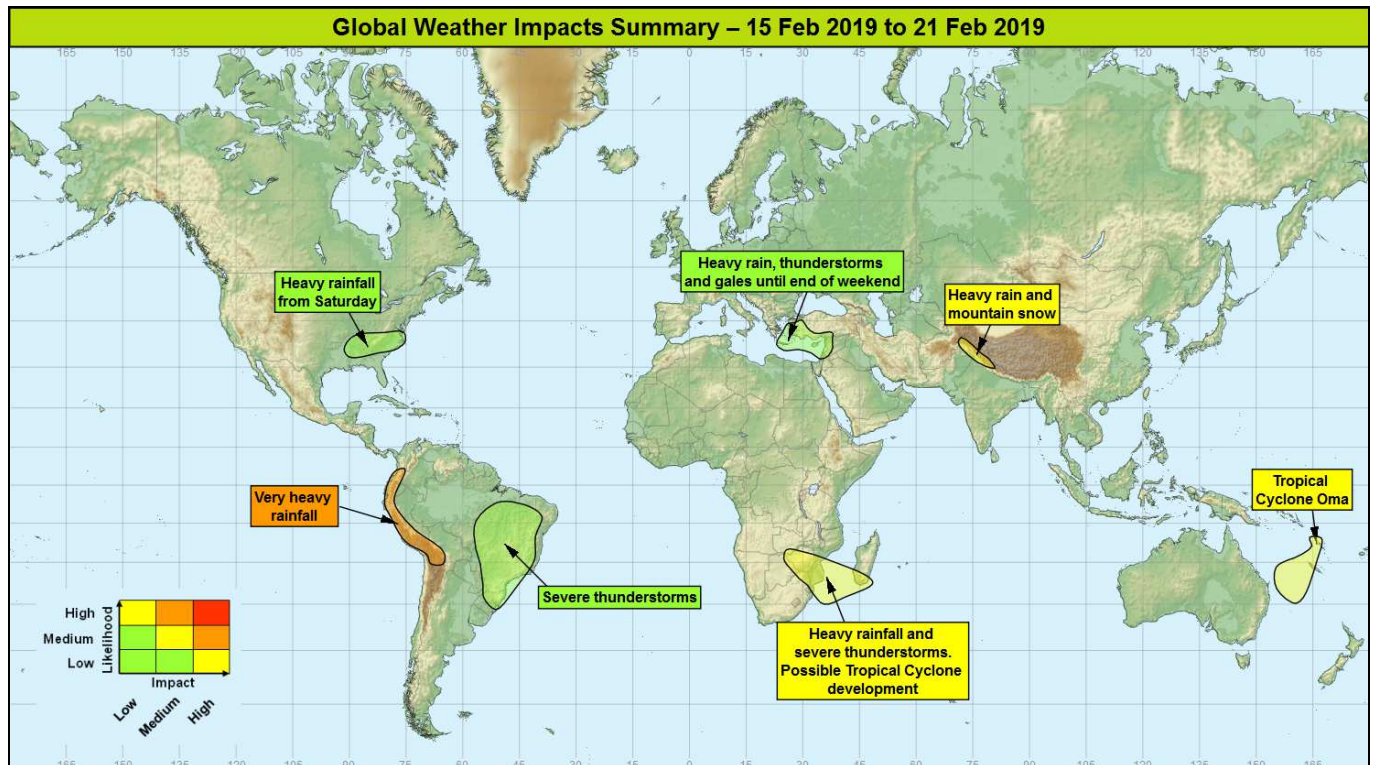


Global Weather Impacts – Friday 15th to Thursday 21st February 2019

Issued on Friday 15th February 2019

HEADLINES

- Heavy rainfall and severe thunderstorms persist over parts of western South America.
- Tropical Cyclone Oma affecting northern Vanuatu and New Caledonia through the next week.
- Severe thunderstorms affecting parts of southeastern Africa.
- Very heavy rainfall and mountain snowfall for northern parts of Pakistan and India.



DISCUSSION

Tropical Cyclones

Tropical Cyclone Oma (Southwest Pacific, Vanuatu and New Caledonia)

Weather

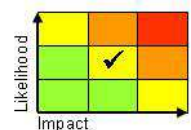
Oma has remained slow moving through the last day or two, just west of Vanuatu, and is likely to remain slow moving through Friday and Saturday. Oma is presently a Category 2 Cyclone with sustained winds of 55 to 73 mph, but is expected to increase to a Category 3 Cyclone (sustained winds of 74 to 98 mph) through Saturday.

