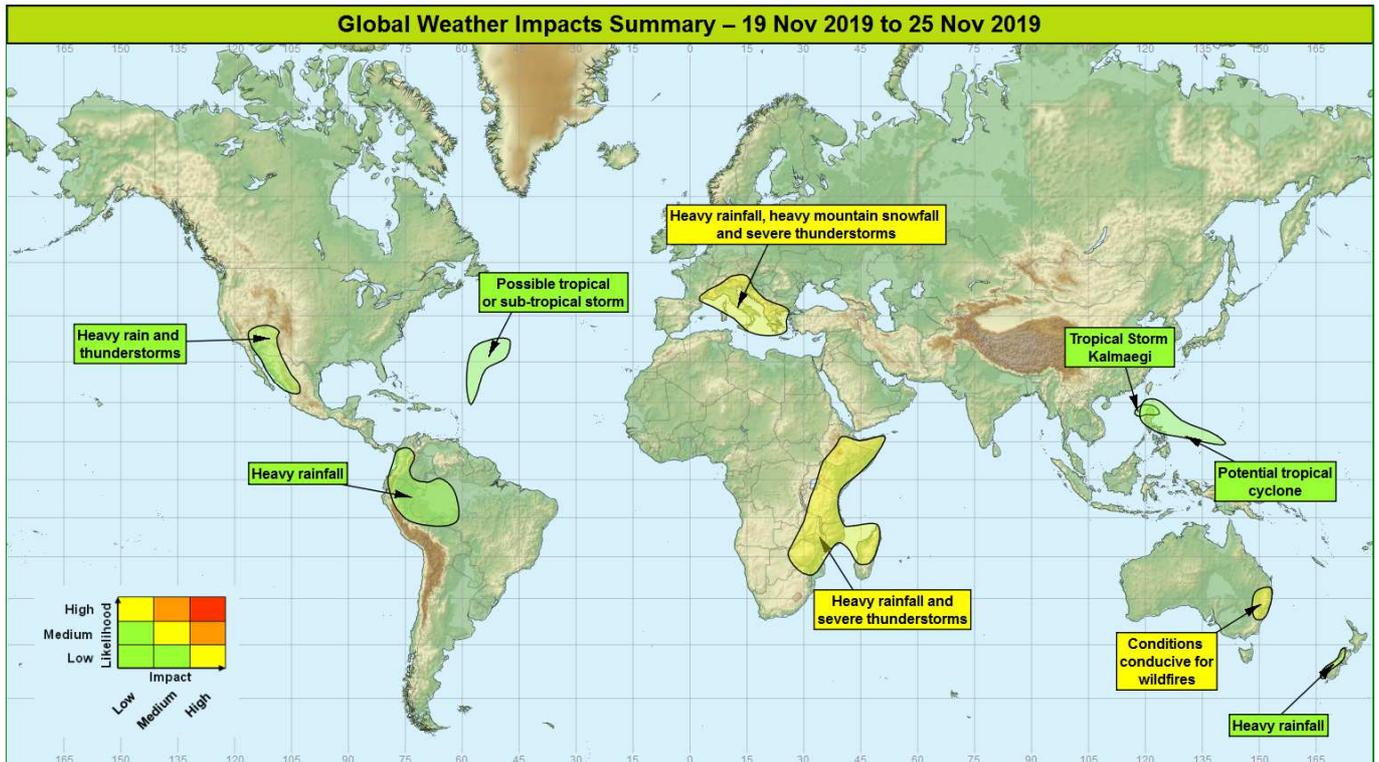


Global Weather Impacts – Tuesday 19th to Monday 25th November 2019

Issued on Tuesday 19th November 2019

HEADLINES

- Remaining very unsettled in parts of southern and south-east Europe.
- Increasing rainfall in East Africa increasing flood threat.
- Ongoing elevated wildfire risk in eastern Australia.
- Tropical storm Kalmaegi impacting the northern Philippines during the next few days.



DISCUSSION

Tropical Cyclones

Severe Tropical storm Kalmaegi, northern Luzon (Philippines)

Weather

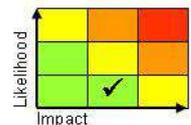
Kalmaegi strengthened for a time on Monday whilst continuing slowly north-westward toward northern Luzon. Kalmaegi is expected to cross the northern tip of Luzon through today (Tuesday) then rapidly weaken through the coming 24-36 hours. There remains the potential for damaging winds, but very heavy rainfall (250-300, perhaps locally 500 mm) is expected to be the most impactful weather event association with Kalmaegi through the next few days.

