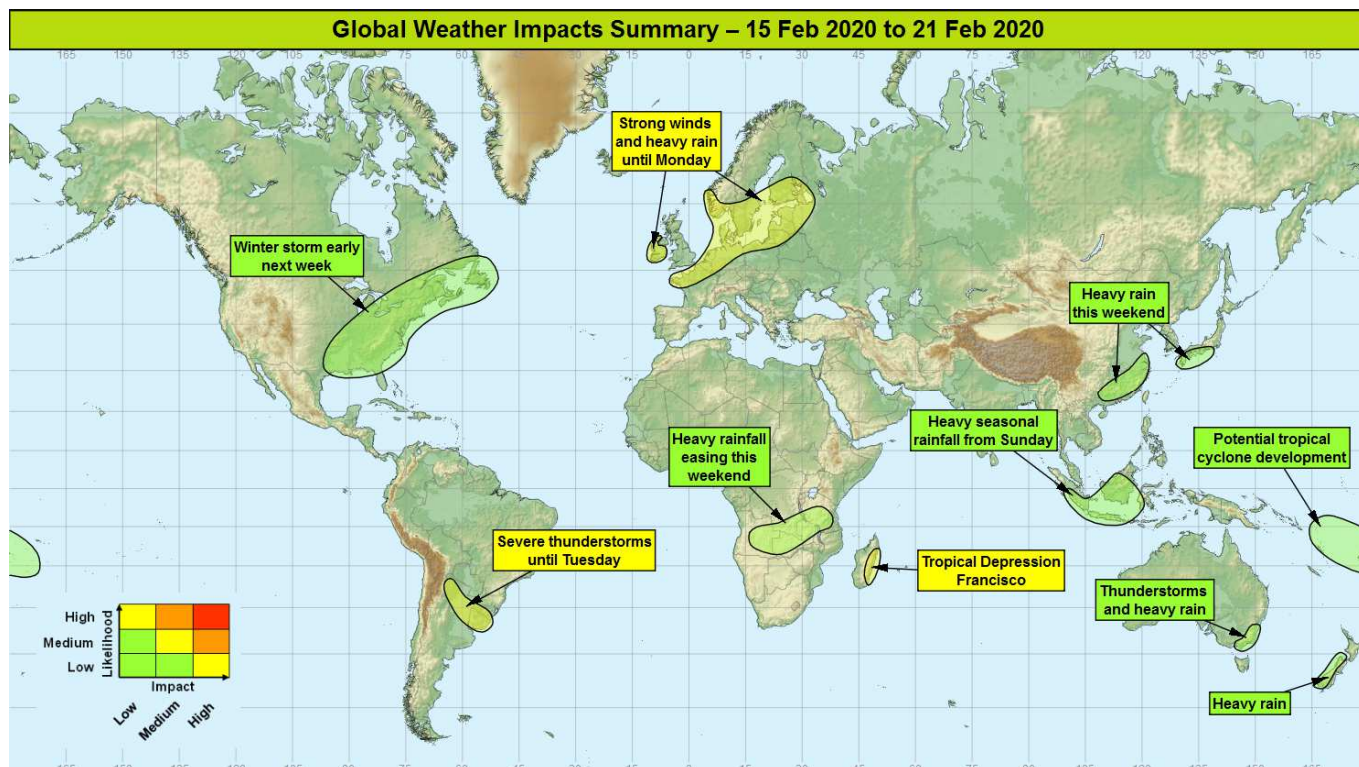


Global Weather Impacts – Saturday 15th to Friday 21st February 2020

Issued on Saturday 15th February 2020

HEADLINES

- Disruptive winds and heavy across much of north and northwest Europe this weekend.
- Tropical Depression Francisco to bring further heavy rainfall to parts of Madagascar.
- Severe thunderstorms likely to bring disruptive conditions to parts of South America.



DISCUSSION

Tropical Cyclones

Tropical Depression Francisco (Southwest Indian Ocean including Madagascar)

Weather

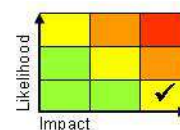
Francisco was located immediately offshore along the east coast of Madagascar early on Saturday with maximum sustained winds of around 35 mph. However, it is frequent heavy showers and thunderstorms which will be the primary concern over the weekend before easing through Monday. Over the next 3 days, much of coastal eastern Madagascar is likely to receive 50-100 mm with locally 300-500 mm possible along the central eastern coast (northern Fianarantsoa Province).

