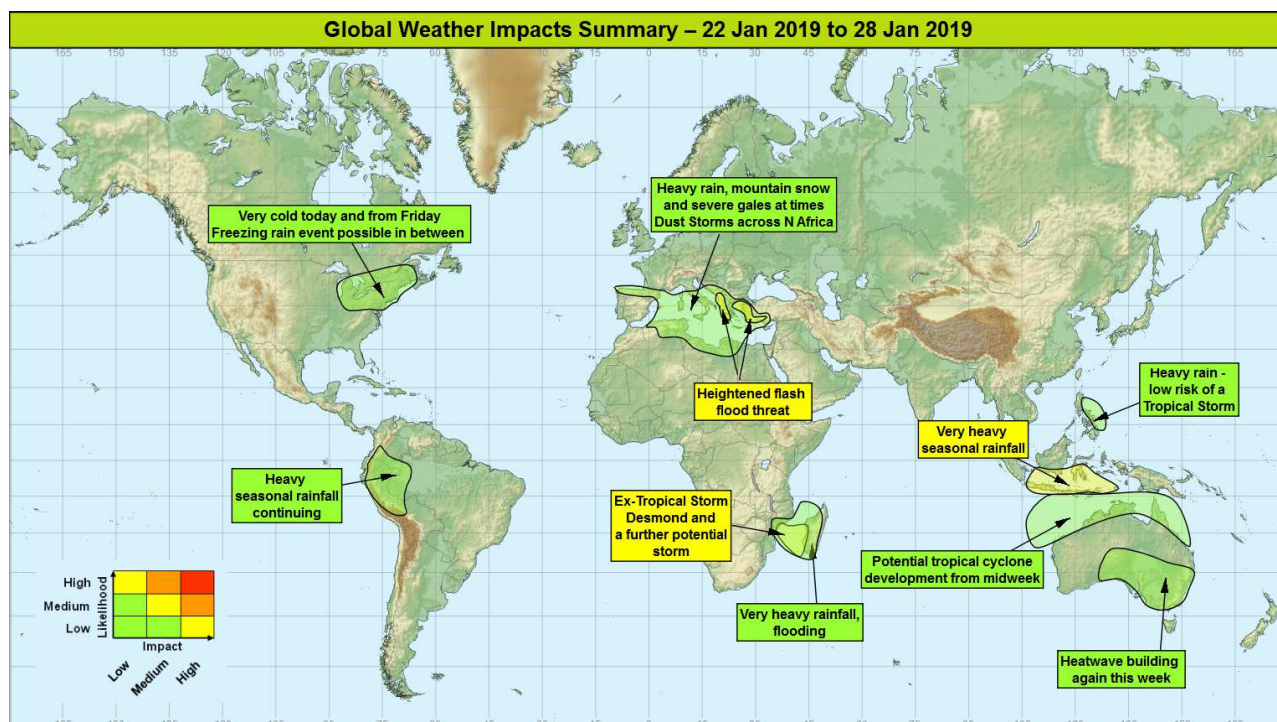


## Global Weather Impacts – Tuesday 22<sup>nd</sup> to Monday 28<sup>th</sup> January 2019

Issued on Tuesday 22<sup>nd</sup> January 2019

### HEADLINES

- Ex-Tropical storm Desmond and potentially a further tropical feature affecting coastal south-east Africa.
- Very unsettled through much of the Mediterranean this week.
- Heavy seasonal rainfall across parts of Indonesia.
- Very high temperatures returning to parts of Australia this week.



### DISCUSSION

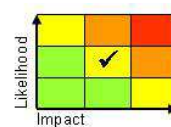
#### Tropical Cyclones

#### Ex-Tropical storm Desmond, plus a further potential Tropical Storm development - Mozambique Channel (Mozambique and Madagascar)

##### **Weather**

Tropical storm Desmond developed during Sunday across the Mozambique Channel and made landfall close to the Marromeu National Reserve, central Mozambique, yesterday evening around 21Z. At this time maximum sustained winds were around 40 mph, but then quickly decayed once overland as it moved gradually northwestwards. Although not a wind event this system is likely to continue to generating some heavy rain along its track during the next 48 hours. Desmond sits within a broader area of severe convection which is affecting eastern Mozambique and western Madagascar. There is the potential for a further tropical storm to develop in the next day or so across the Mozambique Channel. However if this system forms it is expected to track southeastwards towards the south of Madagascar by the weekend. This would enhance the rainfall across the region, especially across W'ern Madagascar, plus lead to some rough seas. 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**



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

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Tropical storm Desmond was barely a tropical storm and decayed further once overland. However this system remains within a broader environment of severe convection across this region. The very unstable environment with enhanced by the passage of a Rossby Wave in the last day or so. There is an increasing signal for a further tropical storm development in the coming days across the Mozambique Channel. However unlike Desmond this is expected to track southeastwards and to the south of Madagascar by the weekend.

