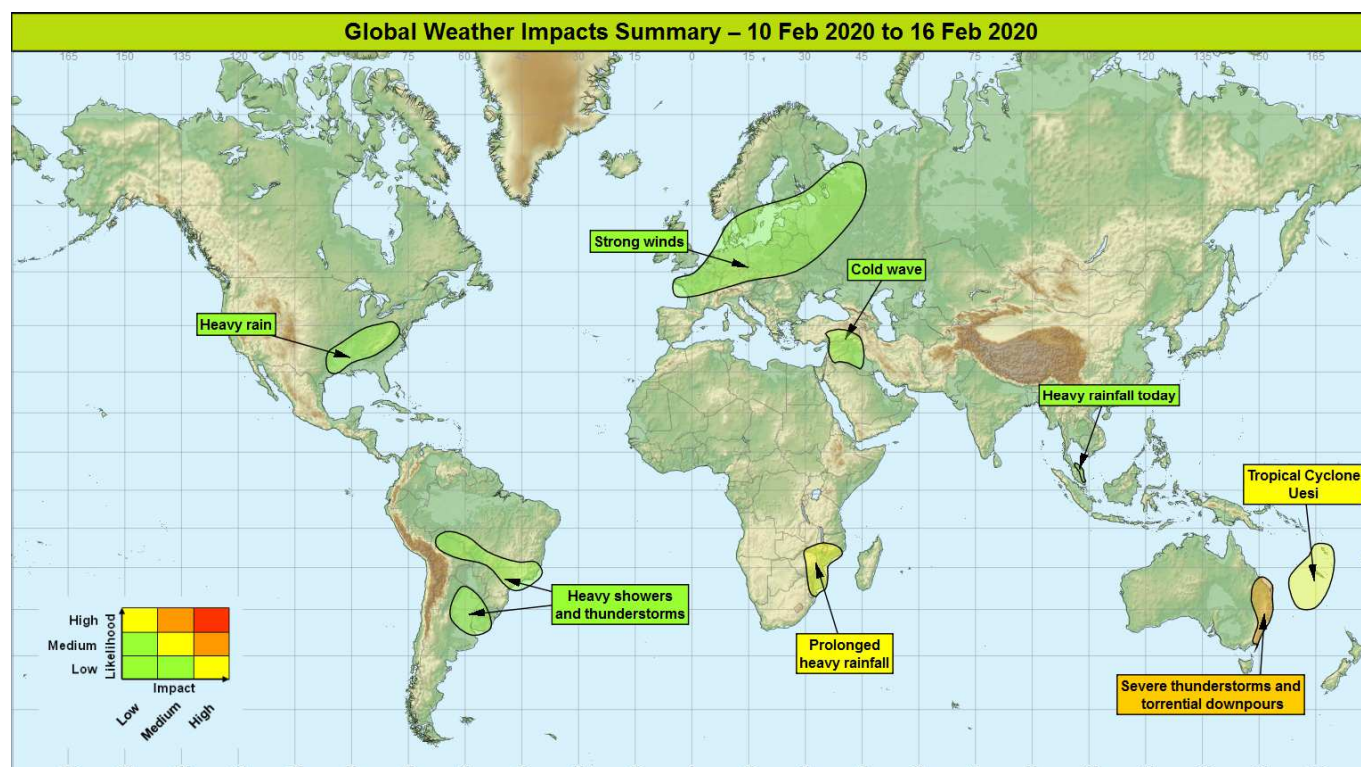


Global Weather Impacts – Monday 10th to Sunday 16th February 2020

Issued on Monday 10th February 2020

HEADLINES

- Severe thunderstorms and flooding threat continues for eastern Australia through the next week.
- Potential for significant flooding parts of Mozambique and Zambia mid-week.
- Tropical Cyclone Uesi brings heavy rain, and possibly damaging winds, to Vanuatu/New Caledonia



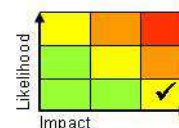
DISCUSSION

Tropical Cyclones

Southwest Pacific – Tropical Cyclone Uesi

Uesi formed yesterday west of Vanuatu, and is expected to both slowly strengthen and slowly drift southwards. There is still some uncertainty as to the exact track of this system through the next 48 hours, however it now looks most likely that it will pass west of New Caledonia through Tuesday. That said heavy rainfall is expected (300-500mm) over New Caledonia over the coming days, with a further 100-200 mm on top of the 150-200mm that has fallen across Vanuatu in the past 24 hours. As Uesi heads towards New Caledonia, there will be an increasing threat of damaging winds, with mean speeds approaching 80mph and gusts to 100mph.

