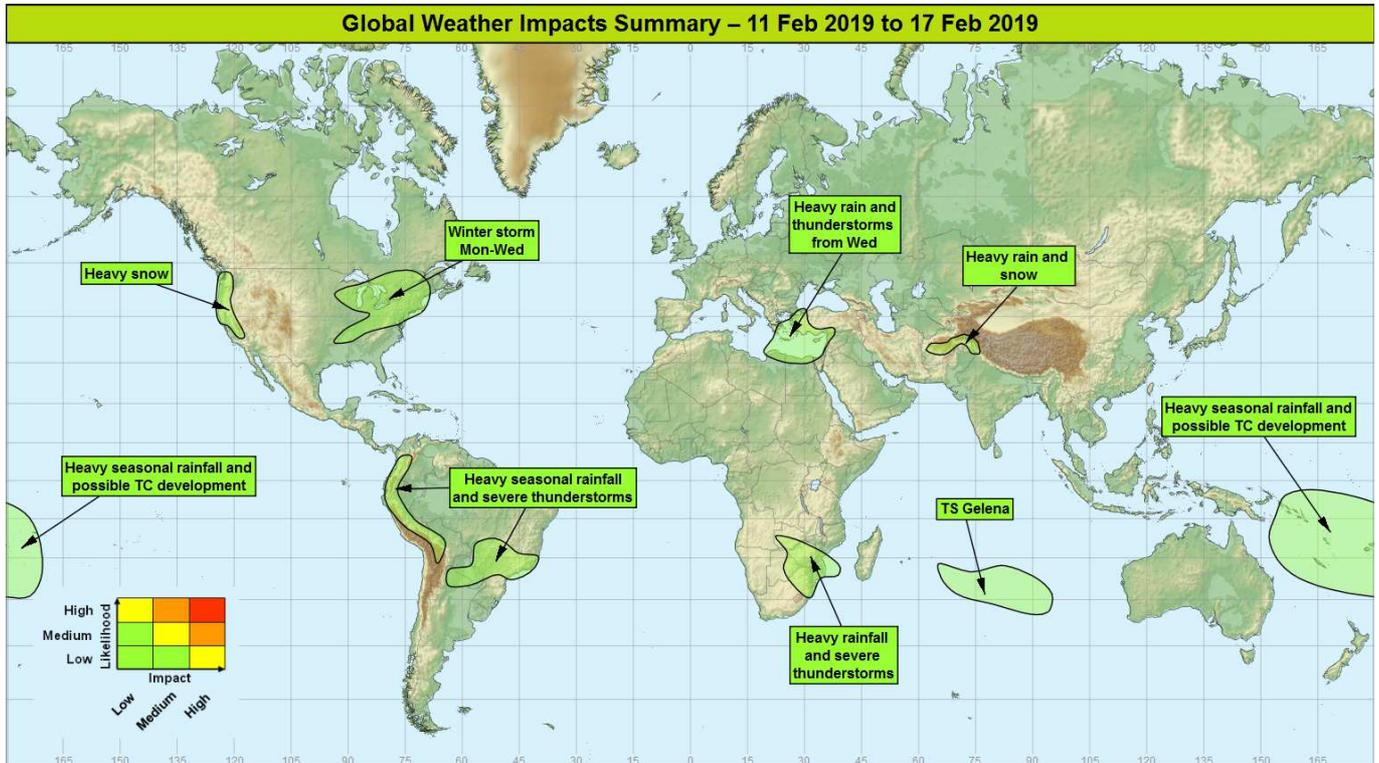


## Global Weather Impacts – Monday 11<sup>th</sup> to Sunday 17<sup>th</sup> February 2019

Issued on Monday 11<sup>th</sup> February 2019

### HEADLINES

- Further TC developments across the Coral Sea and SW Pacific likely.
- Heavy seasonal rainfall and severe thunderstorms over parts of South America.
- Winter storms affecting parts of N America over the coming days.



### DISCUSSION

#### Tropical Cyclones

#### Severe Tropical Storm Gelena (Southwest Indian Ocean)

##### Weather

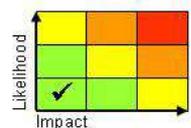
Gelena is now well to the southeast of Rodrigues over open water. Although now downgraded to a Severe Tropical Storm, winds remain strong within the vicinity of Gelena with mean speeds of 60 to 65 mph leading to rough seas. Gelena is forecast to continue to track east or southeast and undergo extra-tropical transition within the next 24 hours or so and pose no further threat to land.

