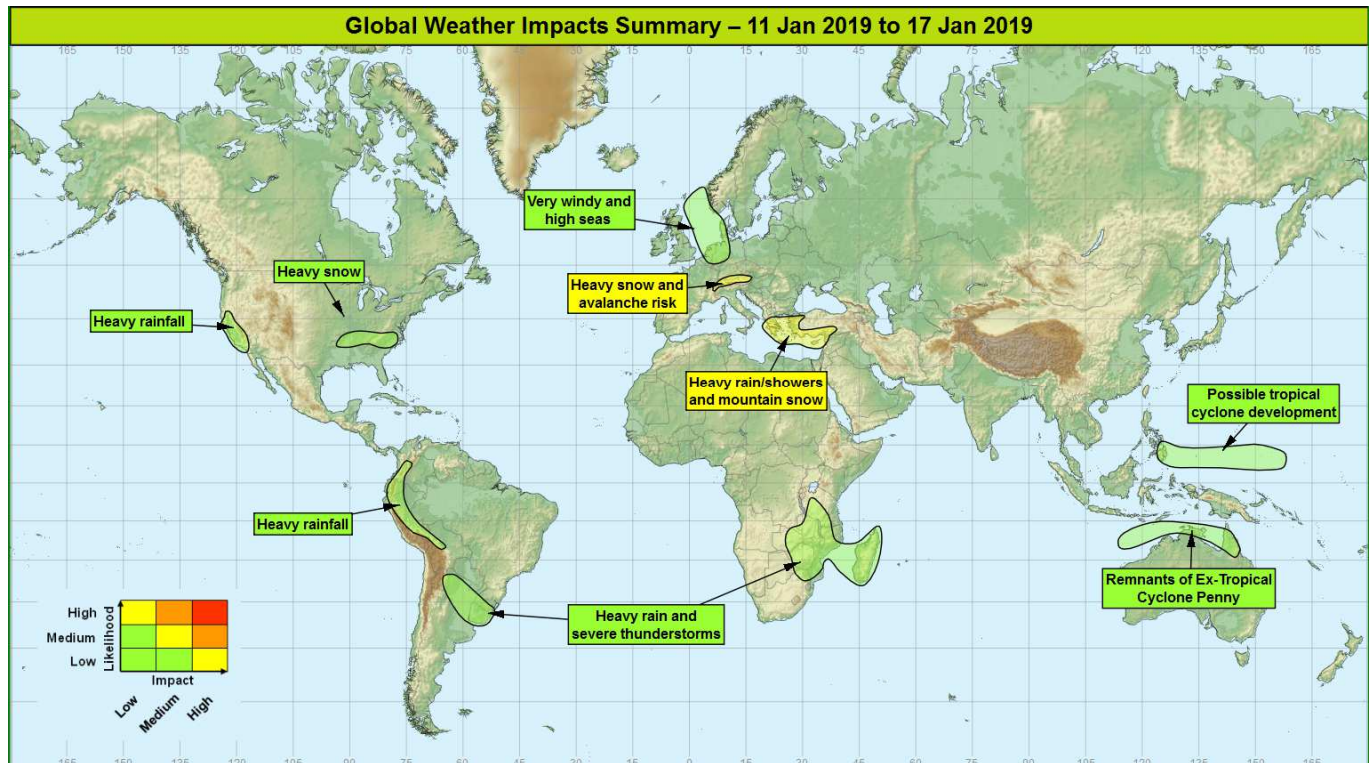


## Global Weather Impacts – Friday 11<sup>th</sup> to Thursday 17<sup>th</sup> January 2019

Issued on Friday 11<sup>th</sup> January 2019

### HEADLINES

- Further heavy snow expected across the northern Alps, leading to yet more disruption to transport and maintaining a high avalanche risk.
- Remaining unsettled across the eastern Mediterranean with heavy showers / thunderstorms and strong winds.



### DISCUSSION

#### Tropical Cyclones

There are currently no named tropical cyclones. The following areas are being monitored:

#### Remnants of ex-Tropical Cyclone Penny (Northern Australia and Timor-Leste)

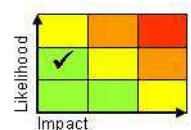
##### Weather

The remnant moisture associated with ex-Tropical Cyclone Penny are expected to bring further heavy rainfall to the far north of Queensland. Widespread thunderstorm activity could produce a further 50-100 mm today. Through Friday and over the weekend this will cross the Gulf of Carpentaria and bringing similar amounts of rain to parts of Northern Territory around Darwin. Thereafter, there is a low probability that this remnant moisture may help spawn a new tropical cyclone to the south of Timor, and could bring heavy rain to the island Timor-Leste through early next week.

