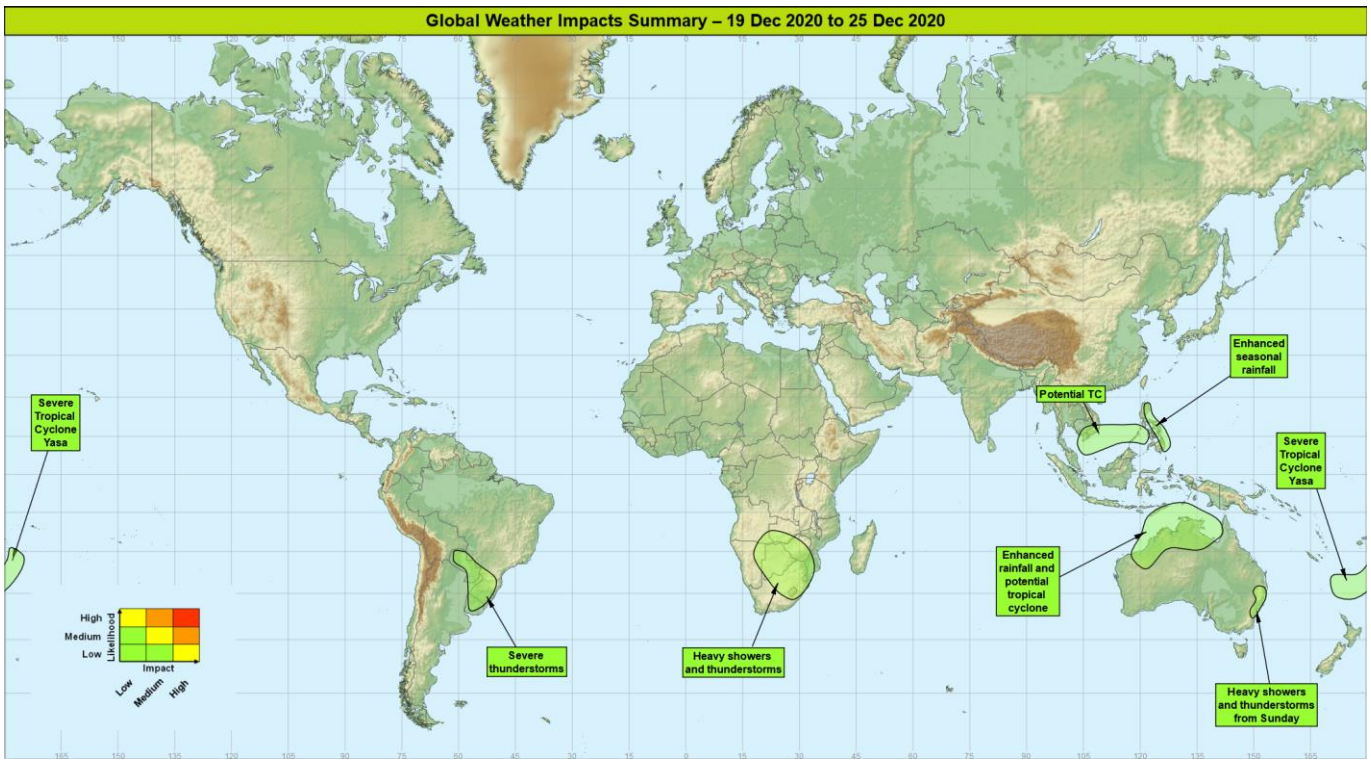
Daily Global Weather Impacts Assessment

Global Weather Impacts – Saturday 19th to Friday 25th December

Issued on Saturday 19th December 2020

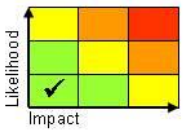
HEADLINES

- Further intense thunderstorms across parts of South America and eastern Australia.
- Tropical Cyclone Yasa continues to move away from Fiji.



Tropical Cyclones

Tropical Cyclone Yasa (South Pacific)



Weather

Yasa continues to weaken as is moves south over the south Pacific Ocean. Now lying well to the west of Tonga the storm is no expected to directly impact any land before likely dissipating this weekend. The outer band of the system could bring some heavy rain and gusty winds to Tonga and outlying small islands of Fiji for a time today.

Discussion

Yasa was a very powerful storm as it passed across Fiji on Thursday but is now much weakened by a combination of lower SSTs and increased upper level shear. Extratropical transition is likely this weekend.

Expected Impacts

Some minor impacts possible across Tonga and other small islands due to flash flooding.

This forecast may be amended at any time
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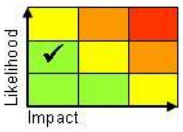
The following areas are also being monitored for tropical cyclone development that may impact land over the coming 7 days.

Sula Sea (north of Borneo)



Weather

A tropical depression has formed in the Sula Sea in between northern Borneo and The Philippines. This feature is likely to track west over the weekend across Palawan, then on into the South China Sea. Some modest strengthening is likely and this system may well become a tropical storm. The system is expected to maintain a broadly westerly course toward the southern Indochina Peninsula around midweek, but is not expected to develop significantly.

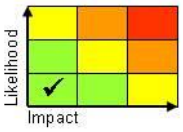
Discussion

An unfavourable vertical shear environment is likely to limit development of this system as it most likely tracks steadily west over the coming days. Models diverge as to its eventual destination, most taking it south of Vietnam toward the Gulf of Thailand.

Expected Impacts

Very heavy rainfall and gusty winds likely across Palawan over the next couple of days. 100 to 150 mm is possible in places which is around the December average for this region.

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 over the weekend, although this is considered a low risk. 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

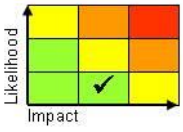
Nil.

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 few days before conditions improve from the south next week. 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

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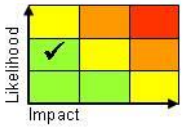
Lobes of forcing acting on the resident warm plume will trigger repeated bouts of convection through the coming days. Extreme amounts of available CAPE (locally in excess of 3000J/kg) will lead to some very intense and long-lived cells.

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. Parts of southern Brazil around Santa Catarina have been particularly affected by flash floods and landslides in recent days.

Africa

Areas of south and south-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).

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. There is also a possibility of cyclogenesis across South Africa next week which would further enhance rainfall in the southern part of the highlighted area, and could also produce some strong winds.

Expected Impacts

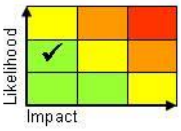
Some flash and minor riverine flooding expected with an enhanced risk of landslides. Lightning will be an additional hazard. Risk of strong and gusty winds.

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 few 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 a further 250-400mm 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. The developed tropical depression over the Sula Sea will also strengthen flow into these coasts, further enhancing activity. 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

Tonga and outlying island groups to the west– See *Tropical Cyclones* section.

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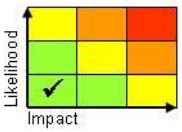
Northern and northwestern Australia – See *Tropical Cyclones* section.

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: 190600UTC **Meteorologists:** Tony Wardle / Mark Sidaway **Global Guidance Unit**

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