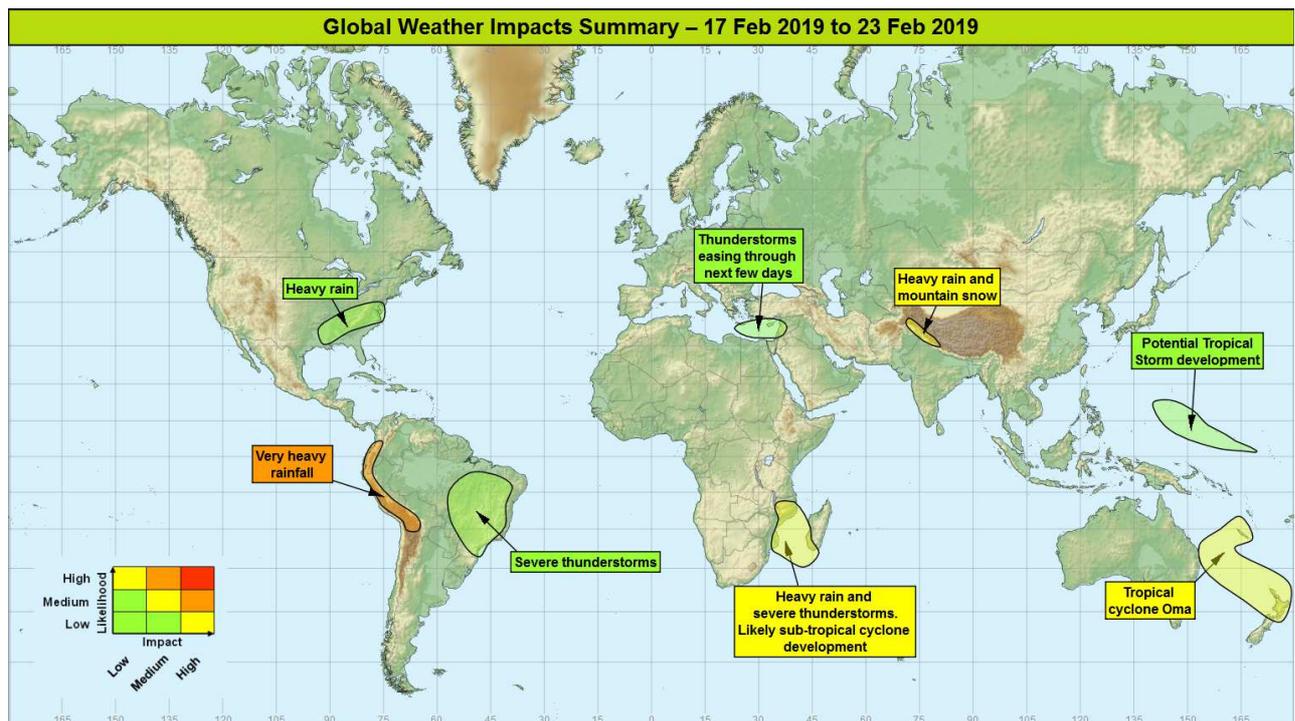


Global Weather Impacts – Sunday 17th to Saturday 23rd February 2019

Issued on Sunday 17th February 2019

HEADLINES

- Heavy rain and severe thunderstorms persist over parts of South America.
- Tropical cyclone Oma is expected to pass to the west of New Caledonia through the next week.
- Severe thunderstorms affecting parts of south-eastern Africa.
- Very heavy rain and mountain snow for northern parts of Pakistan and India.



DISCUSSION

Tropical Cyclones

Tropical Cyclone Oma (Southwest Pacific, Vanuatu, New Caledonia, New Zealand and far east of Australia)

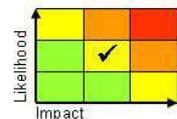
Weather

Oma drifted slowly south-west over the last 24 hours. Oma remains a Category 2 cyclone with sustained winds of 55 to 73 mph, and is not now expected to attain Category 3 strength (sustained winds of 74 to 98 mph).

The strongest winds from Oma are likely to remain offshore, though some strong winds could affect western parts of New Caledonia by Monday. Whilst the forecast storm track keeps Oma offshore, strong onshore flow caused is likely to lead to persistent heavy showers coming on the northern coast of New Caledonia. By the time these ease, some areas along the north coast could see as much as 1000 mm of rain, which would be as much as five times the average rainfall for February.

There is a small likelihood that Oma could drift far enough west by next weekend to affect the far east of Australia, but it is more likely to track southeast to bring heavy rainfall (up to 200 mm in a day) and very strong winds to the north island of New Zealand.

Discussion



This forecast may be amended at any time

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The official track from RSMC Nadi remains 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. The main cluster of EPS members allows Oma to track south-west for a few days, before curving south-east and accelerating toward New Zealand by the forecast period. However, the 17/00Z ECMWF and a small cluster of EPS output track Oma towards Brisbane by next weekend, although this is a low probability solution.

Expected Impacts

Whilst Oma is not expected to make landfall across New Caledonia, frequent heavy showers are likely to lead to flash-flooding and landslides, particularly in areas exposed to the northeast. New Zealand will likely see a threat of flash flooding by the end of the week, with a lower likelihood of flooding and wind damage to the far east of Australia.

