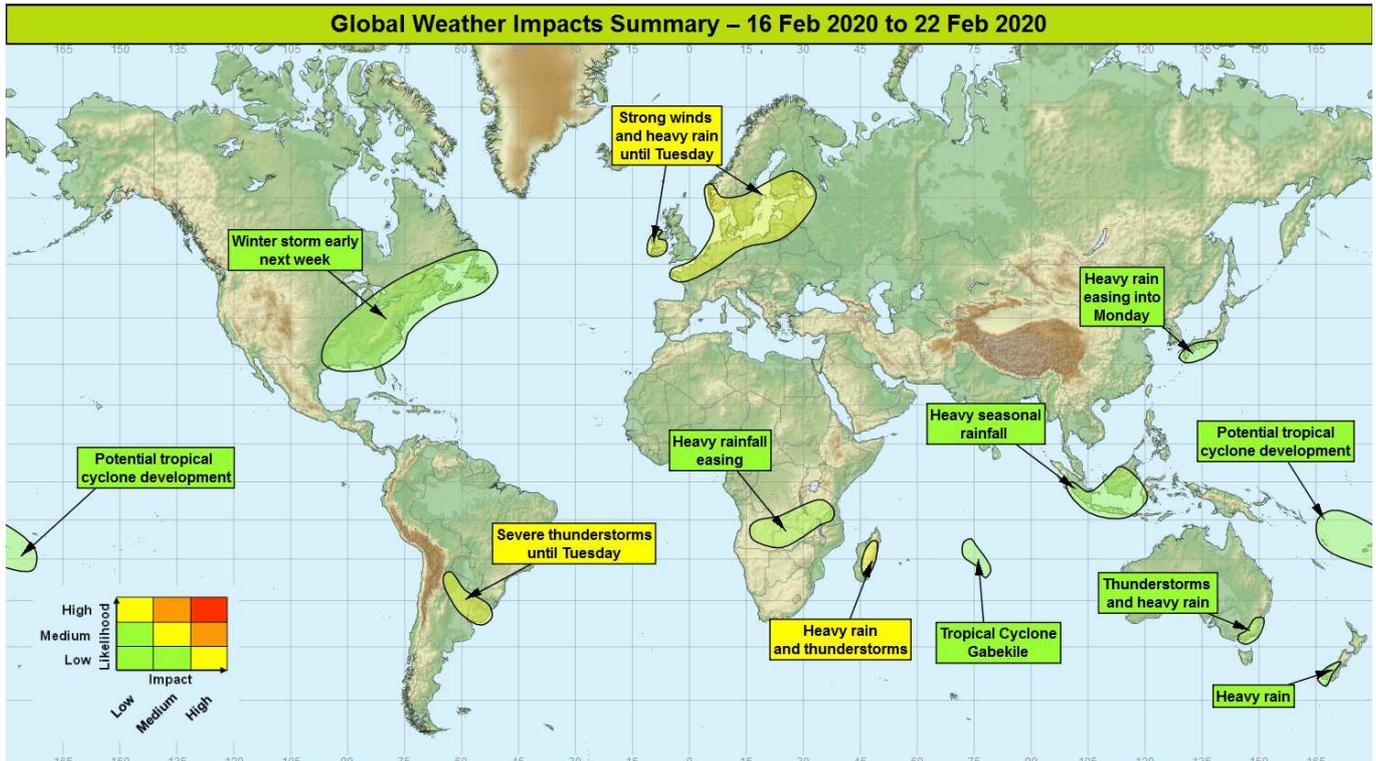


Global Weather Impacts – Sunday 16th to Saturday 22nd February 2020

Issued on Sunday 16th February 2020

HEADLINES

- Disruptive winds and heavy rain across much of north and northwest Europe this weekend.
- Further heavy rain/thunderstorms for parts of Madagascar.
- Severe thunderstorms likely to bring disruptive conditions to parts of South America.



DISCUSSION

Tropical Cyclones

Tropical Cyclone Gabekile (Southwest Indian Ocean)

Weather

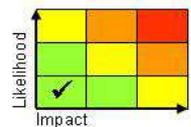
Gabekile formed on Saturday well to the east of Rodrigues Island. The expected track of the storm is open to a lot of uncertainty, but the likelihood is it will stay over open water, peaking in strength today (Sunday), with maximum sustained winds around 80 mph. A gradual weakening is expected thereafter.

Discussion

Gabekile formed from the interaction of a passing convectively-coupled Rossby Wave and an area of enhanced convection. It is expected to track generally south, remaining away from any land.

Expected Impacts

Nil.



