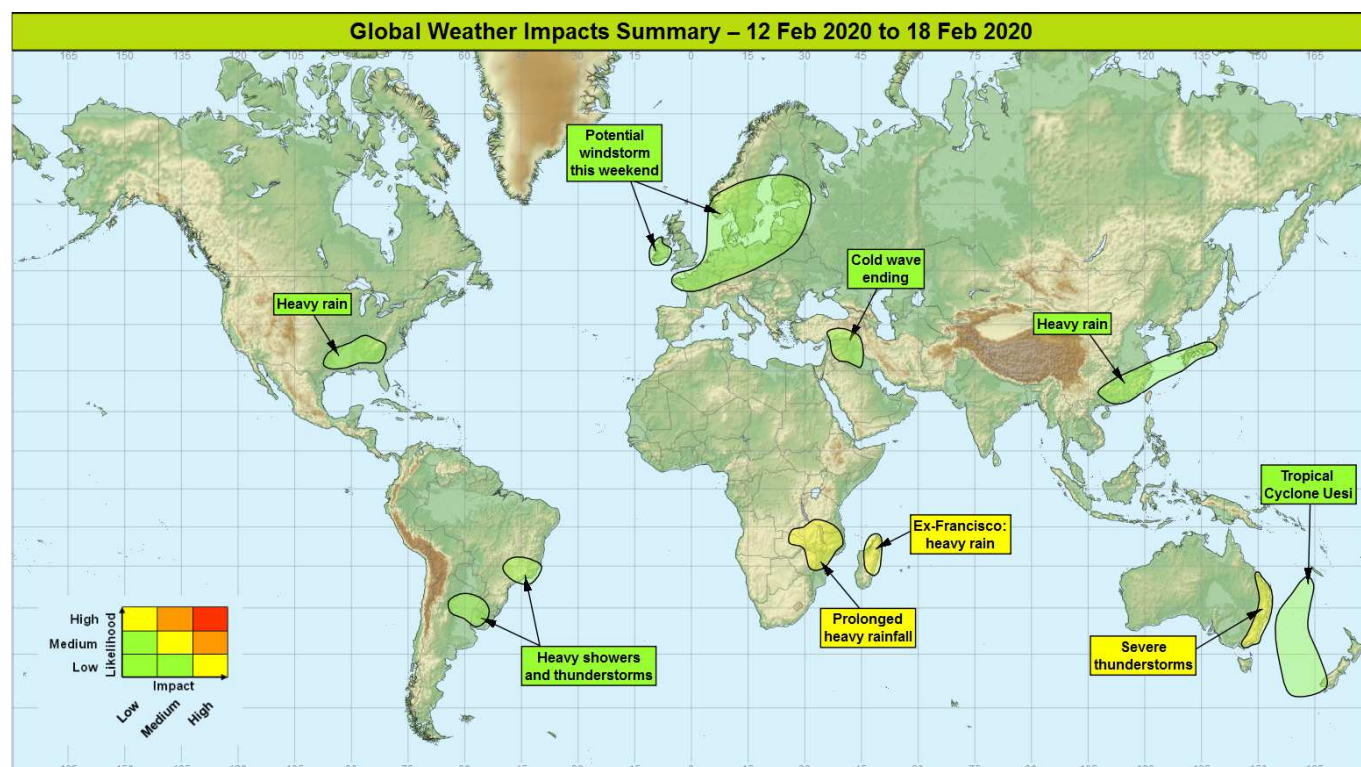


Global Weather Impacts – Wednesday 12th to Tuesday 18th February 2020

Issued on Wednesday 12th February 2020

HEADLINES

- Flooding likely to continue for parts of east and southeast Australia.
- Potential for significant flooding for parts of southeast Africa midweek.
- Severe Tropical Cyclone Uesi clearing from New Caledonia.



DISCUSSION

Tropical Cyclones

Southwest Pacific – Tropical Cyclone Uesi

Weather

Tropical Cyclone Uesi (sustained winds of 65 to 70 mph) is now clearing south of New Caledonia with rain and strong winds easing here. The most likely track of Uesi sees it continuing south offshore of Australia over the Tasman Sea over the coming days whilst slowly weakening. There is now a growing consensus that Uesi, as an ex-tropical system, will reach the South Island of New Zealand over the weekend bringing heavy rain and the possibility of strong winds.

