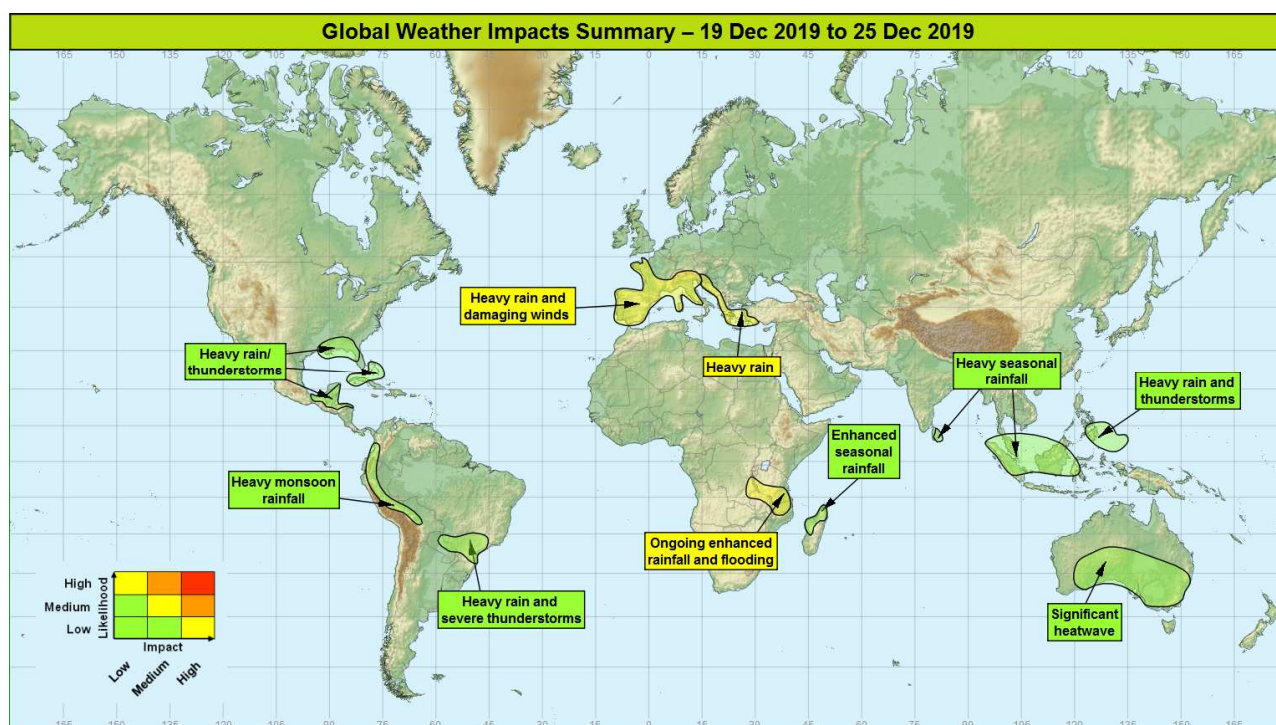


Global Weather Impacts – Thursday 19th to Wednesday 25th December 2019

Issued on Thursday 19th December 2019

HEADLINES

- Very unsettled weather with heavy rain and strong winds continuing across western/southern Europe.
- Above average rainfall and flooding across parts of eastern Africa.
- Historic heatwave continues for southern and eastern Australia.



DISCUSSION

Tropical Cyclones

There are currently no active tropical cyclones, and no areas are being monitored for development.

Europe

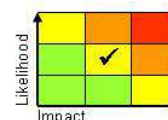
Western and southern Europe Weather

Remaining very unsettled through the next five days with spells of heavy rain and strong winds. The most extreme rainfall is likely across northern Spain and Portugal in the next day or two, where a further 150-200mm could fall. Heavy rain is also likely at times across the rest of the region, with 30-50mm likely widely, and up to 200mm over some high ground. Snowfall will largely be restricted to above 1800 metres over the Alps.

Discussion

A powerful south shifted Atlantic jet persists, driving a succession of active frontal systems into western Europe. The heaviest rainfall is expected over NW Iberia as high WBPT is dredged NE from the sub-tropics. Two named storms (Daniel and Elsa) have already been produced by this weather regime, with further named storms possible. The unsettled conditions will also likely spread to Corsica and Sardinia with time.

Expected Impacts



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Both flash and longer term river flooding are possible, especially across parts of Iberia. Strong winds are likely to cause disruption to travel and some property/infrastructure damage, especially over the weekend. Large waves bring the potential for dangerous conditions for Atlantic coasts.

