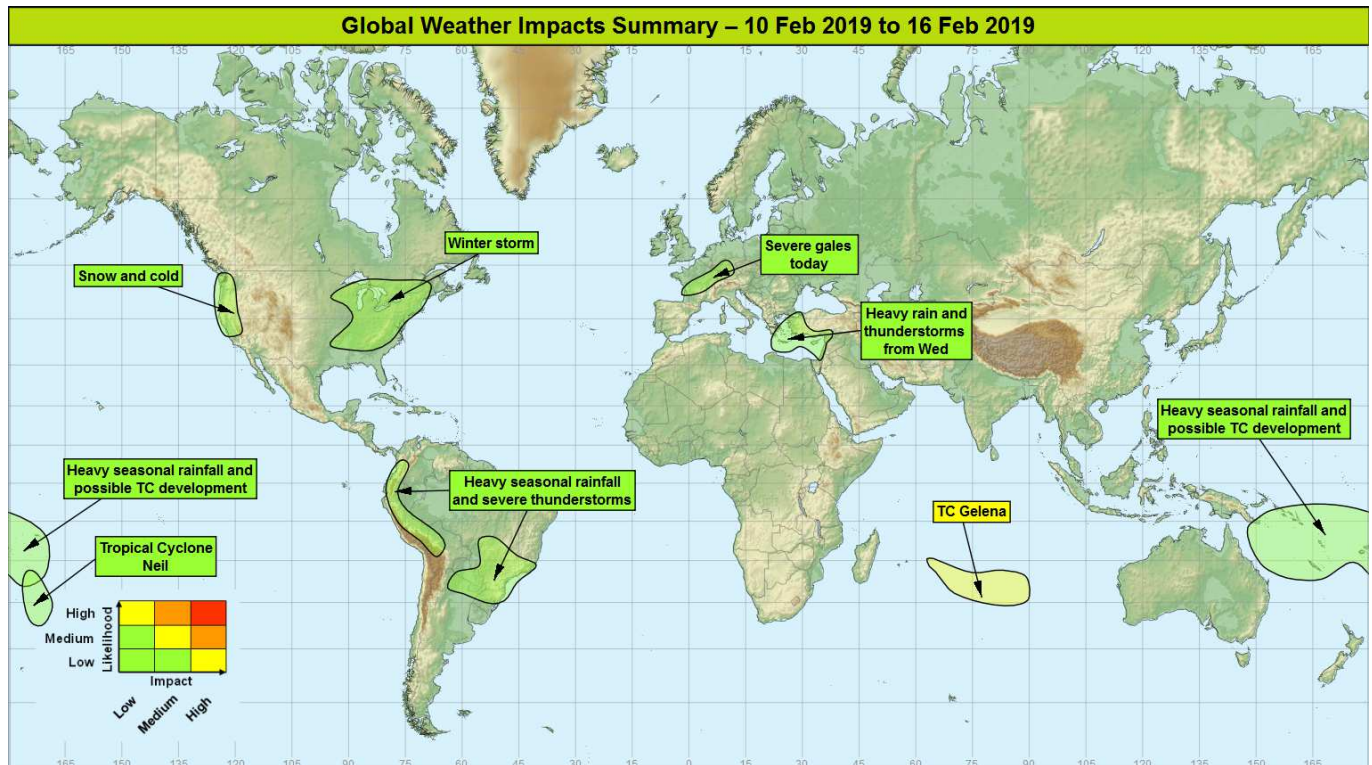


## Global Weather Impacts – Sunday 10<sup>th</sup> to Saturday 16<sup>th</sup> February 2019

Issued on Sunday 10<sup>th</sup> February 2019

### HEADLINES

- Intense TC Gelena now clearing Rodrigues, Southwest Indian Ocean.
- Further TC developments across the Coral Sea and SW Pacific possible.
- Heavy seasonal rainfall is expected to continue across parts of South America.
- Winter storms affecting parts of N America over the coming days.



### DISCUSSION

#### Tropical Cyclones

#### Intense Tropical Cyclone Gelena (Southwest Indian Ocean)

##### Weather

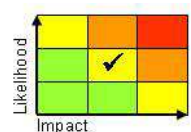
Over the last 12 hours the centre of Gelena has tracked just (around 30-40 nautical miles) to the southwest of Rodrigues. Gelena and its associated very strong winds (gust of just over 100 mph reported at Pointe Canon) and heavy rain are forecast to continue to move away from Rodrigues throughout today with no further threat to land.