Discussion

Shower and thunderstorm activity associated with what was ex-Francisco became sufficiently organised on Friday to be reclassified as a tropical depression. However, this is relatively inconsequential to the forecast evolution which is focused on heavy rainfall across eastern Madagascar over the weekend.

Expected Impacts

An enhanced risk of surface water and riverine flooding, as well as landslides in more mountainous regions.



This forecast may be amended at any time

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The following area is also being monitored for potential development affecting land over the next week:

Southwest Pacific Ocean

Weather

There is a moderate likelihood of one or more tropical cyclones to develop near Fiji and/or Vanuatu later this weekend or early next week before moving southeast. This has the potential to bring damaging winds and/or torrential rain to some of the Pacific Islands in the highlighted area including Vanuatu, Fiji, Tonga and Samoa and American Samoa.

Discussion

There is a growing signal for the development of one or more tropical cyclones in the southwest Pacific Ocean early next week as the MJO slowly migrates eastward. However, there continues to be significant differences across deterministic output regarding any system's intensity and track.

Expected Impacts

Risk of damaging winds, flooding and high seas resulting in disruption to maritime transport.



Europe

North and northwest Europe

Weather

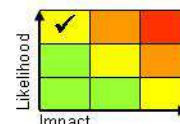
Another very unsettled spell is underway in association with a very deep area of low pressure (named *Dennis* by the Met Office). Strong winds are expected to develop and transfer eastwards through the next 2-3 days. In addition, heavy persistent rain will also impact parts of the highlighted area. Conditions will tend to improve from the west early next week.

Discussion

Dennis is currently undergoing an explosive deepening phase before reaching maturity south of Iceland later on Saturday. Strong winds and fronts associated with this low will spread east across northern Europe over the weekend. Whilst models are broadly in very good agreement there is still some local uncertainty regarding the potential for minor waves to develop along the trailing frontal zone which may act to intensify already strong winds to parts of the highlighted area.

Expected Impacts

Widespread impacts to travel are expected with disruption to road, rail, sea and air transport. Winds may also be strong enough to cause more localised damage to structures and buildings. There is also an increased threat of flooding to homes and businesses.



North America

Eastern USA and southeast Canada

Weather

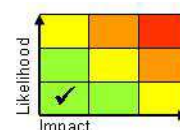
A winter storm is expected to develop on Monday across central parts of the USA on Monday, before intensifying and transferring east through the following days, likely moving out into the Atlantic by or through Thursday. This system will bring very heavy rainfall (up to 100 mm in a few days) in places (especially southern parts of the highlighted area) with heavy snow and freezing rain in more northern parts of the area.

Discussion

The combination of an eastward travelling upper trough from the Rockies and a northward extending warm plume from the Gulf of Mexico will develop a low pressure area and strengthening frontal system early next week.

Expected Impacts

Flash flooding in more southern areas looks possible, with winter hazards in the north of the area likely disrupting transport and power network.



Central America

Nil significant.

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South America**Uruguay, northern Argentina and the far southeast of Brazil****Weather**

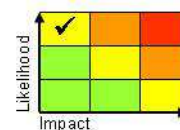
Heavy shower and thunderstorm activity is expected to continue through to Tuesday with thunderstorms likely to be severe in places, bringing a risk of torrential downpours. 50-100 mm per day is possible in the heaviest showers, with a risk of hail, frequent lightning and localised damaging wind gusts. Over the next 4 days, there is potential for localised rainfall totals of 200 mm, which is almost double the February average rainfall in this region.

Discussion

A renewed pulse of the SACZ is forecast affect the region, induced by renewed troughing in the sub-tropical jet. High precipitable water accompanied by high instability and vertical wind shear should lead to the development of further severe thunderstorms with the potential for these upscale into mesoscale convective systems.

Expected Impacts

Ongoing threat of flash flooding and landslides, particularly in mountainous terrain. Hail, lightning, and strong winds may disrupt transport and cause localised damage to homes and businesses.