##### Discussion

Although any circulation associated with what was Penny has decayed, remnant moisture and convection is still evident on imagery. There is some model output that signals for this to become entrained in a newly developing low, possibly a tropical cyclone during Monday or Tuesday (UK time) as it moves across the Timor Sea. This feature is then expected to track SW and remain over the sea from Wednesday.

##### Expected Impacts



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Risk of flash across the far north of Queensland and the Northern Territory, including Darwin over the next few days before a similar risk reaches Timor-Leste for Monday and Tuesday.

## **Northwest Pacific (Micronesia and southern Philippines)**

### **Weather**

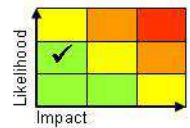
An enhanced area of thunderstorms is expected to track west from across Micronesia towards the southern Philippines (Mindanao) by the end of the week. There is a low risk that the convective activity could become organised to form a tropical cyclone, at least for a time.

### **Discussion**

An equatorial Rossby Wave developed a tropical low level circulation in the last few days, and this is expected to track westward track across Micronesia through the coming week.

### **Expected Impacts**

Possibility of local flash flooding affecting some of the tiny Micronesian Islands and by the end of the week towards the southern Philippines, with a much lower likelihood of wind-related impacts.



## **Europe**

### **Greece, Turkey, Cyprus, Lebanon and northwest Syria**

### **Weather**

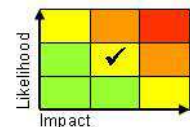
Further spells of heavy rain, thunderstorms and mountain snow are expected to affect the region over the next week. The focus for the heaviest rainfall will be across Greece and Western Turkey on Friday and Saturday, with the rest the region having a somewhat drier spell of weather. However, conditions are expected to turn very unsettled across Southern Turkey, Cyprus and parts of the Levant from Sunday, then to parts of Northern Syria by Tuesday. Up to 50-100 mm, perhaps 150mm across parts of Southern Turkey could fall in some locations on any particular day, with up to 300 mm in some places building up over the course of the next few days.

### **Discussion**

The remarkably persistent planetary scale ridge near to the meridian will continue to feed trough extensions south towards the eastern Mediterranean. This will create an environment which develops a series of waves/lows resulting in widespread showers and thunderstorms across the region. On the northern edge of the systems cold air will result in snowfall across higher ground of southeast Europe. This pattern shows no sign of breaking down and the very unsettled conditions have the potential to last for another couple of weeks.

### **Expected Impacts**

Further heavy rainfall will lead to an enhanced threat of flash flooding and landslides in the region, more especially as this follows previous wet weather in recent weeks and months. In addition strong winds and below average temperatures are likely to affect vulnerable populations in parts of southern Turkey and the Levant region. Snowfall over parts of Greece may also cause some further transport disruption and perhaps utility outages.



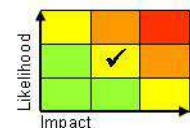
## **Alps, Switzerland, Austria and southern Germany**

### **Weather**

Further spells of heavy snow are expected across the Austrian, Swiss and southern German Alps through this period. Heavy snow ongoing across the region has eased somewhat during Thursday. However a further spell of heavy snow is expected to develop late on Saturday, and more especially during Sunday and Monday. With the snow line lifting to around 800 metres with this system, this could bring a combination of heavy rain and short-lived thaw of lying snow to low levels before colder conditions return by the end of Monday.

### **Discussion**

Frontal systems arriving from the north or northwest, bringing higher WBPT/moister air, combined with brisk northerly flow will generate significant orographically enhanced precipitation. Over the next few days snow will fall to all levels, but over the weekend will become restricted to above 800 metres, leading to a thaw of lying snow at low levels. Rising and fluctuating freezing levels over the weekend will make the snow pack more unstable than usual, increasing the risk of avalanches.



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## Expected Impacts

Even in a region so well prepared for such weather, this amount of snowfall is likely to cause disruption to air and land based transport. 3 to 5 metres of fresh snow has been reported across the highest tops of the Alps in the last few days. Additional snow will also increase the already very high threat of avalanches in the region. Risk of some flood impacts at lower elevations possible this weekend.

## North Sea and adjacent coastlines

### Weather

A further spell of severe gales is likely to develop on Sunday, lasting into Monday, affecting countries bordering the southern North Sea.

### Discussion

There is increasing evidence to suggest a deep depression will track from Iceland, then close to southern Norway and towards the Baltic Sea during Sunday and Monday. Very strong winds, across a large area is associated with this feature and will lead to very rough seas and possibly produce a significant storm surge across the southern North Sea.

### Expected Impacts

Disruption to marine and offshore activities is expected. Wind damage is possible across Denmark, northern Germany and the Netherlands, with these coastlines seeing the threat of storm surge flooding.