##### Discussion

Whist passing close to Rodrigues Gelena has lost its eye but there are signs of an ongoing eye wall replacement cycle. There is good agreement that Gelena will continue to track southeasterly, away from Rodrigues although models differ in its intensity over the coming days.

##### Expected Impacts

Swells from Gelena are expected to continue affect Rodrigues (and perhaps Mauritius and La Reunion) over the next day or so, potentially leading to dangerous rip current and surf conditions. Flash and coastal flooding remains possible early on Sunday.



This forecast may be amended at any time

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## Tropical Cyclone Neil (Tonga)

### Weather

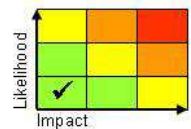
Tropical Cyclone Neil has now tracked to the south of Tonga with maximum wind gusts of around 50 mph. Neil is forecast to weaken/dissipate over the next 48 hours or so and is expected to remain over open water during this time.

### Discussion

There is good model agreement for this storm to remain over open water and gradually weaken as it moves over lower SSTs and comes under the influence of increased wind shear.

### Expected Impacts

No significant impacts expected.



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

## Southwest Pacific Ocean and Coral Sea

### Weather

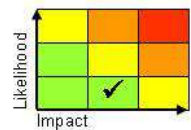
Through the coming week there is an increased chance of tropical cyclone formation over the Coral Sea and/or South Pacific in the vicinity of the Solomon Islands and Fiji. There is a very low probability of a significant tropical storm developing in the vicinity of Vanuatu early next week. Irrespective of tropical cyclone formation, Polynesian islands south of the equator as well as the Solomon Islands, Vanuatu, New Caledonia and Fiji are likely to see more frequent heavy showers and thunderstorms over the coming days. Some places may receive 150-200 mm in a day, which is equivalent to around 2 weeks rainfall at this time of year.

### Discussion

The tropical low which has brought historic rainfall to northern Queensland has emerged across the Coral Sea with the potential for gradual development and intensification early next week as it tracks east. There is considerable uncertainty as to the potential developments across the region, with models differing considerably. However it is worth noting that there are some solutions which highlight a low probability for a more significant storm to develop from early next week near Vanuatu.

### Expected Impacts

Very heavy rainfall could lead to localised flash flooding and an increased risk of landslides across Polynesia, Solomon Islands, Vanuatu, New Caledonia and Fiji. Potential tropical cyclone development brings an increased risk of damaging winds and rough seas to a similar area.



## Europe

### France, Switzerland and Germany

### Weather

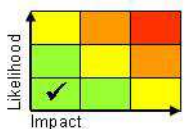
A spell of heavy rain and strong, squally winds will move east across parts of central France, northern Switzerland and southern Germany through today. Typically wind gusts of 50-60 mph are anticipated but some isolated gusts of 65-75 mph are possible.

### Discussion

A very squally cold front will move across these areas through today. A strong confluent flow across the front and associated line convection will help bring wind gusts to the surface which could exceed gradient values at times. Meteo France has named the storm/swathe of winds 'Isaias' (also named 'Uwe' by DWD).

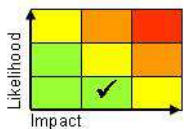
### Expected Impacts

Disruption to transport, aviation in particular. The strongest wind gusts could be enough to cause damage to structures and lead to short term loss of power.



## Southeast Europe and the Levant coast

### Weather



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Turning very unsettled again in this area from Wednesday with outbreaks of very heavy rain developing along with thunderstorms. 50-100 mm could fall in places each day (much of this in only a few hours) which is the equivalent of nearly a month's worth of rainfall. In addition, very strong, gusty winds and coastal gales could develop at times. Later in the week, heavy mountain snow is possible, mainly over Turkey.

## Discussion

An amplification of the pattern over the E Atlantic and W Europe over the next 48 hours will help drive another trough southeast over the Med. A strong N'ly jet on its W'ern flank will help feed and maintain an upper vortex over the E'ern Med from around Wednesday. A sympathetic surface depression is expected to form with upper short waves acting to organise rainfall and thunderstorms at times.

## Expected Impacts

Increased threat of flash flooding and landslides in mountainous areas. Strong winds and rough seas could impact aviation and maritime transport. Risk of impacts to vulnerable and displaced populations in the region.

## North America

### Eastern USA and eastern Canada

#### Weather

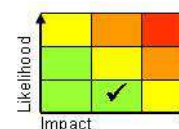
A winter storm is expected to develop early next week to affect parts of the eastern USA and southeastern Canada. Snow, freezing rain, heavy rain, thunderstorms and strong winds are associated with this feature.

