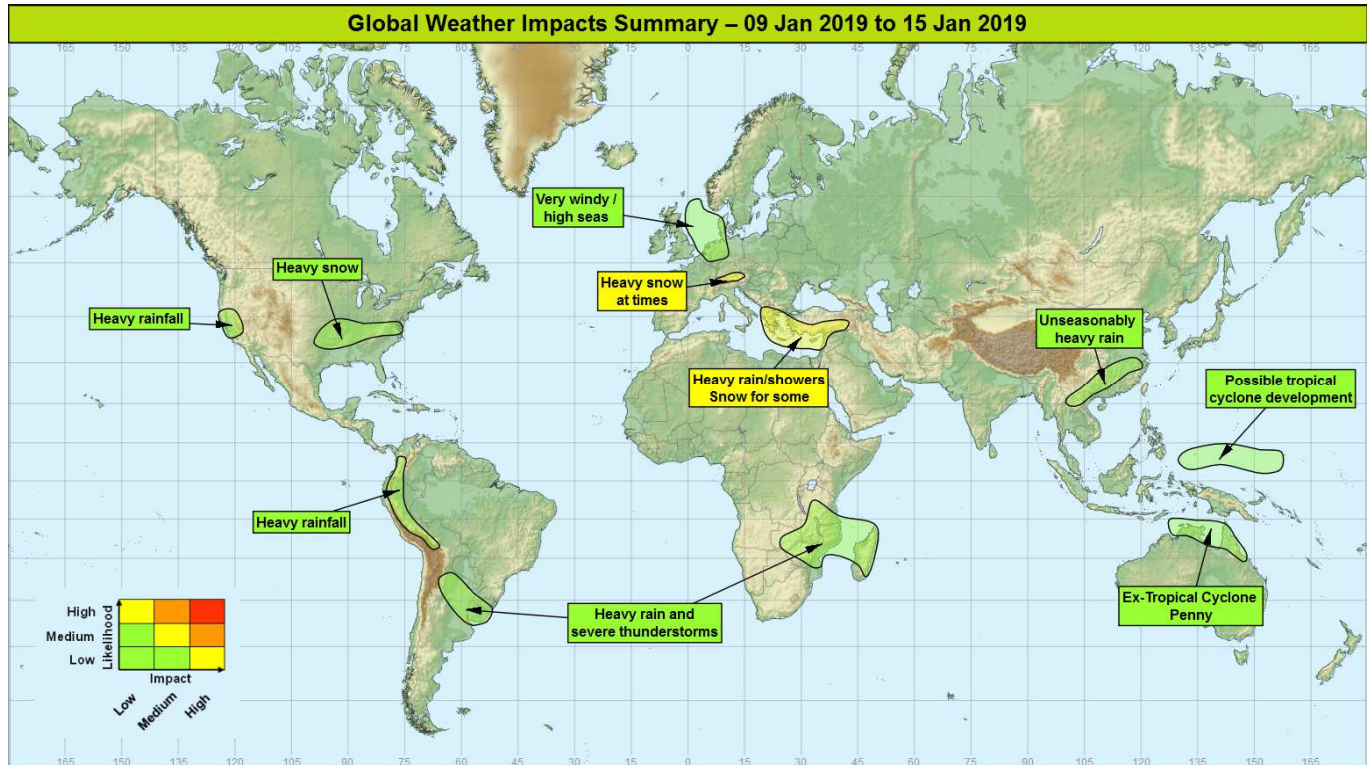


## Global Weather Impacts – Wednesday 9<sup>th</sup> to Tuesday 15<sup>th</sup> January 2019

Issued on Wednesday 9<sup>th</sup> January 2019

### HEADLINES

- Heavy snow expected to continue across the northern Alps, further disrupting transport and maintaining a high risk of avalanches.
- Very unsettled across the eastern Mediterranean with heavy showers/thunderstorms and strong winds.



### DISCUSSION

#### Tropical Cyclones

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

#### Ex-Tropical Cyclone Penny (Northeastern Queensland, Australia)

##### Weather

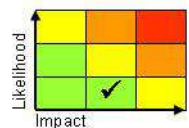
Ex-Tropical Cyclone Penny is expected to bring torrential rainfall to northern parts of Queensland over the next 2-3 days. Widespread thunderstorm activity could produce event rainfall totals of 200-300, isolated 500 mm to parts of northeastern Queensland (almost 200% of the January average rainfall). Over the weekend the remnants of Penny will cross the Gulf of Carpentaria, potentially redeveloping and producing widespread heavy rain across the Northern Territory early next week.

##### Discussion

The remnants of Penny are expected to cross Cape York, bringing widespread heavy rainfall to Queensland. The system has the potential to then regenerate into a tropical cyclone as it crosses the Gulf of Carpentaria over the week, although this is more probable as it moves further west into the Timor Sea.

##### Expected Impacts

Significant risk of flash and river flooding as the remnants of Penny make landfall on the Queensland coast between Alva Beach and Yeppoon, the worst effects now likely to the south of main centres such as Townsville and Cairns.



This forecast may be amended at any time

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## Northwest Pacific (Micronesia)

### **Weather**

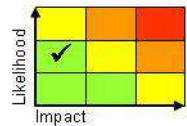
An enhanced area of thunderstorms is expected to track west from the Marshall Islands in the next few days through Micronesia. There is a low risk that the convective activity within a tropical depression could become organised to form a tropical storm.