## North America

### California

#### Weather

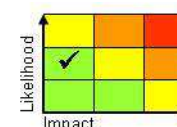
Further Pacific weather systems are expected to affect the state on Saturday and again from Tuesday onwards. Over the next 7 days, many locations will receive over 75 mm of rain with locally 150-200 mm possible. Above 1800 metres, further significant snowfall is expected over the Sierra Nevada range.

#### Discussion

A succession of Pacific depressions will affect the region over the weekend and from early next week, driven by a stronger sub-tropical jet. The semi-permanent trough across the western USA is expected to prevail throughout next week and maintain the unsettled conditions across the southwest.

#### Expected Impacts

Flash flooding has already affected California, Washington and Oregon in recent days so further rainfall will add to the problems. Mudslides are a significant threat in burn scar regions of California in particular. Heightened avalanche threat is also likely in the Sierra Nevada.



## Central and eastern USA

### Weather

A spell of heavy snow is expected to develop across Kansas and southeast Nebraska on Friday afternoon. This is then expected to extend eastwards across Tennessee, North Carolina, Virginia and the Southern Appalachians over the weekend. Some larger population centres such as Charlotte, perhaps even towards Washington DC could receive up to 15 cm of snow. There is also a risk of freezing rain in places.

### Discussion

An upper trough will interact with a high WBPT plume moving north from Mexico to produce a shallow wave depression, which then moves east across southern parts of the USA over the weekend. Along the northern flank of this system areas of heavy snow will develop, along with a risk of some freezing rain.

### Expected Impacts

Significant travel disruption is possible along with disruption to power supplies.



## Central America and Caribbean

Nil significant.

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## South America

### Northern Argentina, far south of Brazil and Uruguay

#### **Weather**

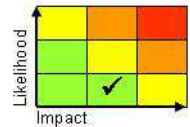
Further episodes of frequent heavy showers and severe thunderstorms are expected to affect this area over the next week, producing a combination of torrential, short-period rainfall, large hail, damaging wind gusts and a tornado threat. Storms will develop during most afternoons, persisting well into the night time. These storms are capable of producing up to 200 mm of rainfall in 24 hours, and in recent days some locations have seen 24 hour rainfall records broken.

#### **Discussion**

Successive rounds of severe convection are expected as the seasonal warm plume is drawn south and engaged by shortwave upper troughs crossing South America. A combination of large CAPE and vertical wind shear will support the development of MCS and supercells.

#### **Expected Impacts**

Impacts will be fairly localised given the nature of showers, but further flash flooding from heavy rainfall is likely. Additionally, large hail, frequent lightning and strong winds/tornadoes are likely to cause some damage to property and utilities infrastructure.



### Western Colombia, Ecuador, Peru and Bolivia

#### **Weather**

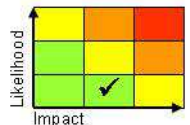
Enhanced rainfall, in association with frequent showers and thunderstorms, is expected this week across the region. There is the potential for up to 400 mm of rain across part of the Andes over the next week. This is likely to equate to the average January rainfall.

#### **Discussion**

The MJO is currently moving across the western Hemisphere which is enhancing convection across the Andes region.

#### **Expected Impacts**

Increased likelihood of flooding and landslides.



## Africa

### Mozambique, Zimbabwe, Zambia, Malawi, Madagascar, northern South Africa and Tanzania

#### **Weather**

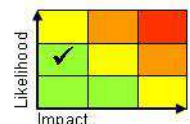
Enhanced seasonal rains are expected to continue in the form of more frequent thunderstorms. These could locally bring 50-100 mm of rainfall in 24 hours, with some significant totals perhaps falling in a short period. Some locations could see 200-250 mm over the next week, with these values close to the January average. In addition to heavy rainfall, these will likely produce frequent lightning, strong downdraughts and possibly large hailstones too.

#### **Discussion**

Enhanced seasonal rainfall associated with monsoon plume is forecast to continue over the next week, with significant rainfall anomalies being generated by the models. Showers will mainly be focussed by the (at times diffuse) axis of high WBPT.

#### **Expected Impacts**

The majority of the area highlighted is sparsely populated; however there are a few large densely populated cities within it. Impacts will be fairly localised given the nature of showers, but flash flooding from heavy rainfall is possible. Additionally, large hail, frequent lightning and strong winds are likely to cause some damage to property, crops and infrastructure. The likelihood of a populated area being significantly affected is rather low.



## Middle East

Syria and Lebanon – See *Europe* section.

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

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**Asia**

**Micronesia, Philippines and Timor-Leste** – See *Tropical Cyclone* section.

**Australasia**

**Northern Australia** – See *Tropical Cyclone* section.

**Additional information**

Nil.

**Issued at:** 110735 UTC    **Meteorologist:** Tony Wardle

**Global Guidance Unit**

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