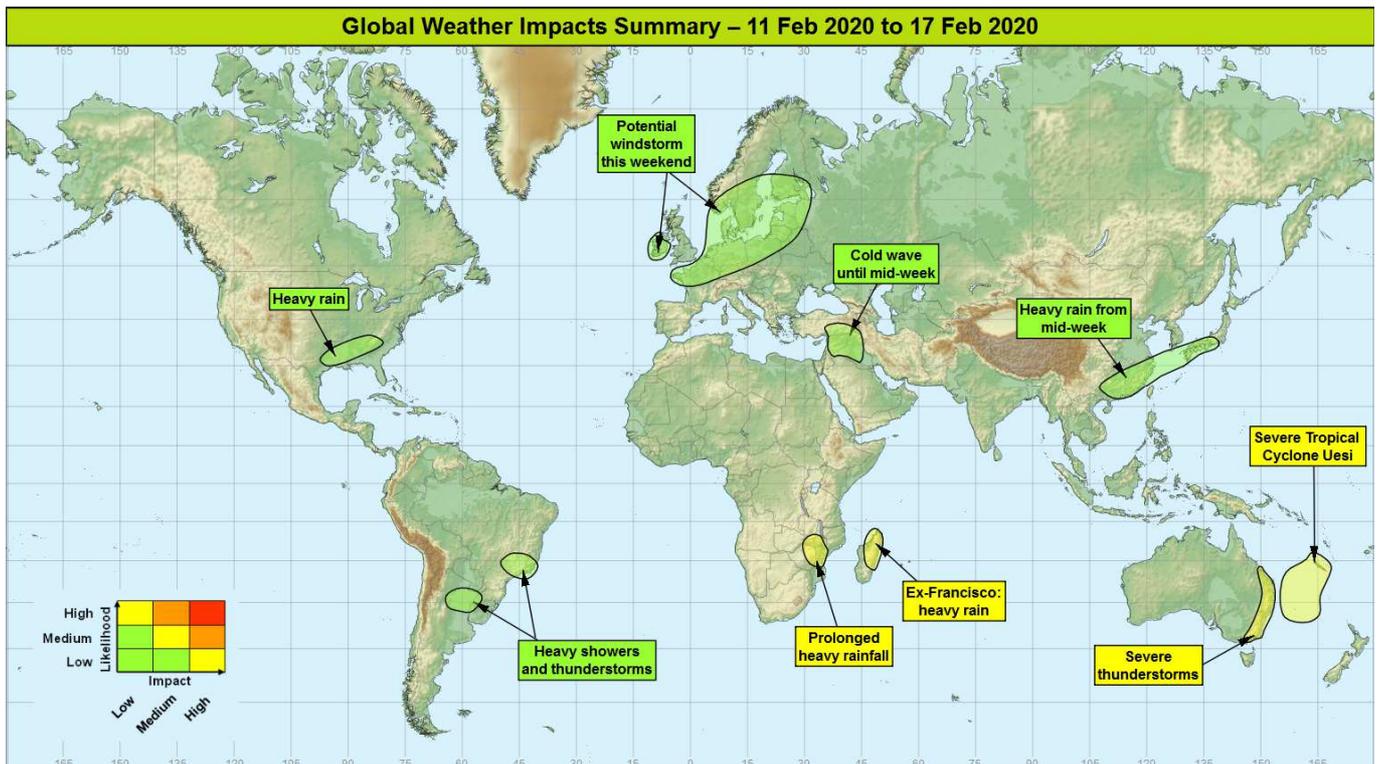


Global Weather Impacts – Tuesday 11th to Monday 17th February 2020

Issued on Tuesday 11th February 2020

HEADLINES

- Flooding likely to continue for parts of southeast Australia.
- Potential for significant flooding for parts of southeast Africa mid-week.
- Tropical Cyclone Uesi bringing heavy rain, and possibly damaging winds, to New Caledonia.



DISCUSSION

Tropical Cyclones

Southwest Pacific – Tropical Cyclone Uesi

Weather

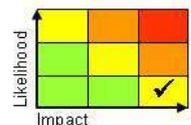
Severe Tropical Cyclone Uesi (sustained winds of 70 to 75mph) is expected to bring heavy rain and strong winds to parts of New Caledonia over the next 24 hours before continuing south. 300-500mm of rainfall is possible across the island. The most likely track of Uesi sees it continuing south adjacent to the east coast of Australia over the coming days and slowly weakening. However, there remains uncertainty over its track.

Discussion

The centre of Uesi is now close to the far northwest of New Caledonia with the system slowly moving southwards. There is now a good consensus that Uesi will continue to track south over the next couple of days with impacts mostly occurring in the next 24 hours. Longer term Uesi looks likely to continue south towards the Tasman Sea and slowly weaken as vertical wind shear develops. Its exact track still uncertain and there are a small minority of ensemble members which allow landfall over eastern Australia later this week.