### **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, with a much lower likelihood of wind-related impacts.



## Europe

### Greece, Cyprus, Turkey and western Syria

### **Weather**

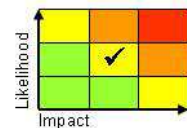
Further spells of heavy rain and thunderstorms are expected to affect the region over the next week. The focus for the heaviest rainfall will be across Greece and Turkey over the next few days, with the rest the region having a somewhat drier spell of weather. However, conditions are expected to turn very unsettled across Cyprus and parts of Syria once again from Monday next week. Up to 50-100 mm 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. In addition to heavy rain some snow is expected across northern parts of Greece today (Wednesday).

### **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 northern parts of Greece at times. 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. Significant snowfall in parts of northern Greece will likely disrupt transport and perhaps cause utility outages.



## Alps, Switzerland, Austria and southern Germany

### **Weather**

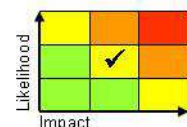
Further spells of heavy snow are expected across the Austrian, Swiss and southern German Alps through this period. The heaviest snowfall is expected today and at first on Thursday, before a drier interlude develops. During this time the higher Austrian Alps are likely to have another 100 cm or so of fresh snowfall, bringing a high likelihood of avalanches. Over the weekend and into the early part of next week milder air could bring a combination of heavy rain and a thaw to lower levels.

### **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.

### **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. Additional snow will also increase the threat of avalanche in the region. Risk of some flood impacts at lower elevations this weekend.



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## North Sea and adjacent coastlines

### **Weather**

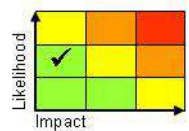
A further spell of severe gales is likely to develop on Sunday, perhaps lasting into Monday, affecting countries bordering the southern North Sea.

### **Discussion**

There is increasing evidence to suggest another deep depression will track close to northeast Scotland, through southern Norway and into the Baltic Sea during Sunday and Monday. This will lead to very rough seas and possibly produce a significant storm surge in 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**

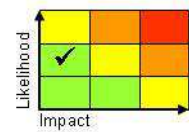
Further wet and, in the north, windy weather is expected to affect California today (Wednesday). Locally a further 100-150 mm of rainfall is possible, some of this falling across the Sierra Nevada where heavy snowfall is expected.

### **Discussion**

The last in a series of active Pacific low pressure systems is expected to affect this region through the next 24 to 48 hours. Behind this an upper ridge should provide some respite. However the signs are that unsettled weather will return to the state by the weekend.

### **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**

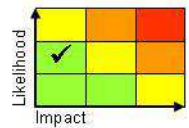
A spell of heavy snow is likely to affect central and eastern parts of the USA through the weekend. Major population centres could be affecting, stretching from Oklahoma City in the west to Washington D.C. in the east as between 15 and 30 cm of snow falls in places.

### **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.

### **Expected Impacts**

Disruption to travel is expected and interruptions to power supplies are possible.



## Central America and Caribbean

Nil significant.

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## South America

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

#### **Weather**

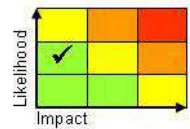
Further episodes of frequent heavy showers and severe thunderstorms are expected to affect this area over the next week, producing a combination of torrential, short-period rainfall, large hail, damaging wind gusts and a tornado threat. Storms will develop during most afternoons, persisting well into the night time.

#### **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**

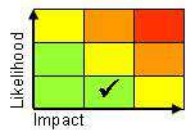
Enhanced rainfall, in association with frequent showers and thunderstorms, is expected this week across the region. There is the potential for up to 400 mm of rain across part of the Andes this week. This is likely to equate to the average January rainfall.

#### **Discussion**

The MJO will be moving through tropical South America during the next few days, which is likely to enhance convection across the Andes region.

#### **Expected Impacts**

Increased likelihood of flooding and landslides.



## Africa

### Mozambique, Zimbabwe, Zambia, Malawi, Madagascar and Tanzania

#### **Weather**

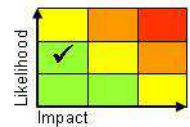
Enhanced seasonal rains are expected to continue in the form of more frequent thunderstorms. These could locally bring 50-100 mm of rainfall in 24 hours, with some significant totals perhaps falling in a short period. Some locations could see 200-250 mm over the next week, with these values close to 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 – See *Europe* section.

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## Asia

### Northern parts of Thailand, Laos and Vietnam, and southern China

#### **Weather**

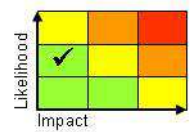
Unseasonable heavy rain is expected during the next few days. 100-200 mm of rain is expected to fall in parts of what would be across a usually dry region at this time of year.

#### **Discussion**

The sharp upper trough responsible for earlier snowfall further west is now engaging with the remnant warm plume of Ex-Tropical Cyclone Pabuk to produce an area of out-of-season very heavy rainfall. The heaviest rainfall will move east through the next couple of days before a more zonal upper flow brings a return of the more usual dry weather before the weekend.

#### **Expected Impacts**

This region deals with these sorts of rainfall totals regularly through the summer monsoon season. However, with this being the dry season there is the possibility that flash flooding and landslides could surprise populations, disrupting transport and agricultural activities.



## Australasia

Queensland, Australia – see *Tropical Cyclone section*.

## Additional information

Nil.

**Issued at:** 090820 UTC    **Meteorologist:** Brent Walker

**Global Guidance Unit**

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