##### Discussion

There is good agreement that Gelena will continue to track east or southeastwards, away from Rodrigues, with extra-tropical transition likely within the next 24 hours.

##### Expected Impacts

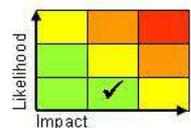
Any further impacts will be limited to maritime operations with the system forecast now remain over open waters. There are reports that Gelena caused widespread flooding and island wide power outages to the island of Rodrigues during Sunday 10<sup>th</sup>.



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

#### Southwest Pacific Ocean and Coral Sea

##### Weather



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

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter  
Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

Through the coming week there is a medium chance of tropical cyclone formation over the Coral Sea and/or South Pacific in the vicinity of Vanuatu and Fiji. 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 helped to bring historic rainfall to northern Queensland has emerged across the Coral Sea. This has the potential for gradual development and intensification over the coming days as it moves into a favourable environment for tropical cyclogenesis. Models are also indicating a likely tropical cyclone development in the vicinity of Fiji over the coming days where another area of convection is evident on imagery.

**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**

**Greece, Turkey, Cyprus, the Levant coast and northern Libya and Egypt**

**Weather**

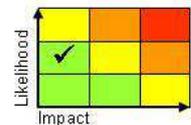
Turning very unsettled again in this area from Wednesday with outbreaks of very heavy rain developing along with thunderstorms. 50-80 mm could fall in places each day (much of this in only a few hours) which is the equivalent of nearly a month's worth of rainfall. In addition, very strong, gusty winds and coastal gales could develop at times. This could also lift dust across northern Libya and Egypt. Later in the week, heavy mountain snow is possible, mainly over inland parts of Turkey.

**Discussion**

Continued amplification of the pattern over the E Atlantic and W Europe over the next 24 hours will help drive another trough southeast over the Med. A strong N'y jet on the trough's 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.



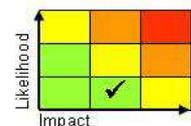
**North America**

**Midwest and northeast USA along with southeast Canada**

**Weather**

An active winter storm is expected to develop over the Midwest of the USA over the next 24 hours with a range of hazards then extending into the northeast of the USA and southeast Canada. The heaviest rain along with thunderstorms is expected across southern parts of the area during Monday and Tuesday with 75-125 mm in places over 48 hours. The highest totals most likely across parts of Arkansas and Kentucky. Further north heavy snowfall and freezing rain will be a more significant hazard. From Monday through to Wednesday parts of northeast USA and southeast Canada are likely to see 15-25 cm of snow. Freezing rain is also likely in places with New York, Washington and many of the major cities of the north-eastern USA at risk. Strong winds/gales will be an additional hazard, particularly around the Great Lakes and near the Eastern Seaboard.

**Discussion**



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

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter  
 Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

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. This then gradually tracking northeast during the middle of the week. Whilst heavy rain is expected in the south and heavy snow in the north there is likely to be an awkward phase transition zone leading the freezing rain and ice. Cold air will follow in the wake of this system but will only be short-lived across these areas with another, possibly less active, system forecast for the end of the week and into the weekend.

**Expected Impacts**

Travel disruption is likely to be the main impact, though disruption to power supplies is also possible. Heavy snow could lead to some rural communities temporarily being cut off. Flash flooding could occur in the south of the area during Monday and/or Tuesday.

**Western USA**

**Weather**

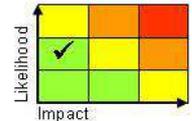
A succession of weather systems are expected to bring spells of heavy snow down to fairly low levels as well as some heavy rain. Snowfall could continue to fall in and around Seattle and Portland over the coming days (heavy snowfall was seen here over the weekend). The heaviest snow and largest accumulations will be over higher ground and particularly over the Cascades with 50-75 cm possible in places over the coming days.

**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.

**South America**

**Northern Argentina, southern Brazil and Paraguay**

**Weather**

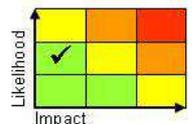
Heavy showers and thunderstorms are expected to be frequent across the region during this week. A zone of organised thunderstorms will tend to drift north across this area over the coming days. Some places are likely to receive 100-150 mm of rain in 24 hours and over the week, some places may receive around 200 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 from the mid latitudes will gradually move north across the area acting to enhance activity on the SACZ. Associated heavy showers and thunderstorms are likely to develop with low level convergence helping to focus activity. The trough engaging the resident warm plume will likely trigger MCS and super cell thunderstorms similar to those seen during January.