The following regions are being monitored for possible development:

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

Northwest Pacific (Marshall Islands, Caroline Islands and Mariana Islands)

Weather

A tropical depression presently located just south of the Marshall Islands is expected to intensify and track west-northwest across the Caroline Islands through the next week, possibly affecting the Mariana Islands by next weekend.

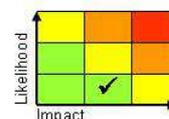
There is a reasonable likelihood that this system could attain typhoon strength (sustained winds of 74 mph or more) later in the week. However, even if this does not happen, this system will produce frequent thunderstorms that will bring up to 300 mm of rainfall in a day.

Discussion

The northern part of an Equatorial Rossby Wave couplet (the southern part associated with Cyclone Oma) could influence the development of a Typhoon from this weak tropical depression through the next 5 days. There is reasonable model agreement for this evolution.

Expected Impacts

Flash flooding is the main threat, but many of these islands are sparsely populated. There is a lower likelihood of damaging winds and storm surge later this week to the Caroline Islands and the Mariana Islands.



Europe

Parts of southern Turkey, Cyprus and the Levant coast

Weather

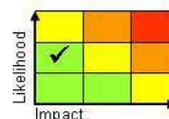
Disturbed weather will continue across this region today (Sunday), with thunderstorms possibly producing up to 30-50 mm (much of this in only a few hours) which is the equivalent of half a month's worth of rainfall.

Discussion

The complex driving upper trough is signalled to continue to be the source of active convection today. As a major ridge amplification develops across central, then E Europe, the build of gph will initially elongate, before shifting the vortex away to the S, allowing an improvement in conditions across the area.

Expected Impacts

Increased threat of flash flooding and landslides in mountainous areas. Threat of impacts to vulnerable and displaced populations in the region.



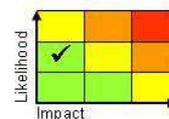
North America

Northern Alabama east to New England

Weather

Several spells of very heavy rain are expected to affect this part of southeastern USA, 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 up to Thursday.

Discussion



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Various active frontal waves are signalled to run from west to east across the area. The frontal zone is then likely to become slow moving early next week. A synoptic scale trough is expected to dig S across the central and E US, drawing up a plume of very warm air from the Gulf of Mexico. This will act to exacerbate rain, as well as bring the threat of a few tornadoes across the SE US. As the trough progresses E, forcing for the front becomes less conducive to further heavy rainfall, with a slow improvement in conditions by the end of the coming week.

Expected Impacts

Flash flooding is very likely, with increased risk of river flooding and landslides. There is also the potential for some severe storm impacts such as damaging winds and large hail, and later, a few tornadoes. Some winter hazards (heavy snow / freezing rain) possible at times on the northern edge of these frontal waves. New York appears to be susceptible mid-week, with potential disruption to travel in the area.

Central America and Caribbean

Nil significant

South America

Northern Andes (Southern Colombia, Ecuador, Peru and Bolivia)

Weather

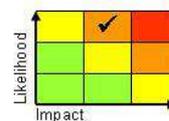
Frequent heavy showers and thunderstorms are expected to continue across the northern Andes through the next week, extending to Bolivia as times. 100-150 mm of rain is possible each day in places (falling within the space of a few hours) with some places seeing a further 250-350 mm of rain over the next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

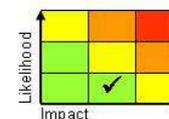
Weather

Heavy showers and thunderstorms continue across the region and should last well into next week. Further areas of organised thunderstorms are likely to form then drift north across this area. Some places are likely to receive 100-150 mm of rain in 24 hours and, over the week, some places may receive around 200-300 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 has extended northwards into south-eastern Brazil, 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



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Much of eastern Brazil (away from the far southeast) has seen below average monsoon rainfall in the past few months; 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

Southern Mozambique, Malawi and south-western Madagascar

Weather

Heavy rain and severe thunderstorms will continue to affect parts of this region through the next few 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.

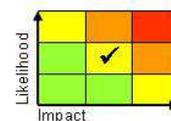
During Monday, the worst of the thunderstorm activity will move offshore into the Mozambique Channel, potentially developing into a sub-tropical cyclone as it continues southeastwards, perhaps close to southern Madagascar

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, now in Phase 8, could be linked to positive precip anomalies in these areas. There is a signal from all models for a depression to emerge into the southern Mozambique Channel next week. The engagement of an upper trough will likely result in this system being a sub-tropical rather than a tropical cyclone.

Expected Impacts

Whilst the rain 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

Marshall Islands, Caroline Islands and Mariana Islands – See *Tropical Cyclones* section.

Northern Pakistan, far northwest of India and western Nepal

Weather

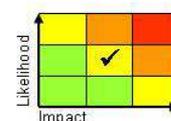
A prolonged spell of heavy rain and mountain snowfall is expected from Monday to Thursday. Up to 100-150 mm of rain could fall in a 24 hour period (equating to 1-1.5 metres of mountain snowfall), with an event total of up to 350 mm of rain (up to 3.5 metres of mountain snowfall). The average rainfall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

Discussion

A very strong sub-tropical jet will extend east into the region from later on Sunday, with marked influence leading to ascent and frontogenesis. A blossoming area of cloud is signalled by all models, with this then being reinforced by jet streaks running through the STJ. 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 snow 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.



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Australasia

Vanuatu, New Caledonia, New Zealand and far east of Australia– See *Tropical Cyclones* section.

Additional information

Nil.

Issued at: 170745 UTC **Meteorologist:** Jason Kelly

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