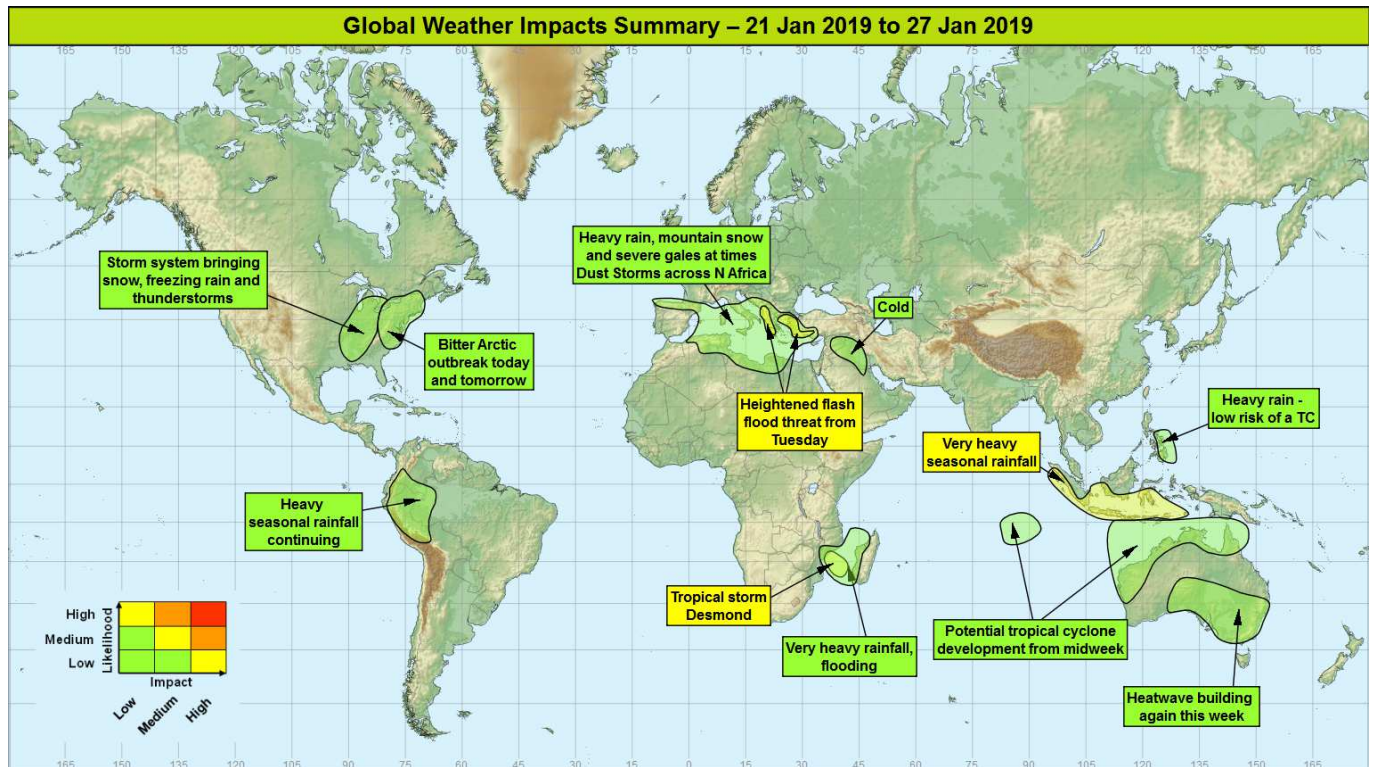


## Global Weather Impacts – Monday 21<sup>st</sup> to Sunday 27<sup>th</sup> January 2019

Issued on Monday 21<sup>st</sup> January 2019

### HEADLINES

- Tropical storm Desmond affecting coastal south-east Africa.
- Very unsettled through much of The Mediterranean this week.
- Heavy rain across Indonesia.



### DISCUSSION

#### Tropical Cyclones

##### Tropical storm Desmond - Mozambique Channel (Mozambique and Madagascar)

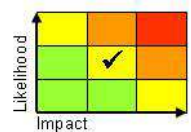
##### **Weather**

Tropical storm Desmond developed during Sunday and was currently located near 20.2S, 37.7E at 06Z. The storm was moving north-northwest at 12mph. Maximum sustained winds are around 40mph. The system is generating some heavy rain, as well as locally rough seas, and should it continue on its current track, Desmond will make landfall near the city of Quelimane, Mozambique, mid-morning on Tuesday. Desmond sits within a broader area of severe convection which is affecting eastern Mozambique and western Madagascar. Locally 200-400 mm of rainfall is possible in the week ahead, although January is usually the wettest month of the year in this area.

##### **Discussion**

Tropical storm Desmond is experiencing large amounts of shear and its centre is displaced from the storm's convection. It is in fact, barely a tropical storm. It is likely to weaken further through the next 12-24 hours, but remain in a broader environment of severe convection. This is due to a Rossby Wave approaching the area, and leading to a very unstable environment.