#### Discussion

An upper trough is expected to engage with high WBPT air across the southern States and develop an area of low pressure to the east of The Rockies. There is good model agreement for this to then track northeast bringing heavy rain from Texas to Virginia on Monday. On the northern flank this will turn to snow or freezing rain across parts of Iowa to Pennsylvania on Monday, then to parts of SE Canada and the northeastern States, with a risk to New York on Tuesday before clearing. This will be exacerbated by strong winds. To the south of this, along a trailing cold front, heavy rain and locally severe thunderstorms could bring up to 100mm per day across parts of the eastern States on Tuesday and into Wednesday.

#### Expected Impacts

Travel disruption is likely to be the main impact, though some disruption to power supplies is possible.



### Western USA

#### Weather

A succession of weather systems are expected to bring an increased risk of valley rain and mountain snow, plus widely significantly below average temperatures in the coming week. Seattle and Portland have already seen heavy snow this weekend. Cold Canadian air may also result in some locally record breaking low temperatures for parts of coastal Washington and Oregon states. Further snow is expected to develop across the area early next week, though the main snow risk is across the higher ground and inland towards Idaho, with a rain (heavy at times) and snow mix at lower levels and close to the Pacific coast.

#### Discussion

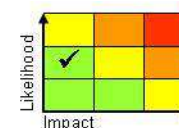
A persistent upper ridge over Alaska is contributing to a somewhat abnormal storm track across the Pacific Northwest with systems moving due south along the coastline and drawing cold air from western Canada.

#### Expected Impacts

Travel disruption is likely with delays on roads and at airports. Blowing snow may result in some communities being temporarily cut-off and lead to interruptions to power supplies. Cold temperatures following across the region may have an adverse impact to vulnerable populations. Heavy rain early next week along the coast may lead to some surface water impacts and river flooding.

### Central America and Caribbean

Nil significant.



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## South America

### Northern Argentina, Uruguay, southern Brazil and Paraguay

#### **Weather**

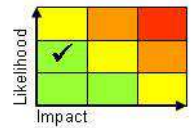
Heavy showers and thunderstorms are expected to become more frequent across the region from Sunday onwards. This zone of organised thunderstorms will tend to drift north across this area through the week. Some places are likely to receive 100-150 mm of rain in 24 hours and over the next week, some places may receive 200-250 mm. This region typically receives 40-60 mm of rain over a week. Thunderstorms are likely to be severe at times with strong winds, large hail and frequent lightning additional hazards.

#### **Discussion**

An upper trough will gradually move north across the area. Associated heavy showers and thunderstorms are likely to develop from Sunday onwards. This will engage the resident warm plume and likely trigger further MCS and super cell thunderstorms similar to those seen during January.

#### **Expected Impacts**

Parts of northern Argentina, southern Brazil and Uruguay have received 150-400% of normal rainfall over the past 3 months which means that further rainfall is likely to fall into sensitive river catchments and onto saturated ground. This additional rainfall is likely to trigger further flash flooding as well as landslides in more mountainous areas. Strong winds, large hail and frequent lightning may also cause damage to property and infrastructure as well as posing a threat to life.



### Northern Andes (Colombia, Ecuador, Peru and Bolivia)

#### **Weather**

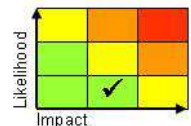
Frequent heavy showers and thunderstorms are expected to continue across the northern Andes through the next week, extending to Bolivia for time early in the week. Up to 75 mm of rain is possible in 24 hours with some places seeing a further 150-200 mm of rain over the next week, which is significantly higher than the monthly average.

#### **Discussion**

With the MJO moving east across the Pacific through the next week, this will likely maintain enhanced convection across the region. Although significant rainfall typically occurs during this time of year, the cumulative effects of above average rainfall for many parts of this region during the wet season so far are likely to be seen.

#### **Expected Impacts**

Flash flooding and landslides are a significant threat in the mountainous areas. Flash flooding is also possible if thunderstorms impact urban areas. Disruption to aviation is possible, as well as large hail, gusty winds and tornadoes. Across desert regions the unusually high level of rainfall runoff may bring severe flooding in the usually dry alluvial plains that many people live and farm along.



## Africa

Rodrigues, Southwest Indian Ocean – See *Tropical Cyclones* section.

## Middle East

Nil significant.

## Asia

Nil significant.

## Australasia

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**Southern hemisphere Polynesia, Solomon Islands, Vanuatu, New Caledonia and Fiji –**  
See *Tropical Cyclones* section.

**Additional information**

Nil.

**Issued at:** 10/0830 UTC **Meteorologist:** Chris Bulmer

**Global Guidance Unit**

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

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