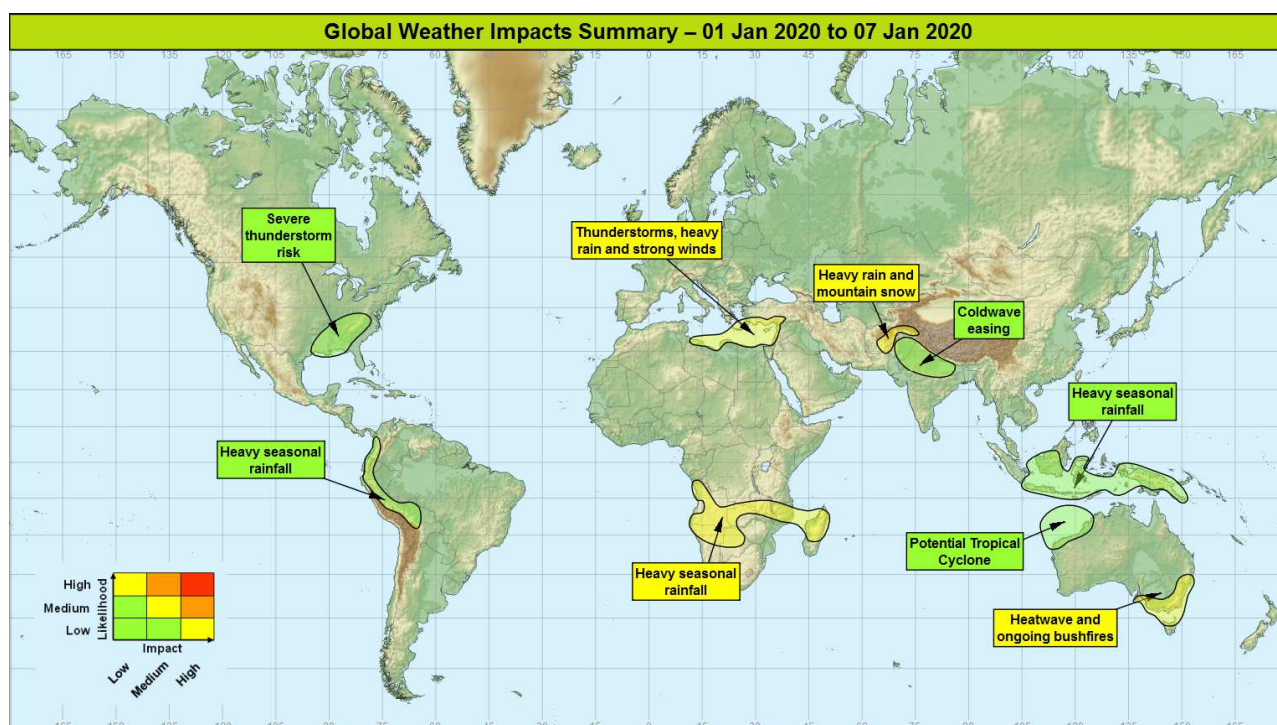


**Global Weather Impacts – Wednesday 1<sup>st</sup> January to Tuesday 7<sup>th</sup> January 2020**

Issued on Wednesday 1<sup>st</sup> January 2020

**HEADLINES**

- Heavy rain and thunderstorms affecting parts of the east Mediterranean and adjacent African coast.
- Fire weather conditions hindering containment of ongoing bushfires in southeast Australia.
- Heavy seasonal rainfall in parts of southern Africa.



**DISCUSSION**

**Tropical Cyclones**

There are no active impactful tropical cyclones at present. The following area is being monitored for potential:

**South-east Indian Ocean Weather**

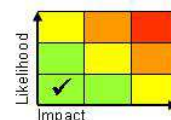
A tropical cyclone may form this coming weekend or early next week, with the potential to impact the north coast of Western Australia.