**Expected Impacts**

Parts of northern Argentina and southern Brazil 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.



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

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter  
 Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

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

### **Weather**

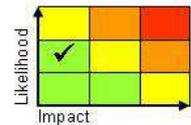
Frequent heavy showers and thunderstorms are expected to continue across the northern Andes through the next week, extending to Bolivia as times. 75-100 mm of rain is possible each day in places (falling within the space of a few hours) with some places seeing a further 150-200 mm of rain over the next week, which is significantly higher than the monthly average. There is small chance that very locally 250-350 mm may fall over the course of the week.

### **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

### Northeast South Africa, Swaziland, Botswana, Zimbabwe, Zambia and southern Mozambique

### **Weather**

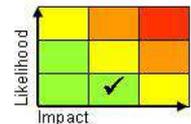
Heavy rainfall and severe thunderstorms are expected in this area through the coming week with a chance of activity becoming enhanced/heavier from Wednesday onwards. There is the potential for 100-150 mm to fall in places each day with as much as 400-500 mm over the course of the week, although there is some uncertainty as to where the heaviest rainfall will fall. Thunderstorms will bring additional hazards of strong winds, large hail and frequent lightning.

### **Discussion**

There are signs that rainfall and thunderstorm activity will become enhanced in these areas over the coming week with a signal for increased low level convergence helping to organise activity. In addition, the MJO moving into Phase 8 could be linked to positive ppn anomalies in these areas. There is some model spread over the location of the heaviest rainfall at this time.

### **Expected Impacts**

Whilst the rainfall will be welcome to some extent in many of these areas the intensity will bring an increased chance of flash flooding. Large hail, strong winds and frequent lightning from thunderstorms could also disrupt transport (especially aviation) and power networks.



Northern Libya and Egypt – See *Europe* section.

## Middle East

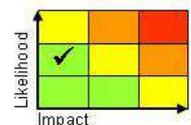
Levant coast – See *Europe* section.

## Asia

### Afghanistan, northern Pakistan and the far northwest of India

### **Weather**

Turning very unsettled across this area over the next few days with a combination of heavy rain and mountain snow. Over the Hindu Kush 50-100 cm over snowfall. In excess of 100 mm of rain could fall in places which would be over the equivalent of a month's worth of rainfall. This could also be combined with some snow melt. Whether places such as Kabul see snow or rain is more marginal although several cms of snow if possible here.



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

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter  
Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

© Crown copyright 2019 This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

**Discussion**

An upper trough will move east across the area over the next couple of days having already engaged a low level plume drawn northwards of the Middle East. Its progression will be slowed somewhat in response to upstream amplification. This will result in an active depression only slowly migrating eastwards across the area during the week increasing the likelihood and large rain and snow totals. WBFLs in the range of 2000-2500m (potentially locally much lower where cold air has pooled in valleys) will make ppn phase in populated areas such as Kabul difficult to determine.

**Expected Impacts**

Snowfall over the mountains will likely block some high road passes in the region and enhance the risk of avalanches. The combination of snowmelt and heavy rain at lower levels could lead to flash and/or fluvial flooding. Below average temperatures may impact vulnerable populations.

**Australasia****Southern hemisphere Polynesia, Solomon Islands, Vanuatu, New Caledonia and Fiji –**

See *Tropical Cyclones* section.

**Additional information**

**Queensland, Australia – Flooding:** The meteorological situation over Queensland has significantly improved with a dry outlook for much of this week. However, as a consequence of unprecedented, record breaking rainfall fluvial response continues with information from the Bureau of Meteorology highlighting ongoing major river flooding in some northwestern parts of the state. Reported river levels in and around Townsville, one of the worst affected populated areas, are now down to 'Minor Flooding' or below.

**New Zealand – Wildfires:** After recent hot and dry weather there are reports of a number of wildfires over parts of New Zealand with a wildfire near Nelson (far north of the South Island) becoming particularly newsworthy due to the evacuation of 2500-3000 people over the last couple of days. Some rain is forecast for the South Island this week although it is likely that the Nelson area will likely be largely sheltered from this with hot and predominantly dry conditions persisting. There are some signs that less warm/hot weather will become established over the coming weekend. However, further wildfires are likely for the remainder of the Austral Summer and into the early Autumn.

**Issued at:** 11/0830 UTC **Meteorologist:** Chris Bulmer

**Global Guidance Unit**

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

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter  
Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

© Crown copyright 2019 This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.