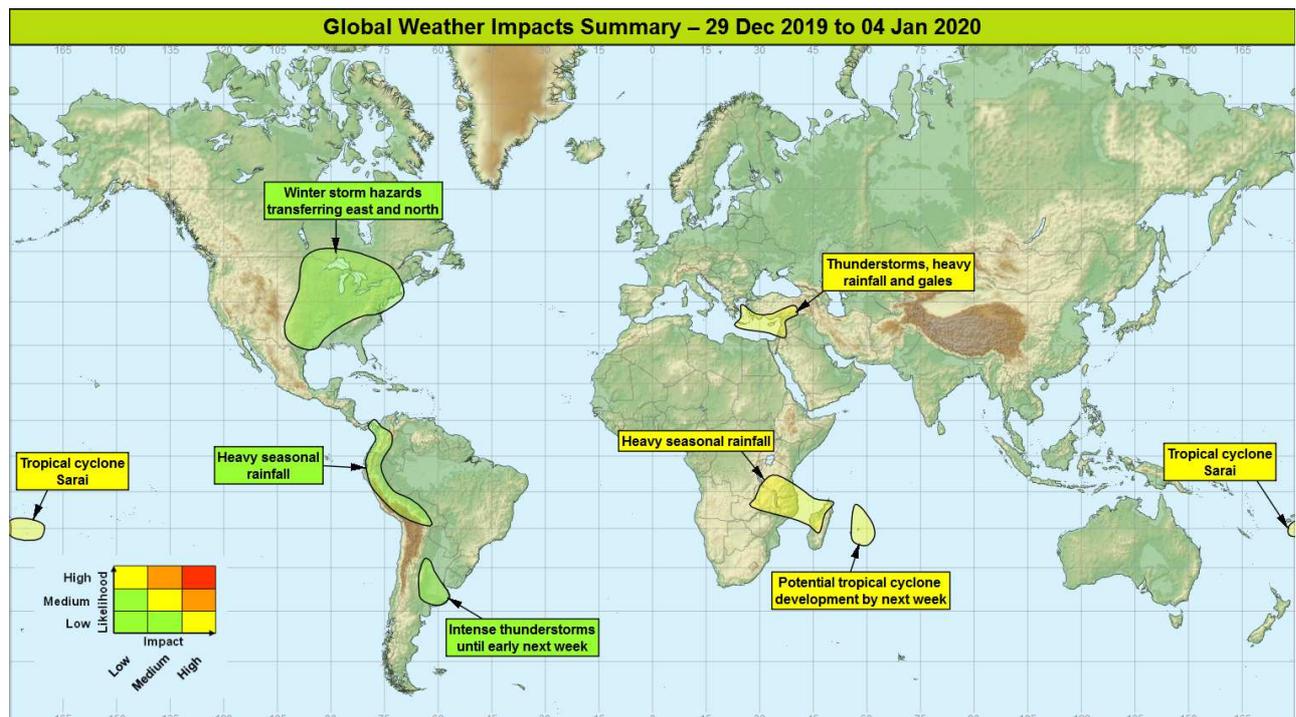


Global Weather Impacts – Sunday 29th December 2019 to Saturday 4th January 2020

Issued on Sunday 29th December 2019

HEADLINES

- Very unsettled across the eastern Mediterranean.
- Tropical cyclone Sarai in the southwest Pacific.
- Potential tropical cyclone developing in the southwest Indian Ocean next few days.
- Very heavy seasonal rainfall for parts eastern Africa.



DISCUSSION

Tropical Cyclones
Tropical Cyclone Sarai
Weather

Tropical Cyclone Sarai was located just south of Fiji on Sunday morning, with sustained winds of 55 to 70 mph. Sarai is likely to continue to track gradually eastwards, maintaining a similar strength, as it tracks east towards or across Tonga.

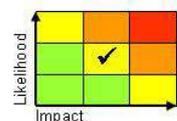
As well as the tropical storm force winds, up to 400-600mm of rainfall is likely to be associated with this cyclone (2 to 3 times the average December rainfall), with very rough sea states around the islands.

Discussion

The GM tracks Sarai more quickly east across Tonga through the first part of this coming week, but the EC and GFS continue to have a much slower eastward movement of this system. These model differences look to be associated with the interaction, or not, of Sarai with a higher latitude complex upper trough / vortex.

Expected Impacts

Flash flooding is possible, along with some structural wind damage. There is also the potential for minor storm surge flooding too. However, there is a decreasing threat to Fiji now.



This forecast may be amended at any time

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The following area is being monitored for potential development:

Southwest Indian Ocean – Reunion, Mauritius and Rodrigues

Weather

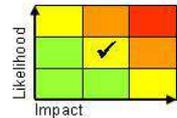
There is an increasing likelihood of a tropical cyclone developing in the southwestern Indian Ocean during the next 24-36 hours, likely tracking close to Mauritius and / or Rodrigues before tracking away southwards towards midweek. Up to 400 mm of rainfall is likely to be associated with this system (around 4 times the December average rainfall), along with tropical storm force winds and very rough seas. Reunion looks likely to avoid the worst conditions from this system.

