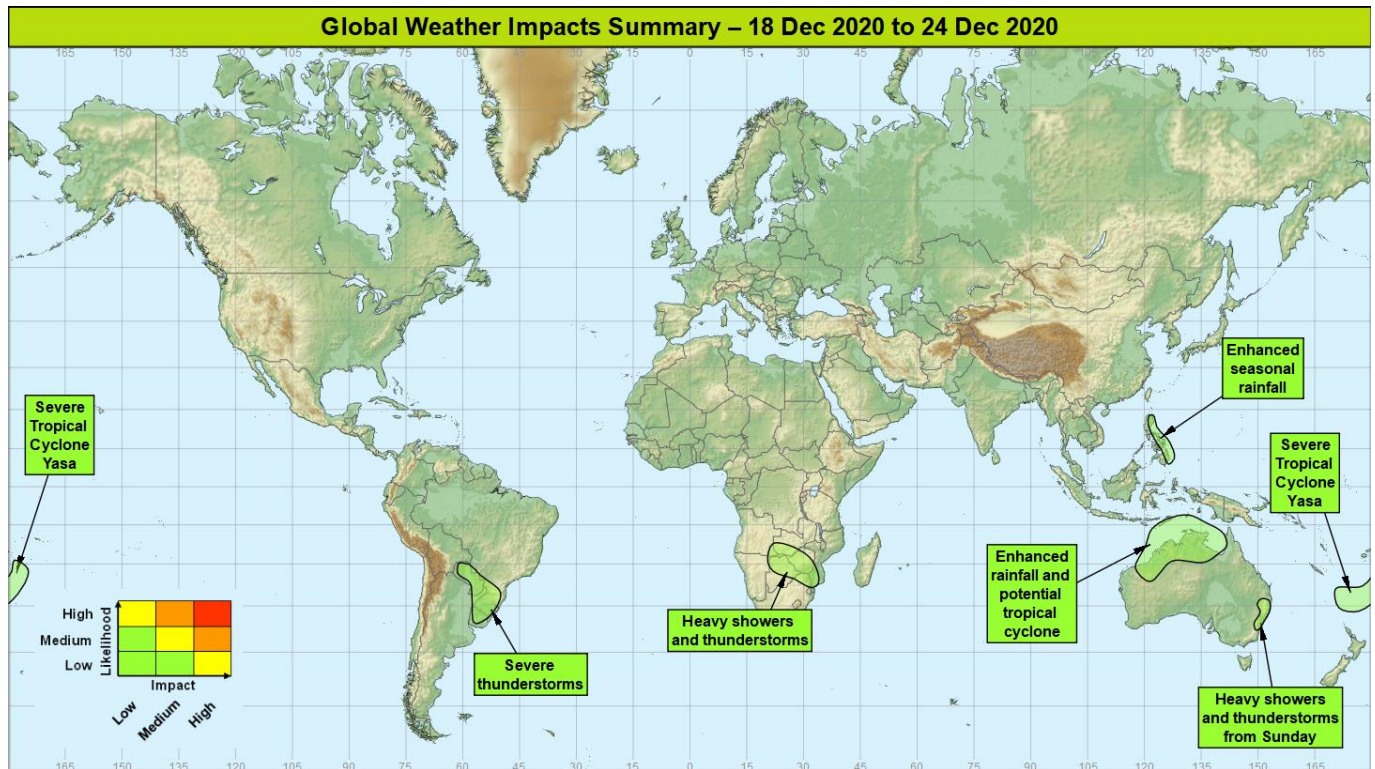


## Global Weather Impacts – Friday 18<sup>th</sup> to Thursday 24<sup>th</sup> December

Issued on Friday 18<sup>th</sup> December 2020

### HEADLINES

- Severe tropical cyclone Yasa will continue to move away from Fiji, and is expected to remain over open waters for the next several days.



### Tropical Cyclones

#### Severe Tropical Cyclone Yasa (Fiji)

##### Weather

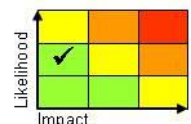
Severe Tropical Cyclone Yasa, named on Sunday, is the first tropical cyclone of the season in the South Pacific. This system crossed Fiji yesterday (Thursday) and has since cleared to the southeast of the islands overnight. It will track southeastward today (Friday) before turning southward during Saturday, weakening as it does so. The core of strongest winds is expected to miss Tonga although heavy rain will affect the island chain; 30-50mm is expected, this over a third of the average rainfall for the month of December.

##### Discussion

Yasa was a very powerful storm as it passed across Fiji yesterday and is gradually weakening as it continues to be steered southeast. Initially moving toward Tonga, Yasa is expected to curve southward and remain to the west of Tonga, weakening further across lower SST's.

##### Expected Impacts

Some flooding impacts may be experienced across Tonga as Yasa tracks well to the west



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

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The following areas are also being monitored for tropical cyclone development that may impact land over the coming 7 days.