Discussion

Environmental conditions allowed for further intensification of Kalmaegi, with warm sea surface temperatures offset by strong shear and entrainment of dry air. Kalmaegi is expected to be steered south-west by the sub-tropical ridge across the far NW of Luzon. Interaction with the land and an increasingly strong wind shear environment are expected to rapidly weaken the system with dissipation likely within 48 hours.

Expected Impacts

Potential for flash flooding and landslides. Strong winds and dangerous seas for north and east coasts of Luzon.



This forecast may be amended at any time

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The following area has been identified for possible tropical cyclone development affecting land over the next week:

Western Pacific

Weather

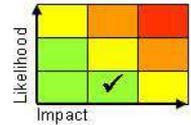
A tropical depression to the east of Luzon in the western Pacific is signalled to develop into a tropical storm over the coming days. There is a lot of uncertainty regarding the track of any development, but for now one very similar to that of Kalmaegi is the preferred solution. This would bring the potential for heavy rain and strong winds to this area of Luzon later in the week.

Discussion

The tropical depression could strengthen to become a tropical storm by midweek as it tracks towards the northern Philippines. There are significant uncertainties for this evolution, track and intensity at this time, but this system could impact a similar region that is expected to be affected by Tropical Storm Kalmaegi.

Expected Impacts

Impacts possible in the Philippines later this week. Potential for flash flooding and landslides. Strong damaging winds, storm surge and rough seas.



Tropical/sub-tropical Atlantic

Weather

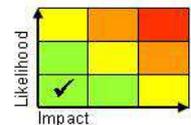
An area of thunderstorms and associated low pressure, centred to the east of the Windward Islands, may develop into a tropical or sub-tropical storm in the next few days as it tracks away north-east.

Discussion

The NHC rates the likelihood of development as 50% in the next 48 hours, with imagery showing a ragged area of convection. An approaching cold front, and associated trough will likely subsume any development later this week.

Expected Impacts

Nil – the system will remain over open water.



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Europe**Italy, southeast France, the southern Alps (into Switzerland and Austria), Greece, western/southern Balkans and parts of the central / western Mediterranean****Weather**

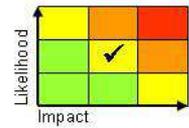
Remaining very unsettled across the area during the coming week with periods of heavy rain and severe thunderstorms. The heaviest rain is likely to be focused on south-facing high ground of Italy and perhaps southeast France, along with the southern Alps (fringing into Switzerland and Austria) and Greece. Some locations could see as much as 200-300 mm of precipitation over the coming week (around twice the average November rainfall), with this rain falling in a region that has already seen a very wet autumn. The precipitation will fall as snow above 1000-1500 metres, resulting in further very heavy snowfall, maintaining a high avalanche threat.

Discussion

A strongly cyclonic upper pattern will dominate through the coming week, leading to a continuation of very unsettled conditions as significant upper forcing engages warm plumes drawn northwards across the region. Upscale growth of thunderstorms into MCS is expected. In addition, precipitation will be modulated by orography to act as a focus for the heaviest ppn accumulations, although above 1000-1500 metres this will fall as snow.

Expected Impacts

Increased likelihood of flash flooding causing damage to property and infrastructure. Frequent lightning strikes, large hail and tornadoes/waterspouts could also produce localised significant damage. Further significant mountain snowfall is expected which will maintain a high avalanche threat, especially in the Alps.

**North America****Baja California Peninsula, northwest Mexico and southwest USA****Weather**

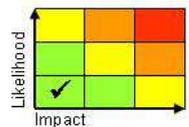
The remnants of tropical storm Raymond are likely to affect south-western parts of the USA, especially Arizona and New Mexico during the midweek period. This will bring heavy rainfall to this desert region, with around 50-75 mm of rain falling quite widely and up to 150 mm in places, mainly mountainous areas. This is several times more than the November average, which for Phoenix is around 15mm. It is possible that in places a month's worth of rain could fall in less than six hours.

Discussion

A plume of tropical air, associated with the remnants of tropical storm Raymond, is expected to interact on Wednesday with a north-eastward-moving upper vortex to produce heavy showers and severe thunderstorms. A disrupting mid-latitude trough arriving from the west through Wednesday is also expected to engage the plume, allowing the disturbed weather to continue at least through Thursday. This is desert region of the USA, with typically very low rainfall at this time of year.