The strongest winds from Oma are likely to remain offshore, but could affect the more northern Vanuatu islands during the next few days and then northern New Caledonia on Sunday and Monday.

The heavy rainfall from persistent torrential rains and thunderstorms will affect the northern Vanuatu islands during the next few days with up to 250 mm likely in places, which compares to an average February rainfall of around 350 mm.

From Sunday through to the middle of next week central and northern New Caledonia could see up to 1000 mm of rain accumulate, especially on the eastern side of the island. This would be three times the February average.

By the middle of next week Oma should have tracked out into the Coral Sea.



This forecast may be amended at any time

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Discussion

The official track from RSMC Nadi is similar to the multi-model consensus for Oma to be slow moving through the next few days as it strengthens a little then to track southwestwards. However, it should be noted that there remains a significant spread of ensemble members, although northern Vanuatu and New Caledonia look like the only islands at risk of impacts.

Expected Impacts

Flash flooding and landslides are a significant threat, with storm surge flooding also possible. Structural damage is also a threat.

The following regions are being monitored for possible development:

Southwest Indian Ocean (Mozambique Channel) – See *Africa* section.

Europe

Parts of Greece and western Turkey, Cyprus and the Levant coast

Weather

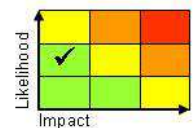
Disturbed weather will continue across this region through the next 2 or 3 days. Outbreaks of very heavy rain are likely along with thunderstorms. Up to 40-70 mm could fall in places each day (much of this in only a few hours) which is the equivalent of nearly a month's worth of rainfall. In addition, very strong, gusty winds and with coastal gales at times, especially through the Aegean Sea. An improvement looks likely into next week.

Discussion

Good model agreement for a complex vortex to maintain very disturbed weather across this region until the end of the weekend, before an upper ridge moves in from the west to bring much more settled weather.

Expected Impacts

Increased threat of flash flooding and landslides in mountainous areas. Strong winds and rough seas could impact aviation and maritime transport. Threat of impacts to vulnerable and displaced populations in the region.



North America

Northern Alabama east to North Carolina and Virginia

Weather

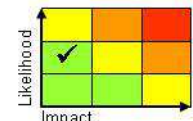
Several spells of very heavy rainfall are expected to affect this part of southeastern USA from Sunday, with thunderstorms producing intense rainfall at times during this period. Up to 50 mm of rain could fall in a 24 hour period with up to 150-200 mm of rain accumulating between Saturday and Thursday.

Discussion

An active frontal wave will run eastwards across this region during Saturday, with similar event later on Sunday and through Monday. The frontal zone is then likely to become slow moving early next week, before another active frontal wave runs east across the region towards midweek.

Expected Impacts

Flash flooding is very likely, with a growing likelihood of river flooding and landslides. There is also the potential for some severe storm impacts such as damaging winds and large hail. Some winter hazards (heavy snow / freezing rain) possible at times on the northern edge of these frontal waves.



Central America and Caribbean

Nil significant

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South America

Northern Andes (Colombia, Ecuador, Peru and Bolivia)

Weather

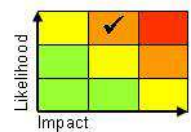
Frequent heavy showers and thunderstorms are expected to continue across the northern Andes through the next week, extending to Bolivia as times. 100-150 mm of rain is possible each day in places (falling within the space of a few hours) with some places seeing a further 250-350 mm of rain over the next week, which is significantly higher than the monthly average.

Discussion

On Thursday 14th February NOAA declared weak El Nino were conditions in the Pacific (although the Australian Bureau of Meteorology maintains ENSO neutral conditions). Along the South American Pacific coastline there are positive SST anomalies (as often seen on El Nino events), and these indicate a weakening of trade winds and the Humboldt Current in this region. This setup allows sea breezes to draw moist oceanic to the usually dry western Andes, with an unusual frequency of heavy showers and thunderstorms occurring here. In addition the MJO is moving east across the Pacific through the next week, this will likely maintain or even further enhance convection across the region

Expected Impacts

Further flash flooding and landslides are a significant threat in the mountainous areas. Flash flooding is also possible if thunderstorms impact urban areas. Significant river flooding is being reported from the region, with areas often caught out as rivers rapidly rise and fall. Parts of Peru in particular have been badly affected with a state of emergency declared in a number of provinces, and there are similar reports from parts of Ecuador.