Discussion

Fairly consistent model signal for a modest tropical cyclone development to take place during the next few days as it tracks south to affect one or more of the Mascarene Islands during the next 2 or 3 days, although the exact track remains fairly low confidence.

Expected Impacts

Flash flooding and an enhanced threat of landslides, with a lower likelihood of storm surge flooding.



Europe

Eastern Mediterranean, southern Turkey, Crete, Cyprus, western Syria, Lebanon and Israel

Weather

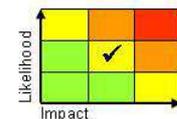
Periods of widespread / frequent thunderstorms will affect this region at times through the next week, with peak activity likely today (Sunday) and Monday. Up to 200 mm of rainfall could accumulate in places through the next 7 days (up to twice the December average rainfall), with the potential for 50-100 mm of rain in just 24 hours during the peak activity period. Strong or gale force winds will build rough or very rough seas at times, with the potential for severe gales Etesian winds (northerly winds) affecting the Aegean Sea and Crete through the next few days.

Discussion

A persistent cyclonic upper pattern will result in periods of deep convection across this region through the next week. Organised thunderstorm activity is possible due to large CAPE and favourable vertical wind shear.

Expected Impacts

Flash flooding and landslides are an enhanced likelihood. Dangerous seas conditions likely at times. Possibly wind damage for Crete, along with dangerous sea conditions.



North America

Central and eastern USA along with southeastern Canada

Weather

An area of low pressure and associated active frontal system developed across central parts of the USA on Saturday and will continue to transfer east and northeast across much of the eastern part of North America through the next few days.

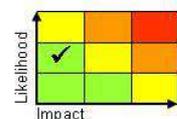
Northern areas will see a mixture of heavy snow (up to 25-40 cm) and freezing rain, with southern parts of the region seeing heavy rainfall (up to 50-100 mm in 24 hours) and thunderstorms. Much more settled conditions will follow by midweek.

Discussion

A major long wave upper trough has engaged a warming plume from the south, resulting in a cyclogenesis event that will be steered northeast across the eastern part of the continent.

Expected Impacts

Power and transport network issues are likely in association with winter hazards. Flash flooding is possible in the south due to thunderstorms.



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Central America

Panama – see *South America* section

South America

Panama, western Colombia, Ecuador, Peru and Bolivia

Weather

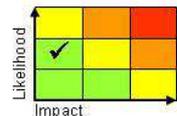
Continued heavy seasonal rainfall in the form of more widespread / frequent thunderstorms will affect areas close to the Andes Mountains from Bolivia northwards through the next week. Up to 300 mm of rainfall is expected in places (around twice the average December rainfall).

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

Flash flooding and landslides are likely.



Northern Argentina

Weather

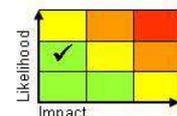
Intense thunderstorms are expected at times through the next 3 days bringing torrential rain (50-100 mm of rain could fall in a few hours), large hail, frequent lightning and strong wind gusts.

Discussion

The airmass over northern Argentina will be very unstable until early next week with forecast profiles showing CAPE of ~3000J/kg and significant wind shear that will allow for the development of severe thunderstorms and MCS events.

Expected Impacts

Flash flooding along with the potential for property and crop damage from strong wind and large hail. Lightning strikes could lead to power outages in places.



Africa

Reunion, Mauritius and Rodrigues – See *Tropical Cyclones* section

Madagascar, Mozambique, Tanzania, Malawi and Zambia

Weather

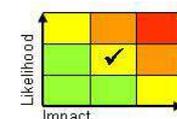
More widespread / frequent thunderstorms than is usually expected will affect this region of eastern Africa at times through the next week, producing up to 300 mm of rainfall in places during the next 7 days (around twice the average December rainfall).

Discussion

Strong model signal for the ITCZ to be active across this region of Africa through the next week.

Expected Impacts

There will be an enhanced likelihood of some flash flooding and landslides.



Middle East

Western Syria, Lebanon and Israel – see *Europe* section

Asia

Nil.

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Australasia
Fiji and Tonga – see *Tropical Cyclone* section

Additional Information

Southern and eastern Australia

Numerous bush fires continue across parts of Victoria, eastern New South Wales, southeastern Queensland and Australian Capital Territory with dry conditions persisting across much of the region.

Heatwave conditions are likely to continue across much of this region through much of the next week, with maximum temperatures rising above 40 degrees Celsius (10 degrees Celsius above average).

A cold front is likely to progress northeast across southeastern Australia early next week, bringing a spell of strong winds for a time (mostly likely Monday and Tuesday). There is also the potential for some rain from frontal thunderstorms, but some dry thunderstorms are also likely which could spark new bush fires.

So conditions are likely to remain conducive for further bushfire generation or spread during the next week.

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

Issued at: 290300 UTC **Meteorologists:** Paul Hutcheon

Global Guidance Unit

This forecast may be amended at any time

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