**Africa**

Madagascar – see *Tropical Cyclones* section.

Southern Tanzania, Malawi, Zambia, Angola and southern Democratic Republic of Congo**Weather**

Torrential, thundery rain will ease from the east across this region over the weekend after a period of enhanced seasonal rainfall and flooding impacts. Many places will continue to see 25-50 mm rain each day, with a few places likely to see 75-150 mm in the heaviest, most frequent showers.

Discussion

The resident plume of warm tropical air across the area will continue to interact with small scale PV anomalies over the weekend, allowing the formation of diurnal showers and thunderstorms. Activity will tend to be concentrated along the ITCZ. The rainfall will ease early next week as the upper forcing weakens.

Expected Impacts

Although much of the rainfall will be welcome across areas that have experienced rainfall deficits in recent times, surface water and riverine flooding is possible.

**Middle East**

Nil significant.

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Asia**Southeast China and southern Japan****Weather**

Further heavy rain and showers are expected across southern China and southern Japan over the weekend with 50-100 mm of rain expected quite widely. As the frontal zone clears south the rain is likely to turn to snow across parts of southern and eastern China, with a threat of significant snowfall in places.

Discussion

Broad troughing in the subtropical jet over China will maintain an area of heavy rain along the quasi-stationary frontal zone on Saturday. A wave depression breaking forward across Japan will bring heavy rain and stronger winds across southern Japan. Within the warm air significant deep instability is present, with potential for organised, heavy showers and thunderstorms in a high PWAT airmass. As the front clears south cold advection will lower the WBFL to allow for snow to fall to low levels before the precip clears.

Expected Impacts

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

**Parts of Indonesia****Weather**

An increase in the frequency and intensity of heavy showers and thunderstorms are expected from Sunday, continuing through next week, across parts of Indonesia, including Java. Up to 100 mm of rain could fall in a 6-12 hour period in association with these thunderstorms.

Discussion

The ITCZ looks likely to become more intense later this weekend due to a surge in NE'ly monsoon to the north and more of a southerly flow from the south. This enhanced low level convergence will increase the potential for more widespread and intense convection.

Expected Impacts

Increased threat of flash flooding and landslides.

**Australasia****Victoria and New South Wales, Australia****Weather**

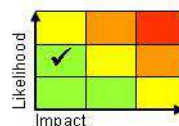
Further heavy showers and thunderstorms are expected to affect eastern Victoria (including Melbourne and bushfire affected regions of East Gippsland) and New South Wales until Tuesday. As seen on Friday, localised rainfall accumulations of 40-60 mm are possible in a few hours, accompanied by strong winds and large hail.

Discussion

A plume of tropical origin will remain slow-moving across southeast Australia over the next few days and will be engaged by shortwave troughs associated with a broadly cyclonic upper pattern. Forecast profiles continue to support the diurnal development of scattered thunderstorms with precipitable water of 35-40 mm.

Expected Impacts

Increased threat of surface water and riverine flooding, particularly as this follows a period of well-above average rainfall. Lightning and hail may also cause localised damage to property and infrastructure.



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South Island, New Zealand**Weather**

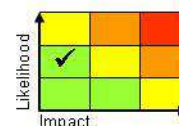
The remnants of Tropical Cyclone *Uesi* are likely to track close to the far southwest of New Zealand over the weekend. This will bring persistent, heavy rain across and to the west of the Southern Alps. 50-100mm will fall widely over a couple of days with more isolated totals of 200-250mm over high ground. Strong winds will accompany the rain although the system has already weakened substantially since it was a tropical cyclone.

Discussion

The remnants of *Uesi* are now embedded within the mid-latitude flow and lies on the eastern flank of an upper trough emerging into the Tasman Sea. The tropical airmass embedded within the circulation will provide ample moisture as it impinges on the steep terrain on South Island and lead to significant orographic rainfall.

Expected Impacts

Rough seas could impact marine travel in the Tasman Sea. Flash flooding possible for New Zealand over the weekend although much of the rainfall probably falling in resilient areas. Also, an increased threat of landslides which could impact transport and/or damage buildings.

**Additional Information**

Nil.

Issued at: 150300 UTC **Meteorologists:** Matthew Lehnert/Chris Bulmer

Global Guidance Unit

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