**Discussion**

All 31/12Z global models assessed indicated the potential for tropical cyclogenesis in this region, with some developing quite a strong system early next week. There is also a weak to moderate signal from ensemble output. The track and intensity of any potential development is not possible to gauge at this time, but there is potential for a landfall along the northern coast of Western Australia.

**Expected Impacts**

Potential tropical cyclone impacts should a tropical cyclone make landfall in a populated part of the coastline of Western Australia.



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

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## Europe

### Eastern Mediterranean including southern Turkey, Crete, Cyprus, western Syria, Lebanon, Israel, and northern Libya and Egypt

#### **Weather**

Further spells of very unsettled weather (thunderstorms) are expected over the next 7 days. Rainfall is expected to be highly variable but some places could receive up to 200 mm over the week, with the potential for 50-100 mm falling in a few hours. Strong to gale force winds will build rough seas at times through the Aegean Sea. Thunderstorms may spawn a few waterspouts/tornadoes in the eastern Mediterranean, including Cyprus later this week.

#### **Discussion**

PMSL in the eastern Med will be generally lower than normal over the next 7 days, as a number of trough extensions dive in to reinforce the broad surface circulation generated by recent events. This will provide ideal, unstable conditions for widespread thunderstorm development; these being steered onto coastlines by the variable flow direction. Should the troughs disrupt, as is signalled later in the week, the temporary equivalent barotropic structure would increase the risk of waterspouts or tornadoes accompanying the thunderstorms.

#### **Expected Impacts**

Increased likelihood of flash flooding and landslides. Localised damage to property and infrastructure is also possible from lightning and waterspouts moving onshore. Dangerous sea conditions are likely at times through the Aegean Sea.



## North America

### Southeastern USA

#### **Weather**

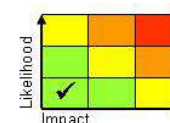
Another area of low pressure is expected to bring further heavy rain and thunderstorms to the southern and eastern states from Thursday, with the potential for a few storms to become severe bringing a threat of damaging winds and isolated tornadoes.

#### **Discussion**

Following the currently clearing winter storm (named "Gage" by The Weather Channel), a further strong pattern amplification takes place towards the end of the week generating a similar low pressure system, although in this case the primary hazard currently looks to be thunderstorms in the warm air mass over SE parts of the US. Although MLCAPE seems modest, moisture return and favourable shear profiles ahead of the cold front should contribute to a good environment for organised severe convection, including supercells.

#### **Expected Impacts**

Flash flooding is possible, as well as localised damage to property and infrastructure from strong winds and lightning.



## Central America

**Panama** – See *South America* section.

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**South America****Panama, western Colombia, Ecuador, Peru and Bolivia****Weather**

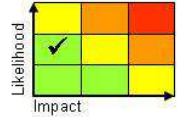
Continued heavy seasonal rainfall in the form of more widespread / frequent thunderstorms will affect areas close to the Andes Mountains from Bolivia northwards through the next week. Up to 300 mm of rainfall is expected in places (around twice the average December rainfall).

**Discussion**

With the South American Monsoon now extending well southward, daily rounds of showers and thunderstorms are expected to form to the west of the Andes of Colombia and Ecuador, and to the east of the Andes further south. The region highlighted has seen above average rainfall during the past weeks.

**Expected Impacts**

Enhanced likelihood of flash flooding and landslides

**Africa****Madagascar, Mozambique westwards to Angola and northern Namibia****Weather**

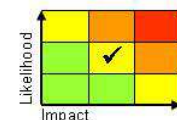
More widespread / frequent thunderstorms than is usually expected will affect this region of Africa at times through the next week, producing up to 300 mm of rainfall in places during the next 7 days (around twice the average December rainfall). Some parts of western Madagascar could see over 400mm.

**Discussion**

Strong model signal for the ITCZ to be active across this region of Africa through the next week, in part likely due to ERW activity (as highlighted on the tropical analysis).