## **Expected Impacts**

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

## **Eastern Philippines**

### **Weather**

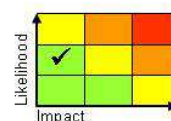
Heavy showers and thunderstorms are likely to affect the east of the Philippines this week. These became organised into a Tropical Depression yesterday, and named 'Amang' by the Philippine Met Service (PAGASA). Associated heavy rain is expected to particularly affect southeastern Luzon where 150-200 mm could fall by the end of the week. There is a very low likelihood that the tropical depression could develop into a tropical storm today (Tuesday).

### **Discussion**

As a Rossby Wave couplet runs westwards across the area, the large area of convection to the east 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 south.

### **Expected Impacts**

Flash flooding is the main threat from this system.



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

### **Weather**

There is a low likelihood of one or more tropical cyclones developing in or close to the Timor Sea and Gulf of Carpentaria during the rest of the week. 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 moving towards northwestern 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 in the coming week. There remain large model differences for location and intensity of any development.

### **Expected Impacts**

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



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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**

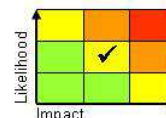
Heavy showers and thunderstorms will affect this region for much of the coming week. Potentially 100-150 mm of rain could fall in a 24 hour period, mainly along with coastal fringes. Through the next 7 days some places could see as much as 300 mm, with this being more than the average January rainfall falling in just a week. The mountains in this region will see heavy snowfall.

**Discussion**

The upper pattern will remain cyclonic this week across this region, with a more significant upper trough disruption resulting in more widespread and intense deep convection. 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**

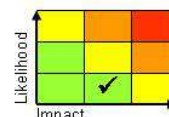
This region will continue to see very unsettled weather through the week with heavy showers or thunderstorms. 24 hour rainfall accumulation of up to 75 mm, along with very strong winds and rough seas. During Wednesday, a deep depression will likely form across the central Mediterranean, with associated gales or severe gales (sustained winds of 39 to 54 mph). These winds will build very rough seas across many parts of the Mediterranean, and likely lead to significant dust storms across north Africa. These conditions will transfer eastwards towards Greece and Turkey by the weekend then beginning to dissipate as they move into the eastern Mediterranean. Heavy rain (up to 100 mm in 24 hours and 250 mm in places through the week) is also expected across parts of northern Spain and the far southwest of France during this period. 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 a central pressure around 975hPa at its deepest.

**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****Northeastern USA and southeast Canada****Weather**

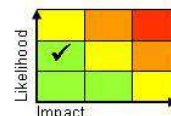
A major winter storm has now transferred out into the Atlantic and is weakening. At the same time the bitterly cold and strong Arctic airmass winds will gradually subside and move away from the northeastern USA and southeastern Canada. Maximum temperatures in New York were around -10°C yesterday with a significant wind-chill. Temperatures are set to recover today (Tuesday), before becoming much milder by Wednesday. However yet another storm system will develop across the Southern Plains today (Tuesday), before transferring quickly northeastwards across parts of the region. This is likely to bring a mix of snow and freezing rain initially, before milder air transitions precipitation to rain for most areas. As the system clears by the end of the week, another Arctic airmass is likely to move southeastwards across the region.

**Discussion**

An Arctic airmass has covered much of eastern USA in the last few days. A developing storm system is expected to push northeast through the Great Plains today and on Wednesday, before clearing offshore close to Boston later on Thursday. Much milder air is associated with this storm and will replace the very cold conditions across the region from mid-week. Wintry hazards on its northern flank should be transient, but as the system clears, some wintry ppn is likely over the higher ground inland, but is not expected to be significant.

**Expected Impacts**

A dangerous wind-chill is likely at first today. The storm system in mid-week will likely bring transient snow and freezing rain before rising temperatures lead to a thaw. 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 northwestern 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 few 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 and Libya** – See *Europe* section.

**Asia**

**Eastern Philippines, Indonesia, Timor-Leste** – See *Tropical Cyclones* section.

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

Seasonal rainfall is expected to be more intense and widespread than is usual over the coming 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 active MJO phase 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.

**Southeastern Australia****Weather**

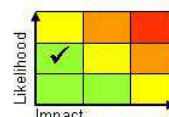
The historic heatwave that has affected much of southern and eastern Australia eased during the weekend. However, temperatures will rise again this coming week. Highest temperatures are expected across southeastern Australia by Friday and quite likely reaching similar levels as this recent heatwave. Last Thursday night, a new all-time Australian overnight heat record was recorded in Noona, NSW with a minimum temperature of 35.9°C. Over the weekend maximum temperatures dropping by 10-15°C from the low-mid 40's°C and back to more normal values for the season.

**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. A cold front is expected to move from the south during Saturday bringing temperatures back to more normal values.

**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:** 220805 UTC **Meteorologist:** Tony Wardle

**Global Guidance Unit**

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