##### **Expected Impacts**



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Very high rainfall accumulations across the region will result in a heightened flood threat, with a lower likelihood of wind damage for eastern Mozambique. However, strong winds and very rough seas may cause some disruption to shipping through the Mozambique Channel.

## **Eastern Philippines**

### **Weather**

Heavy showers and thunderstorms are likely to affect the east of the Philippines for the next couple of days, particularly Mindanao and Visayas. Here some 300-600mm of rain is likely by the weekend. There is a low risk that a tropical cyclone could develop in association with the tropical depression in the area.

### **Discussion**

As a Rossby Wave couplet runs W across the area, the large area of convection to the E of the Islands is likely to come ashore, bringing frequent heavy showers and thunderstorms. Activity is likely to be maintained for much of the week by the MJO approaching from the W, and the passage of a Kelvin Wave to the S.

### **Expected Impacts**

Flash flooding as well as disruption to infrastructure in the area.



## **Timor Sea and Gulf of Carpentaria (Northern Australia and southern Indonesia)**

### **Weather**

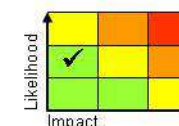
There is a low likelihood of one or more tropical cyclones developing through the second half of this coming week in or around the Timor Sea and Gulf of Carpentaria. Irrespective of development, above average rainfall is expected to affect parts of the far north of northern Australia, southern Indonesia and Timor Leste. There is a lower risk still that a tropical storm could develop by the end of the week leading to heavy rain spreading further south through western Australia.

### **Discussion**

A pair of equatorial Rossby waves moving slowly westward may become foci for tropical cyclone development, enhanced by the arrival of the MJO across the region later next week. There remain large model differences for location and intensity of development.

### **Expected Impacts**

Localised flash flooding and strong winds should a tropical cyclones develop.



## **Eastern Indian Ocean**

### **Weather**

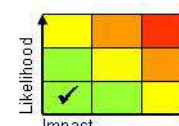
There is a low probability of a weak tropical cyclone forming to the south of the Equator in the eastern Indian Ocean from midweek.

### **Discussion**

A passing Rossby Wave couplet may reignite the moisture footprint of ex-Penny, leading to a largely inconsequential tropical storm.

### **Expected Impacts**

None expected as any development will remain over the open ocean.



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## Europe

### Southern and western Turkey, western and northern Greece, Albania, Montenegro, southern Bosnia and Herzegovina and far south of Croatia

#### Weather

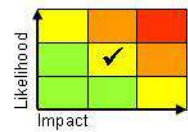
Heavy showers and thunderstorms will affect this region for much of the next week, with the peak activity being Tuesday to Friday when up to 100-150 mm of rain could fall in a 24 hour period. Through the next 7 days some places could see as much as 300 mm, with up to the average January rainfall falling in just a week. The mountains in this region will see heavy snowfall.

#### Discussion

The upper pattern will remain cyclonic through the next week across this region, with a more significant upper trough disruption resulting in more widespread and intense deep convection from tomorrow. The impacts from heavy rain could be enhanced by the already sodden ground in a region that has seen a very wet last few months.

#### Expected Impacts

Localised flash flooding. Some temporary transport disruption is also possible. Further snowfall over mountains is expected to produce an increased risk of avalanches.



### Much of southern Europe and the Mediterranean, along with northern Africa

#### Weather

This region will continue to see very unsettled weather through the next week with heavy showers or thunderstorms bringing 24 hour rainfall accumulation of up to 50 mm at times, although with strong winds and rough seas.

Through Wednesday, a deep depression will likely form in the central Mediterranean, with gales or severe gales (sustained winds of 39 to 54 mph) expected at times. These winds will build very rough seas across many parts of the Mediterranean from Wednesday, and likely lead to significant dust storms across north Africa. These conditions will continue through the rest of the week, slowly transferring eastwards.

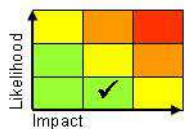
The system responsible for this will also produce heavy rain (up to 100 mm in 24 hours and 300 mm from Tuesday to Friday) across parts of northern Spain and the far southwest of France from tomorrow to Friday. The rain will fall as snow across higher ground, especially the Pyrenees (including Andorra) where very large snowfall of up to 150 cm could be seen.

#### Discussion

Significant trough extensions on the forward side of the major upper high in the E Atlantic will maintain the very unsettled theme. An unusually deep low is likely to develop between Sardinia and Italy by Thursday, with central pressure expected to bottom out around 975hPa.

#### Expected Impacts

Disruptive snowfall will affect Andorra and higher altitudes of northern Spain. There is also the potential for flash flooding across this region, with coastal flooding also a possibility due to very strong onshore winds. Dangerous sea conditions will pose a threat to marine transport. Dust storms may impact on the health of the local population.