Discussion

The centre of Uesi is now southwest of New Caledonia with the system slowly moving south then southwestwards. There is now a good consensus that Uesi will continue to track south over the next couple of days with impacts easing over New Caledonia. Longer term Uesi looks likely to continue south over the Tasman Sea and slowly weaken as vertical wind shear increases. Its exact track still uncertain but there is a growing consensus that ex-Uesi will reach the South Island of New Zealand.



This forecast may be amended at any time

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Expected Impacts

Rough seas could impact marine travel in the Tasman Sea. Flash flooding and/or damaging winds possible for New Zealand over the weekend although much of the rainfall probably falling in resilient areas.

Europe

Northwest Europe Weather

There are signs of another significant and widespread wind/rain storm developing over the weekend with its impacts lasting into early next week. Strong winds and heavy rain will initially arrive into the British Isles during Saturday and then spread quickly east across northwest Europe over the weekend and into Monday. This has been named storm Dennis by the UK Met Office.

Discussion

An energetic, NAO+ pattern is expected to continue into next week. A similar event to last weekend looks possible, although perhaps a little less severe generally. 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, sea and air transport is possible. Flooding from heavy rain also possible.



North America

Southern and southeastern USA Weather

Heavy rain is expected across some southern and southeastern parts of the USA over the next couple of days with 150-200mm of rain in places. This 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 and localised freezing rain over parts of northeast USA on Thursday.

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 will spawn an active wave depression bringing areas of heavy rainfall rippling NE'wards. With the trough likely to lead to marked wind shear/large CAPE, active thunderstorms, and a tornadic risk, look possible in the warm air. As the wave comes further N this will lead to 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 later this week.



Central America

Nil significant.

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South America

Southeast Brazil

Weather

Further heavy showers and thunderstorms are expected over southeast Brazil during the next few days. This brings the potential for 50-100mm in places each day, and some locations seeing as much as 250mm by later this week. Rio de Janeiro typically sees around 100 mm through the whole of February.

Discussion

The SACZ will remain 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 leading to transport disruption.



Northern Argentina and Uruguay

Weather

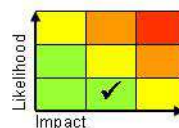
Increasing shower and thunderstorm activity is likely to develop later this week (likely from late Thursday or early Friday), bringing a risk of torrential downpours. 50-100mm per day is possible in the heaviest showers, with a risk of hail, frequent lightning and localised damaging wind gusts.

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 by this 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, as well as to homes and businesses.



Africa

Tanzania, Mozambique, Zimbabwe, Malawi and Zambia

Weather

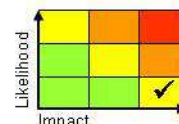
Torrential, thundery rain is forecast to continue across this region until later this week – a few places yesterday reported between 60 and 80mm of rain in 24 hours. Many places will continue to see 20-50mm rain each day, with a few places likely to see 75-150mm in the heaviest, most frequent showers, and up to 500mm in total by the weekend 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.



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Madagascar

Weather

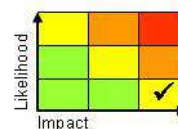
The remnants of a tropical cyclone (ex-Francisco) will produce a focus for heavy showers and thunderstorms in the north and east of Madagascar. 100-200mm is likely quite widely through the latter part of this week (mainly Friday onwards), with some places in the east perhaps seeing 400-500mm of rain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

Discussion

The remnants of tropical cyclone Francisco and its associated low-level moisture plume, 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 will bring some thunderstorms. The remains of the cyclone are wrapped by dry air which is limiting any convection at present, but as the circulation draws in increasing moisture from Madagascar itself, and 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 and Jordan

Weather

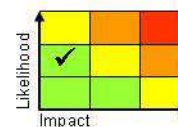
A very cold airmass has brought temperatures some 10-15°C below normal, both by day as well as overnight with widespread overnight frosts. Milder conditions are now gradually becoming established from the west.

Discussion

A storm system cleared east over the weekend, 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. Disruption to transport



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Australasia**Southeast Australia****Weather**

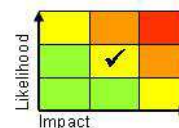
Heavy showers and thunderstorms are expected to persist in parts of southeast Australia for a couple more days. Thunderstorms will be capable of producing up to 50-100 mm of rain in places within a few hours, as evidenced by 70mm in 24 hours near Rainbow Beach, south Queensland. Frequent heavy showers 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 couple of 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 the potential for hail/strong winds.

Expected Impacts

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

**Additional Information**

Nil.

Issued at: 120830 UTC **Meteorologists:** Chris Tubbs / Chris Bulmer

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