Expected Impacts

Flash flooding (potentially very severe and widespread across New Caledonia) and an increased risk of landslides. There is a risk of significant wind impacts for New Caledonia in particular, and associated rough seas could impact marine travel in the region.



This forecast may be amended at any time

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Europe

Northwest Europe

Weather

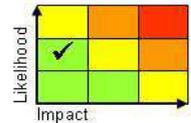
There are signs of another significant and widespread wind/rain storm developing into the weekend – arriving into the British Isles on Saturday and spreading quickly east across northwest Europe on Sunday.

Discussion

An energetic, NAO+ pattern is expected to continue through this week. A similar event to the preceding weekend looks possible, although predictability looks a little lower for this event with more model spread developing than seen in the previous week. The strong baroclinicity and jet stream will generate a widespread swathe of strong winds. The confluent nature of the broad troughing and associated frontal system bring the potential for significantly gusty/squally fronts.

Expected Impacts

Widespread impacts from wind, including damage to homes and businesses, and significant disruption to road, rail and air transport possible. Localised flooding from heavy rain is also a possibility.



North America

Southern and southeastern USA

Weather

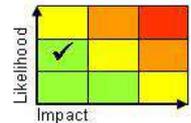
30-50mm of rain fell quite widely over the past 24 hours in this region, and a further 150-200mm of rain is expected in the highlighted area over the next couple of days, accompanied by locally severe thunderstorms and possible tornadoes. For context, this amount of rain would be close to twice the February average for Memphis (Tennessee). The system may also produce heavy snowfall over parts of northeast USA on Thursday, although this is less certain.

Discussion

A marked upper trough will engage strengthening baroclinicity over Central/SE US associated with warm, moist, Gulf of Mexico air flowing northwards to meet Arctic air coming southwards. This looks likely to spawn at least two individual waves, bringing areas of heavy rainfall rippling NE'wards along a similar track. With the trough likely to lead to marked wind shear/large CAPE, active thunderstorms, with a tornadic risk, look possible in the warm air, whilst as the more developed second wave come further N next week this brings a threat of snow falling across urban areas in the NE as it meets the cold air mass in situ here.

Expected Impacts

Flash and river flooding look like the most likely impacts, with severe thunderstorms and a few tornadoes also possible. Lower risk of transport disruption due to snow in urban areas of the far NE of the USA mid-week.



Central America

Nil significant.

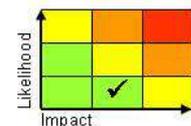
South America

Southeast Brazil

Weather

Heavy showers and thunderstorms are expected to develop within this zone, locally slow moving and torrential, with 50-100mm per day, and some locations seeing as much as 250mm through to the middle of this week. Rio de Janeiro typically sees around 100 mm through the whole of February.

Discussion



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The SACZ is expected to become increasingly active over the next few days, with a cyclonic upper pattern favouring it to become a focus for widespread deep convection. The slow moving nature of this system means that similar areas will be affected by heavy showers over the next few days. Forecast profiles show deep instability with PWAT of 50-60 mm, allowing for some torrential downpours.

Expected Impacts

Renewed threat of flash flooding and landslides.

Northern Argentina and Uruguay

Weather

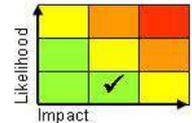
Increasing shower and thunderstorm activity is likely to develop later this week (likely from late Thursday or early Friday), bringing a risk of torrential downpours. 50-100mm per day is possible in the heaviest showers, with a risk of hail, frequent lightning and localised damaging wind gusts.

Discussion

A renewed pulse of the SACZ is forecast to come NE later this week, engaged by renewed troughing in the sub-tropical jet. High PWAT, accompanied by strong vertical shear and CAPE, should lead to the development of heavy thunderstorms, with the potential to organise into severe thunderstorms/MCS structures into the weekend.

Expected Impacts

Increased threat of flash flooding and landslides, particularly in mountainous terrain. Hail, lightning, and strong winds will be localised disruptors to transport, homes and businesses.



Africa

Mozambique, Zimbabwe, Malawi and Zambia

Weather

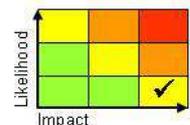
Torrential, thundery rain is forecast to continue across this region during the first part of this week – a few places yesterday reported between 80 and 150mm of rain in 24 hours. Many places will continue to see 20-50mm rain each day, with a few places likely to see 75-150mm in the heaviest, most frequent showers, and up to 500mm in total through the next few days where the rain becomes particularly heavy and prolonged. This is 4 to 5 times the February average for this region.