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## North America

### Central and eastern USA and southeast Canada

#### **Weather**

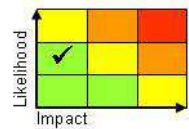
A major winter storm has pushed offshore and allowed a bitterly cold Arctic airmass to overspread the area. Maximum temperatures in New York are likely to be around -10°C with hazardous windchill likely. Temperatures recover somewhat tomorrow, before becoming much milder Wednesday. From mid-week another storm system is expected to develop across the Southern Plains before pushing quickly north across parts of the region. This is likely to bring a mix of snow and freezing rain initially, before milder air changes precipitation to rain for most areas. As the system clears by the end of the week, another Arctic airmass is likely to come south-east across the region.

#### **Discussion**

A frigid Arctic airmass has overspread much of the central and E US. A second storm system is expected to push N through the Great Plains Tuesday and Wednesday, before clearing offshore later Thursday. This secondary storm is signalled to have a lot of mild air associated with it, though the driving upper trough lags behind it somewhat precluding sig development. Wintry hazards on its N and NE flanks will be transient. Further, as the system clears, cold air will lag sufficiently behind it to preclude ppn turning to snow.

#### **Expected Impacts**

Dangerous windchill is likely through today and at first tomorrow. The storm system in mid-week will likely bring transient snow and freezing rain before rising temperatures lead to a thaw and the possibility of flooding. Cold air returns for the end of the week, with widespread ice being the main hazard.



### Central America and Caribbean

Nil significant.

## South America

### Southern Colombia, Ecuador, Peru and north-western Brazil

#### **Weather**

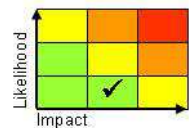
Above average rainfall in association with frequent showers and thunderstorms is expected through the next week. As seen in recent days, localised accumulations of 50-100 mm of rain can be expected in a few hours, with many areas seeing 150-250 mm of rain by the end of next week. This is expected to equate to close to the January average in places.

#### **Discussion**

The SSTs in the eastern tropical Pacific have cooled in the last weeks, and this is resulting in weakening convective rainfall to the west of the Andes mountain chain. The focus for the heaviest rain this coming week will be along and to the east of the Andes.

#### **Expected Impacts**

Increased likelihood of flash flooding and landslides from heavy rainfall.



## Africa

Mozambique Channel (Mozambique and Madagascar) – See *Tropical Cyclones* section.

Algeria – See *Europe* section.

## Middle East

### Syria and Iraq

#### **Weather**

Below average temperatures have become established across the region with widespread frost expected overnight away from coastal areas until midweek. Temperatures will gradually recover to normal values later in the week.

#### **Discussion**

A cold outbreak with origins over W Russia has overspread the area. Widespread night frosts and below average maxima are likely as a result.

#### **Expected Impacts**

Adverse health impacts on vulnerable populations exposed to below average temperatures.



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**Asia**

**Southern and central Philippines, Indonesia, Timor-Leste** – See *Tropical Cyclones* section.

**Much of Indonesia****Weather**

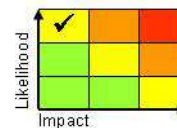
Seasonal rainfall is expected to be more intense and widespread than is usual over the next week. Up to 100 mm of rain could fall in a few hours, combined with locally strong winds or even a tornado. Rainfall totals of up to 350 mm could accumulate in places which is equivalent to around the average January rainfall in this region.

**Discussion**

A combination of a Kelvin wave recently moving through the region, a strengthening cross-equatorial northerly, enhanced low level ITCZ convergence and an emerging active MJO phase in the Indian Ocean has resulted in and will maintain enhanced seasonal rainfall through the coming week.

**Expected Impacts**

Localised flash flooding with some wind damage possible near severe thunderstorms. With the wet season progressing, there will be an increasing threat of landslides and river flooding as soil becomes increasingly saturated.

**Australasia**

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

**South-eastern Australia****Weather**

The historic heatwave that has affected much of southern and eastern Australia eased during the weekend. However, temperatures will rise again this coming week, quite likely reaching similar levels as this recent heatwave. Last Thursday night, a new all-time Australian overnight heat record was recorded in Noona, NSW with a minimum temperature of 35.9°C.

**Discussion**

High temperatures are not unusual for Australia in the last decade. The Bureau of Meteorology recently announced that 2018 was the 3<sup>rd</sup> warmest year on record. These heat-waves tend to develop over NW Australia (where the town of Marble Bar has now exceeded 41 °C for over a month) then spread south and east across the interior, then on to affect the more populated areas of south-eastern Australia.

**Expected Impacts**

Impact on health of vulnerable populations. Impact on supply of water and the power due to excessive demands. Melting of roads and buckling of railways impacts infrastructure, whilst wildfires become more probable.

**Additional information**

Nil.

**Issued at:** 210800 UTC **Meteorologist:** Jason Kelly

**Global Guidance Unit**

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