## **Timor Sea (Northern and northwestern Australia)**

### **Weather**

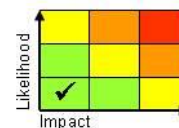
An area of enhanced shower and thunderstorm activity in the monsoon trough across the northwest of Australia may consolidate into a tropical low close to the northwestern coastline of Australia later this weekend and into early next week. There is a low risk that this system could strengthen into a tropical storm prior to moving inland. Regardless of development heavy rainfall is expected across this sparsely populated region with many locations seeing 200-300mm through the coming week, locally more if a tropical cyclone does form.

### **Discussion**

An Equatorial Rossby Wave (ERW) will move gradually west and enhance vorticity along the monsoon trough. This and the enhanced convection associated with it could consolidate and potentially allow a tropical storm to form in this region. If this process happens quickly a cyclone could form across the Timor Sea on Sunday or Monday. Thereafter this system decaying as it moves inland next week.

### **Expected Impacts**

Due to the area being sparsely populated, impacts will be minimal, but flash and riverine flooding are possible, along with storm surge and strong winds.



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## **Europe**

Nil.

## **North America**

Nil.

## **Central America and Caribbean**

Nil.

## **South America**

### **Paraguay, northern Argentina, Uruguay and southern Brazil**

### **Weather**

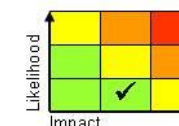
Further bouts of heavy showers and severe thunderstorms are likely to affect this region at times in the next 3 or 4 days. Rainfall totals will vary over short distances, but in the wettest locations 50-75mm (locally up to 100mm) of rain could fall in a short period. The Paraguayan capital Asuncion sees 150mm of rainfall on average through December. Large hail and tornadoes are also possible.

### **Discussion**

Lobes of forcing acting on the resident warm plume will trigger repeated bouts of convection through the coming days. Extreme amounts of available CAPE (locally in excess of 3000J/kg) will lead to some very intense and long-lived cells.

### **Expected Impacts**

The main impacts are likely to be from flash flooding. Large hail, tornadoes and very strong winds are additional hazards, and may lead to impacts on transport, travel and crops.

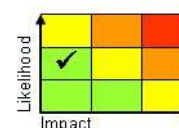


## **Africa**

### **Areas of southern-central Africa**

### **Weather**

The rainy season continues across this region with further enhanced shower and thunderstorm activity over the coming week. Showers will be capable of bringing 50-100mm of rainfall in a short duration with some locations seeing as much as 150-250mm during the week. Typical December rainfall totals in this region are around (200-250mm).



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## Discussion

As is typical for the time of year the plume of tropical air has been drawn southwards across the region of high topography, with weakening mid-latitude fronts (and their moisture footprints) making some northwards progress across the far south of the continent. This will lead to diurnal rounds of deep convection, aided by enhanced surface convergence close to the frontal zones. Profiles tend to show low shear, high precipitable water suggesting the heavy rainfall and lightning the most probable hazards.

## Expected Impacts

Some flash and minor riverine flooding expected with an enhanced risk of landslides. Lightning will be an additional hazard.

## Middle East

Nil.

## Asia

### Parts of The Philippines

#### Weather

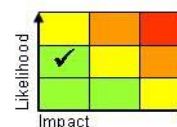
Seasonal heavy showers and thunderstorms will be more frequent and intense than usual in the coming 4 or 5 days, with the most at-risk regions highlighted. Rainfall totals of 50-100mm could occur over the course of a few hours, with some locations seeing 250-500mm of rainfall by early next week. Typically this region sees around 300-400mm of rainfall during the whole of December. Rainfall is likely to return to more normal values by Tuesday or Wednesday.

#### Discussion

Within the context of the La Nina background state which favours above-average convection across this region, the passage of at least one Kelvin Wave and an Equatorial Rossby Wave (ERW) couplet through this area will lead to further enhanced convection. PWAT is in excess of 60mm with a high skinny CAPE environment suggestive of heavy rainfall being the primary hazards.

#### Expected Impacts

Potential for flash flooding and an enhanced risk of landslides.



## Australasia

**Fiji** – See *Tropical Cyclones* section.

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

### Southeast Queensland and northeast New South Wales, Australia

#### Weather

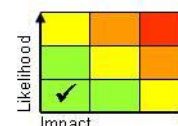
Following recent disturbed weather yet another bout of unsettled weather is likely across this region later in the weekend and into next week. Daily rainfall totals of 20-40mm are likely across quite a large area, whilst some places may see over 100mm in association with heaviest showers.

#### Discussion

A mid-latitude trough crossing central and southern Australia will engage warm air being drawn south across this region. Heavy showers and thunderstorms will result, with the distribution dictated by the progression of the mid-latitude trough.

#### Expected Impacts

Increased risk of flash and riverine flooding.



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**Additional information****Northern India, Pakistan, Afghanistan and parts of eastern China**

Urban pollution will continue to generate high levels of air pollution in this area over the coming months. Hazardous air quality has continued to be reported in cities in the area including Delhi, Varanasi, Lahore, and Kabul.

**Large parts of central and eastern Asia**

Very cold air from Siberia/Russia will affect these areas through the coming week, with temperatures 5-10°C below average, with some very cold nights. This will impact upon vulnerable members of the population lacking shelter and heating, particularly in places like Pakistan and northern India.

**Issued at:** 180825UTC**Meteorologists:** Tony Wardle/David Oliver**Global Guidance Unit**

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

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