Discussion



This forecast may be amended at any time

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Uesi formed yesterday from the consolidation of enhanced convection associated with a broad tropical low, and will gradually drift S given a weak N to NW'ly steering flow. Conditions are conducive for further, mainly slow, strengthening, with indications that increasing vertical shear will be met after the system passes New Caledonia. There is currently a large spread in model tracks, which is reflected by the unusually broad warning cone at early lead times issued by RMSC Nadi, but there is high confidence in New Caledonia being affected by at least heavy rain in association with this system. Longer term there is a small risk that the remnants of this system could further enhance rainfall for eastern Australia.

Expected Impacts

Flash flooding 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.

Europe

Northwest Europe

Weather

A significant northwest European windstorm (named Ciara by the UK Met Office) will slowly weaken today as it heads up towards northern Scandinavia – despite this it will continue to bring gusts of wind of widely 50-60mph in a broad swathe across the highlighted area. This will be accompanied by squally showers and areas of heavier rain. Remaining unsettled over the next few days thereafter but more usual for the time of year.

Discussion

Storm Ciara is associated with a strong, zonal jet which will propagate across Central Europe over the next few days, combined with a strong thermal and surface pressure gradient which will bring a further spell of widely windy weather, showers in the cold air and potential for weak waves to run through the flow locally enhancing wind and rain/snow. The pattern becomes more amplified from mid-week, with a more changeable flow developing in response.

Expected Impacts

Main impact will be on transport and aviation with disruptions/cancellations to journeys, and potential for knock on impacts due to recovery of aircraft into the UK. Some minor structural damage possible.



North America

Southern and south-eastern USA

Weather

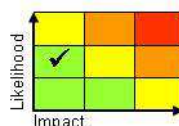
200-250mm of rain is expected in the highlighted area over the next few days, accompanied by locally severe thunderstorms and tornadoes. For context, this amount of rain would be close to twice the February average for Memphis (Tennessee). The system may also produce some snowfall for parts of the NE USA, 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.

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South America

South Brazil, Bolivia

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

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, Uruguay

Weather

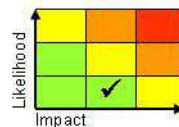
Increasing shower and thunderstorm activity is likely to develop, arriving from the south on Thursday/Friday, bringing a risk of torrential downpours towards the end of the week. 50-100mm per day is possible in the heaviest showers, with a risk of hail, frequent lightning and localised damaging wind 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, far north-east of South Africa, Eswatini

Weather

Torrential, thundery rain is forecast to develop across this region during the first part of this week – many places seeing 20-50mm rain in a day or two, but a few places likely to see 50-100mm in the heavier 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 will interact with the predominately slightly cyclonic upper flow 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.

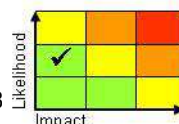
Expected Impacts

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.



Middle East

Eastern Turkey, Syria, Iraq, Lebanon, Jordan



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Weather

A very cold airmass will settle across the region over the next couple of days bringing temperatures some 10-15°C below normal, both by day as well as overnight. Widespread severe frost is likely.

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.

Expected Impacts

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

Asia

West Malaysia

Weather

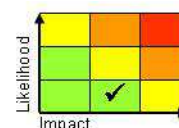
Enhanced showers and thunderstorms are expected across this area today. Many places are likely to see between 50 and 100mm of rain, a few places could see in excess of 150mm in a few hours.

Discussion

An Equatorial Rossby Wave will bring enhanced deep convection to this part of the Malay Peninsula today, topography and wind direction helping to concentrate the rainfall into a relatively small area.

Expected Impacts

Flash flooding and increased risk of landslides.



Australasia

Eastern Australia

Weather

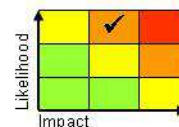
Heavy showers and thunderstorms are expected to persist along the eastern coast for a few more days. Storms will be capable of producing up to 100-200 mm of rain, with some significant totals likely in a few hours. Frequent heavy showers and the threat of severe thunderstorms will also extend further inland, with the potential for some locations seeing accumulations of up to 200 mm per day, and as much as 300-500 mm in total. In addition to the rainfall there is the potential for damaging gusts of wind, large hail and frequent lightning. Sydney has already seen 391.6 mm of rainfall over a period of four days.

Discussion

An upper vortex is expected to sit over south-eastern Australia through much of the next week, maintaining the 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

Significant 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

With unsettled weather and periods of rain across much of eastern and south-eastern Australia, many of the wildfires here have been significantly reduced in size, or extinguished altogether. For now, further sig impacts from wildfires and/or exceptional heat are not expected during this period.

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Issued at: 100830 UTC **Meteorologists:** D J Harris / Mark Sidaway

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