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

Southwest Pacific Ocean

Weather

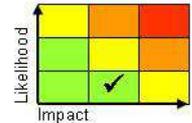
There is a moderate likelihood of one or more tropical cyclones developing near Fiji and/or Vanuatu over the next few days before moving southeast. This has the potential to bring damaging winds and/or torrential rain to some of the Pacific Islands in the highlighted area including Vanuatu, Fiji, Tonga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

Discussion

There is a continuing 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

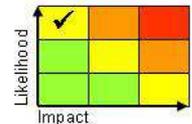
Another very unsettled spell is underway in association with a very deep area of low pressure (named *Dennis* by the Met Office). Strong winds are expected transfer eastwards through the next 2-3 days. In addition, heavy persistent rain will also impact parts of the highlighted area. Conditions will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

Discussion

Dennis underwent explosive deepening overnight Friday and into Saturday. Central pressure fell close to 920hPa, making it one of the deepest areas of low pressure recorded in the North Atlantic. Whilst the storm system remains close to SE Iceland, its influence (very strong winds and heavy rain) extends across most of NW Europe. *Dennis* will begin to fill into next week, though strong to gale force winds are likely to continue across NW Europe until Tuesday, though with the focus for strongest winds transferring from west to east.

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

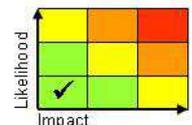
A winter storm is expected to develop on Monday across central parts of the USA, before intensifying and transferring east through the following days, likely moving out into the Atlantic by or through Thursday. This system will bring very heavy rainfall (up to 100 mm in a few days) in places (especially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

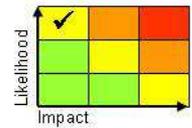
Heavy shower and thunderstorm activity is expected to continue through to Tuesday with thunderstorms likely to be severe in places, bringing a risk of torrential downpours. 50-100 mm per day is possible in the heaviest showers, with a risk of hail, frequent lightning and localised damaging wind gusts. 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 to affect the region, induced by renewed troughing in the sub-tropical jet. High precipitable water accompanied by high instability (locally up to 4000J/kg of SBCAPE) 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. Isolated tornadoes are possible.



Africa

Madagascar

Weather

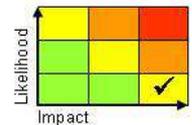
The remnants of ex-Tropical Storm Francisco will be the focus for heavy showers and thunderstorms well into next week. Much of coastal eastern Madagascar is likely to receive 50-100 mm with locally 300-500 mm possible along the central eastern coast (northern Fianarantsoa Province). Further inland, Antananarivo is likely to see the heaviest rainfall over the next 24-36 hours, when 50-100 mm is likely, this approaching one third of the average ppp for February.

Discussion

The moisture footprint and inherent instability left over from ex-Francisco is likely to act as the focus for further torrential downpours and thunderstorms well into the coming week. With the terrain of central and eastern Madagascar being extreme in places, impacts from torrential rain are possible.

Expected Impacts

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



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

Weather

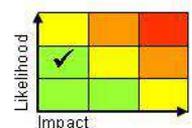
Torrential, thundery rain will ease from the east across this region over the weekend after a period of enhanced seasonal rainfall and flooding impacts. Many places will continue to see 25-50 mm rain each day, with a few places likely to see 75-150 mm in the heaviest, most frequent showers.

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

Southern Japan

Weather

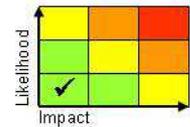
Further heavy rain and showers are expected across southern Japan over the next 24-36 hours, with 50-100 mm of rain expected. The cold front responsible for the rain should clear by the start of Monday, allowing much more settled weather to follow.

Discussion

An upper trough is signalled to engage pre-existing baroclinicity, allowing an area of low pressure to develop to the N of Japan. Its associated cold front is likely to be initially aligned with the upper flow, with it being slow-moving through much of today across southern Japan. As the driving trough pushes E across the Korean Peninsula, upper flow veers, helping to drive the cold front S of Japan by Monday morning/

Expected Impacts

Localised flash and river flooding, landslides, and disruption to transport is likely.



Parts of Indonesia

Weather

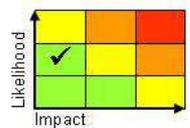
An increase in the frequency and intensity of heavy showers and thunderstorms are expected through the next week, across parts of Indonesia, including Java. Up to 100 mm of rain could fall in a 6-12 hour period in association with these thunderstorms.

Discussion

The ITCZ looks likely to become more intense over the next day or so 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

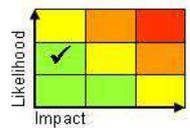
Further heavy showers and thunderstorms are expected to affect eastern Victoria (including Melbourne and bushfire affected regions of East Gippsland) and New South Wales until Tuesday. As seen on Friday, localised rainfall accumulations of 40-60 mm are possible in a few hours, accompanied by strong winds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



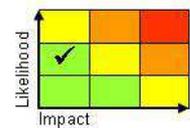
South Island, New Zealand

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 until Monday. 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.



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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: 160300 UTC

Meteorologists: Jason Kelly/Matthew Lehnert

Global Guidance Unit

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