Eastern Brazil

Weather

Heavy showers and thunderstorms are expected to be frequent across the region during this week. Further areas of organised thunderstorms are likely to form then drift north across this area over the coming days. Some places are likely to receive 100-150 mm of rain in 24 hours and, over the week, some places may receive around 200 mm. This region typically receives 40-60 mm of rain over a week at this time of year. Thunderstorms are likely to be severe at times with strong winds, large hail and frequent lightning additional hazards.

Discussion

An upper trough over northern Argentina will extend northwards into Southeastern Brazil this weekend, enhancing activity on the SACZ. Associated heavy showers and thunderstorms are likely to develop with low level convergence helping to focus activity. The vortex engaging the resident warm plume will likely trigger MCS and super cell thunderstorms similar to those seen during January.

Expected Impacts

Much of eastern Brazil (away from the far southeast) has seen below average monsoon rainfall in the past few months. So some of this rainfall will be welcome. However, intense rainfall will trigger flash flooding as well as landslides in more mountainous areas, perhaps impacting large cities. Strong winds, large hail and frequent lightning may also cause damage to property and infrastructure as well as posing a threat to life.



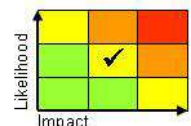
Africa

Northeast South Africa, Swaziland, eastern Botswana, Zimbabwe, southern Mozambique and southern Madagascar

Weather

Heavy rainfall and severe thunderstorms will continue to affect much of this region through the next 3 days. There is the potential for 100-150 mm to fall in places within a 24 hour period, with as much as 300-400 mm over the period of a few days. Severe thunderstorms will bring additional hazards of strong winds, large hail and frequent lightning.

During Monday the worst of the thunderstorm activity will move offshore into the Mozambique Channel, potentially developing into a Tropical or Sub-tropical Cyclone as it continues southeastwards, perhaps close to southern Madagascar



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Discussion

Enhanced rainfall and thunderstorm activity will affect these areas over the next few days with a signal for increased low level convergence helping to organise activity. In addition, the MJO moving into Phase 8 could be linked to positive precip anomalies in these areas. There is a signal from all models for a depression to develop over the weekend, and then emerge into the southern Mozambique Channel next week. The engagement of an upper trough will perhaps result in this system being a sub-tropical rather than a tropical cyclone.

Expected Impacts

Whilst the rainfall will be welcome to some extent in many of these areas (especially Zimbabwe and eastern Botswana) the intensity will bring an increased chance of flash flooding. Large hail, strong winds and frequent lightning from thunderstorms could also disrupt transport (especially aviation) and power networks. Growing risk of strong winds across southern Mozambique, southern Madagascar and the Mozambique channel early next week.

Middle East

Levant coast – See *Europe* section.

Asia**Northern Pakistan, far northwest of India and western Nepal****Weather**

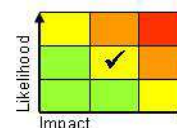
Heavy rain and mountain snowfall is expected on Friday, with a more prolonged spell of heavy rain and mountain snowfall expected from Monday to Thursday. Up to 100-150 mm of rain could fall in a 24 hour period (equating to 1-1.5 metres of mountain snowfall), with an event total of up to 350 mm of rain (up to 3.5 metres of mountain snowfall). The average rainfall for February in this region is 75-125 mm.

Discussion

An upper trough will sweep east across the region on Friday, bringing the brief spell of heavy precip. A very strong sub-tropical jet will then extend east into the region from Monday, with this region remaining on the northern side, resulting in marked upper forcing that will produce heavy precip with the potential for embedded thunderstorms. The snow level looks likely to be around 2000 metres for much of the time, but will fluctuate between 1700 metres and 2500 metres.

Expected Impacts

Very heavy snowfall over the mountains will block some key high road passes in the region, collapse roofs and enhance the risk of avalanches. The combination of snowmelt and heavy rain at lower levels could lead to flash and/or fluvial flooding at lower elevations.

**Australasia**

Vanuatu and New Caledonia– See *Tropical Cyclones* section.

Additional information

Nil.

Issued at: 150820 UTC **Meteorologist:** Paul Hutcheon

Global Guidance Unit

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