**Expected Impacts**

There will be an enhanced likelihood of some flash flooding and landslides given the already wet conditions.

**Middle East****Western Syria, Lebanon and Israel** – See *Europe* section.**Asia****Afghanistan and northwestern Pakistan****Weather**

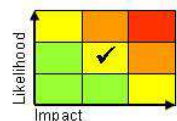
A spell of heavy rain is likely through Wednesday and Thursday with some locations (including Kandahar in Afghanistan) at risk of receiving 50-75 mm of rain over two days. This would be equivalent to a third of the annual average rainfall (190 mm) falling in 48 hours. Further north, heavy snow is likely to fall above 1800 metres (including the area surrounding Kabul).

**Discussion**

A diffluent upper trough associated with a strong jet left exit is expected to engage the weak baroclinicity across the country during Wednesday, generating heavy precipitation over the Hindu Kush and Central Highlands of Afghanistan. Warm air drawn northeastwards on the forward side of weak cyclogenesis initiated by said jet left exit, from the Arabian Peninsula, will destabilise across the south with embedded thunderstorms.

**Expected Impacts**

The main hazard is expected to be flash flooding causing property and infrastructure damage, as well as posing a risk to life. Where heavy snow falls it will cause transport disruption, increase the risk of avalanche in areas where terrain is steep and unusually low temperatures will pose a risk to vulnerable population groups.



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## North India and eastern Pakistan

### **Weather**

Below average temperatures across northern India and eastern Pakistan are slowly recovering. Over the previous weekend, several locations recorded minima close to freezing, and on Monday New Delhi had its coldest day since records began in 1901. The cold wave has been accompanied by areas of dense fog and much poorer than normal air quality.

### **Discussion**

The succession of western disturbances originating from the Mediterranean and reaching south Asia has resulted in a protracted period of below average temperatures across northwestern parts of the Indian subcontinent. The colder than average temperatures have also contributed to much poorer than average air quality due to a stronger surface inversion and increased demand for heating.

### **Expected Impacts**

Poor visibility has already, and will continue to, affect air, road and rail networks in the region. Below average temperatures are also likely to have a human health impact to vulnerable people exposed to near freezing overnight temperatures.



## Central and eastern Maritime Continent

### **Weather**

Scattered heavy showers and thunderstorms will be more frequent than usual over the next week. Some places are likely to receive up to 100-150 mm per day although rainfall amounts will be highly variable from location to location.

### **Discussion**

Anomalously warm SST's and an active ITCZ are key ingredients for the consistent signal for above average rainfall in this part of the world from the models over the past few days. Whilst we are entering the wet season for this part of the world, impacts from flash flooding and landslides have already been reported in the past week in Indonesia.

### **Expected Impacts**

Increased likelihood of flash flooding and landslides.



## Australasia

### Southern and eastern Australia

### **Weather**

Numerous bush fires continue across parts of Victoria, eastern New South Wales, south-eastern Queensland and Australian Capital Territory with dry conditions persisting across much of the region. Following a respite from the severe heat through the middle of this week, a further burst of heat from the northwest looks likely, with maximum temperatures rising above 45°C in some places (15°C above average).

### **Discussion**

A cold front moving across southeastern Australia on Tuesday eased somewhat the dangerous fire conditions ahead of it from recent days. Rainfall along the front did not provide much respite; the sheer size of wildfires across the Blue Mountains in New South Wales will mean considerable rainfall will be required to limit further progress. A return of further hotter conditions looks likely towards the mid to latter part of this week.

### **Expected Impacts**

The sheer size of many ongoing fires will continue to produce large amounts of small particulates that will contribute to hazardous air quality for several weeks to come, affecting heavily populated areas such as Sydney.



## Additional Information

Nil.

**Issued at:** 010315 UTC **Meteorologists:** Laura Ellam / D J Harris

**Global Guidance Unit**

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