Parts of the Balkans, Greece and western Turkey

Weather

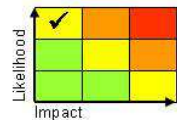
The disturbed weather across western parts of Europe is likely to affect occasionally spread to other parts of the Mediterranean at times. By the end of the period some 40-80 mm of rain is likely to have fallen widely across this area, with western upslopes of Albania and northern Greece seeing as much as 200-250 mm – this is just over the average total for all of for December in these areas.

Discussion

The strong jet and intense push of warm air is likely to allow active frontal systems to get across much of the Mediterranean, with a strong orographic component to rainfall. With warm, tropical air entrained into these systems, pop efficiency will be high. WBFLs are also high meaning rainfall will not be locked up as snow over mountains, exacerbating likely impacts.

Expected Impacts

Flash-flooding, landslides and impacts to some transport and utilities is possible.



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Central America

Belize, Honduras, Guatemala and southeast Mexico

Weather

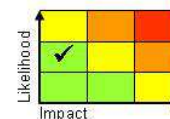
Heavy rain and thunderstorms are likely to affect the area over the next several days, bringing widely 50-100mm of rain by the end of the period. Some areas could see 150-300mm of rain during today (Thursday), with much of this falling in a relatively short space of time. This is equivalent to more than a month's worth of rainfall in places.

Discussion

A stalled mid-latitude cold front will act as the focus for heavy rain and severe thunderstorms. Forecast profiles support slow-moving torrential downpours, with frequent lightning and large hail.

Expected Impacts

Flash and river-flooding. Disruption to utilities and infrastructure.



Western Cuba and The Bahamas – see North America section

North America

Gulf Coast of America, Western Cuba and The Bahamas

Weather

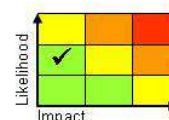
Heavy rain and thunderstorms are expected to affect the area through the weekend, bringing 40-80mm of rainfall fairly widely, and locally peaks of around 300mm. As much of the rainfall will be in the form of heavy showers and thunderstorm, large amounts of precipitation are likely to fall in a short duration.

Discussion

The same mid-latitude cold front discussed in the previous section will reach this region today and then become slow moving, becoming a focus for heavy rain and thunderstorms through into the early part of next week. Profiles support some organised and long lived cells, capable of producing slow moving torrential downpours, that will also likely produce frequent lightning and some hail. Another mid-latitude trough is signalled to disrupt to the NE of the area through the weekend, leading to the development of a surface tropical low.

Expected Impacts

Flash flooding is likely, especially in urban areas. Some disruption to utilities and infrastructure is possible and an increased risk of landslides in areas of steep terrain in Cuba.



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South America

Ecuador, western Colombia, Peru and Bolivia

Weather

Frequent heavy showers and thunderstorms will affect these regions through the next 7 days, with the showers each day bringing 50-75 mm in just a few hours, with some locations receiving over 200 mm (around the December average rainfall). As is the nature of showers, spatial coverage on any one day will be highly variable.

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, and is also forecast to receive the highest rainfall totals.

Expected Impacts

Flash flooding likely, with increased likelihood of landslides.



Parts of Paraguay and southern Brazil

Weather

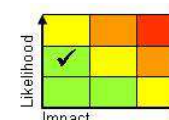
An ongoing outbreak of heavy rainfall and some severe thunderstorms will continue to move northeast across this region. Frequent lightning is likely, and a risk of localised large hail. Although the initial area highlighted will see storms and rain ease this weekend, a further area is likely to form around the River Plate Estuary.

Discussion

A significant pulse of the South Atlantic Convergence Zone will remain the focus for heavy showers and thunderstorms. Activity along the SACZ will likely wax and wane, as shortwaves in the STJ engaged the resident plume.

Expected Impacts

Localised flash flooding, and low risk of localised damage from large hail, frequent lightning and strong wind gusts.



Africa

Parts of eastern/central Africa

Weather

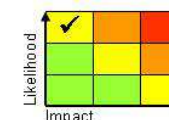
Continued widespread heavy showers and thunderstorms associated with the seasonal rains are expected to continue to be heavier than normal over the next week, with a further 100-200 mm of rain falling in places from frequent heavy, thundery, afternoon downpours. This is close to the average rainfall in this region for the whole of December, with this area having already seen 200-400% of the usual rainfall over the past few weeks.