Discussion

The resident plume of warm tropical air across the area is forecast to interact with a slow moving upper vortex, allowing the formation of heavy diurnal showers and thunderstorms each day. Activity will tend to be concentrated along a combination of the ITCZ which dips south over the region, and a developing Indian Ocean Convergence Zone – both zones will be slow moving for the next few days allowing large totals to build up. The heaviest rain should tend to gradually migrate north next week, with drier weather developing further south.

Expected Impacts

Although much of the rainfall will be welcome across areas that have experienced rainfall deficits in recent times, significant flash and river flooding is possible.

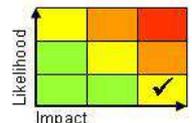


Madagascar

Weather

The remnants of a tropical cyclone (ex-Francisco) will gradually drift towards Madagascar to produce a focus for heavy showers and thunderstorms. 100-200mm is likely quite widely through the latter part of the week (mainly Friday onwards), with some places in the east perhaps seeing 400-500mm of rain over the course of a few days.

Discussion



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The remnants of tropical cyclone Francisco and its associated low-level moisture plume is gradually drifting towards Madagascar – along with an Equatorial Rossby Wave that is eventually expected to aid enhanced convection once the mid-upper troposphere start to become favourable again. In particular, the cyclone is wrapped by dry air which is limiting any convection at present, but as the circulation draws in increasing moisture from Madagascar itself this will likely initiate more active convection followed by heavy rain enhanced by favourable topography in the east of the island.

Expected Impacts

Flash flooding and landslides possible, this on top of what has been a wet few weeks with numerous flooding and landslide impacts already reported.

Middle East

Eastern Turkey, Syria, Iraq, Lebanon and Jordan

Weather

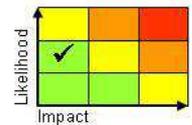
A very cold airmass has moved across this region bringing temperatures some 10-15°C below normal, both by day as well as overnight. Widespread overnight frosts will continue, severe in the north of this region, until milder conditions gradually become established from the west over the next couple of days.

Discussion

A storm system cleared east through Saturday, allowing a Pc airmass to quickly overspread the region. Ideal radiation conditions of clear skies, dry air, and light winds means some exceptionally low minima are likely. NE Syria reported recent overnight minima of around minus 10°C, which is likely to be a local record for many places, and the average overnight minimum in February is 4°C. Most parts of Syria and Iraq have been around 0°C to minus 3°C overnight.

Expected Impacts

Cold wave likely to have impacts for vulnerable population groups in the region unable to access adequate shelter and heating.



Asia

China, Southern Japan

Weather

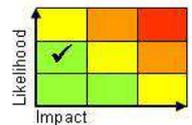
Areas of heavy rain and showers are expected to develop quite widely over the next few days, with weather systems breaking forward from the main area across China to bring heavy rain and possibly strong winds to the southern half of Japan too. 100-150mm is likely fairly widely over the next few days, some places, particularly those exposed to a south-westerly flow, could see over 300mm, which would be 3 times the February average for somewhere like Ganzhou.

Discussion

Broad troughing in the sub-tropical jet over China will generate heavy rain along the quasi-stationary frontal zone here, wave depressions breaking forward to bring heavy rain across southern Japan too. Within the warm air significant deep instability is present, with potential for organised, heavy showers and thunderstorms in a high PWAT airmass.

Expected Impacts

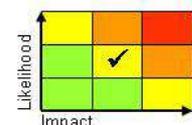
Localised flash flooding, landslides, and potential for some rivers to flood too given the duration of the event.



Australasia

Southeast Australia

Weather



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Heavy showers and thunderstorms are expected to persist in parts of southeast Australia for a few more days. Thunderstorms will be capable of producing up to 50-100 mm of rain in places within a few hours. Frequent heavy showers and the threat of severe thunderstorms will also extend further inland at times. In addition to the rainfall there is the potential for damaging gusts of wind, large hail and frequent lightning. Cities including Sydney and Brisbane look prone to seeing further torrential downpours over the next few days.

Discussion

An upper vortex will remain slow moving over this region, maintaining very unsettled conditions. Profiles highlight the risk of heavy showers and thunderstorms along the coast with very moist, but skinny CAPE indicative of efficient rain producers, whilst inland profiles exhibit greater CAPE values with potential for hail/strong winds.

Expected Impacts

Flash flooding, especially in populated coastal areas, along with hail and wind damage, and a high risk of river flooding. Aviation and power networks could be disrupted by lightning damage.

Additional Information

Nil.

Issued at: 110845 UTC **Meteorologists:** D J Harris / Chris Bulmer

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