Expected Impacts

Flash flooding is likely.

**Central America and Caribbean****Baja California and northwest Mexico – see North America section**

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South America

Western Colombia, Ecuador, Peru, western Brazil and northern Bolivia

Weather

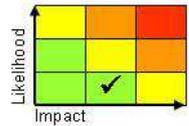
Continued enhanced shower and thunderstorm activity is likely across this region through much of the coming week. Up to 100 mm of rainfall is possible each day, with some places seeing as much as 200-400 mm in total this week (equivalent to the average November rainfall), although these totals are likely to be very localised. Conditions should ease later this week.

Discussion

The progression of the MJO has allowed an uptick in convection across equatorial South America. Each day, diurnal heating is able to release deep and energetic convection, leading to slow and locally severe storms each day. Marked upper level divergence is evident across tropical regions of South America, which will aid the longevity of severe convection across the region.

Expected Impacts

Increased threat of flash and river flooding with landslides increasingly likely in mountainous areas. This follows on from a recent wet period across the region with significant river flooding reported over the last couple of weeks.



Africa

Much of eastern Africa, including Madagascar

Weather

Heavy showers and thunderstorms will become heavier and more widespread through this week. The heaviest rainfall is expected to be across the Kenyan Highlands, western Tanzania, Rwanda, Burundi and eastern DRC where up to 200 mm of rain could accumulate through the week (over a month's worth of rain). Elsewhere, rainfall accumulations will be lower, but still above average.

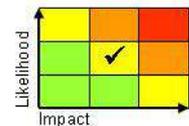
Discussion

A combination of the MJO moving across Africa and the positive IOD phase continuing, will promote above-average rainfall across this region in the coming week.

Across the south of the region, a warm plume will be the focus for further deep convection through the next week, with engagement from an upper trough crossing South Africa around midweek likely to result in a peak in activity. Serious multi-year droughts have affected parts of this region, and to a degree this rain will be welcome, however the short duration over which large amounts of precipitation are likely to accumulate will likely cause some serious localised issues.

Expected Impacts

An increased risk of flash flooding and landslides in the region, with further river flooding possible in Somalia. This is true of regions in the south of the area which have been experiencing drought conditions. Frequent lightning is also likely, along with large hail and strong wind gusts.



Asia

Luzon (Philippines) – See *Tropical Cyclones* section.

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Australasia

Parts of eastern Australia

Weather

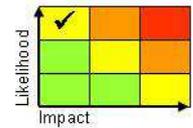
Numerous wildfires continue for parts of New South Wales and Queensland, between Sydney and Brisbane. With no significant rainfall expected in the next few days, along with likely strong wind events at times, the wildfire threat will remain very high in the region. There is the potential for some rain later this week and at the weekend which could help the situation, but the associated thunderstorms and strong winds could also spark new wildfires or spread existing wildfires due to dry lightning events.

Discussion

This early season wildfire event has already claimed a number of lives, with good model agreement for predominantly dry and at times windy conditions to continue this week. Transient upper troughs could bring thunderstorms to the affected areas from late week, but it is unclear whether these storms will bring much needed rainfall or just dry lightning events.

Expected Impacts

Fires will bring a danger to life and environmental damage across a wide area. Smoke could bring poor air quality to densely populated urban centres, with a risk of some impacts in the Sydney and Brisbane region possible.



New Zealand

Weather

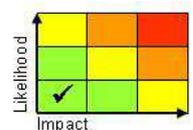
Further heavy rainfall is likely to affect parts of New Zealand through Tuesday. 100-150 mm of rainfall is possible in some western parts of South Island, especially in mountainous areas. It is likely to become drier across this region from midweek, although further, less intense rainfall may return next weekend.

Discussion

Further active frontal systems are likely to affect New Zealand through Tuesday. As is normally the case, orographic enhancement of rainfall over western parts of the Southern Alps will see high rainfall totals build up here. Drier conditions are signalled from Wednesday.

Expected Impacts

Increased threat of flooding and landslides which could primarily cause transport disruption.



Additional Information

Nil.

Issued at: 190830 UTC **Meteorologists:** Jason Kelly/Mark Sidaway

Global Guidance Unit

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