Discussion

Enhanced seasonal rainfall in association with the strong positive Indian Ocean Dipole event which, although declining, is still influencing the large scale shower distribution. Large tracts of eastern Africa have seen well above average rainfall over the past few months. The combination of all these factors dramatically increases the likelihood of further flash and river flooding along with further deadly landslides. There are signs that the area of enhanced rainfall is slowly waning, with totals offered by extended models also slowly reducing.

Expected Impacts

Increased threat of flash flooding and landslides in the region, with further river flooding likely.



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Madagascar**Weather**

Across the far north of the island daily shower and thunderstorm activity will continue at above average frequency. Over a couple of hours 25-50 mm of rainfall is locally possible, whilst some locations may receive 100-200 mm in total overall; this representing around a month's rainfall during the wet season, following an already wet spell across this region.

Discussion

Enhanced low-level moisture will act to promote shower and thunderstorm activity, albeit of gradually reducing intensity. December is a very wet month in Madagascar, at the start of the annual rainy season. With that in mind, these rainfall accumulations although high, are unlikely to be overly problematic.

Expected Impacts

Localised flash flooding possible. An elevated risk of landslides in areas where terrain is steep.

**Middle East****Weather**

Nil significant.

Asia**Malaysia, Indonesia and Brunei****Weather**

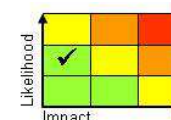
Heavy rainfall is expected to continue through the next week with some places seeing up to 300mm (equivalent of 50-75% of the average monthly rainfall at this time of year) event totals. There has already been extensive flooding parts of Malaysia (Johor in particular), and whilst rainfall should ease as compared to recent days, further disruption is likely at times.

Discussion

Above average SSTs in the Java Sea and surrounding waters, combined with increased convergence as a result of a stronger northeasterly flow through the South China Sea and passage of several tropical Equatorial Rossby Waves (ERW) are likely to contribute to enhance convection through the next week. These rains have already caused significant impacts in parts of this region, with further impacts likely

Expected Impacts

Increased threat of flash flooding and landslides.

**Western Sri Lanka****Weather**

Periods of heavy rain are likely to affect many eastern areas of the Island through the next 5-7 days, with event totals approaching 150-200mm. This is well above the average total rainfall for December for this part of Sri Lanka.

Discussion

An active train of Equatorial Rossby Waves are expected to bring periods of heavy rain and thunderstorms primarily to the west of Sri Lanka. Above normal SSTs and a series of ERW are likely to lead to periods of heavy rain.

Expected Impacts

Flash-flooding, disruption to transport and utilities are all possible.



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Philippine Sea
Weather

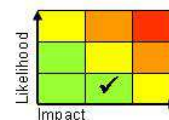
A cluster of thunderstorms currently to the north of Papua New Guinea is expected to be steered west over the coming week. As this region approaches the southern Philippines this weekend, development of a tropical low is possible. This bringing heavy rainfall (up to 200-400mm) where a magnitude 6.8 earthquake occurred last Sunday.

Discussion

An Equatorial Rossby Wave (ERW) has organised thunderstorm activity in the Philippine Sea. This wave will gradually move westwards through the rest of this week and into the weekend. As this feature approaches land this weekend, it will may organise into a tropical low, bringing.

Expected Impacts

Flash flooding is possible across the southern Philippines, with a lower risk of damage from strong winds. Vulnerability may be higher than normal here given the recent earthquake.

**Australasia**
Parts of central/southern Australia
Weather

Temperatures across many central parts of Australia are well above normal, with records having already been broken. Australia has again experienced its hottest day on record on Wednesday (following Tuesday record temperatures) with the national average temperature reaching a high of 41.9°C). Maximum temperatures are likely to remain some 10-15°C above normal for much of the rest of this week and for some places, into the weekend. Values into the mid to high 40s°C remain likely.

Discussion

An area of high pressure to the S of Australia is drifting east, with N'ly flow on its western flank. This continues to tap into hot desert air, leading to some exceptional temperatures.

Expected Impacts

A state of emergency has been declared in New South Wales, Australia, fearing that the record-breaking heatwave will exacerbate the state's bushfire crisis. Impacts on infrastructure, including road and rail, as well as utilities, can be expected. Impacts on vulnerable populations (without access to air-con) are also likely. This event is expected to be fairly long in duration, exacerbating the impacts further.

**Additional Information**
Eastern Australia

Numerous bush fires continue across parts of eastern New South Wales, Queensland and Australian Capital Territory with widely dry conditions persisting across all but coastal Queensland over the next week. Whilst fire weather conditions have improved relative to recent days, 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.

Issued at: 190800 UTC **Meteorologists:** Jason Kelly/Tony Wardle

Global Guidance Unit

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