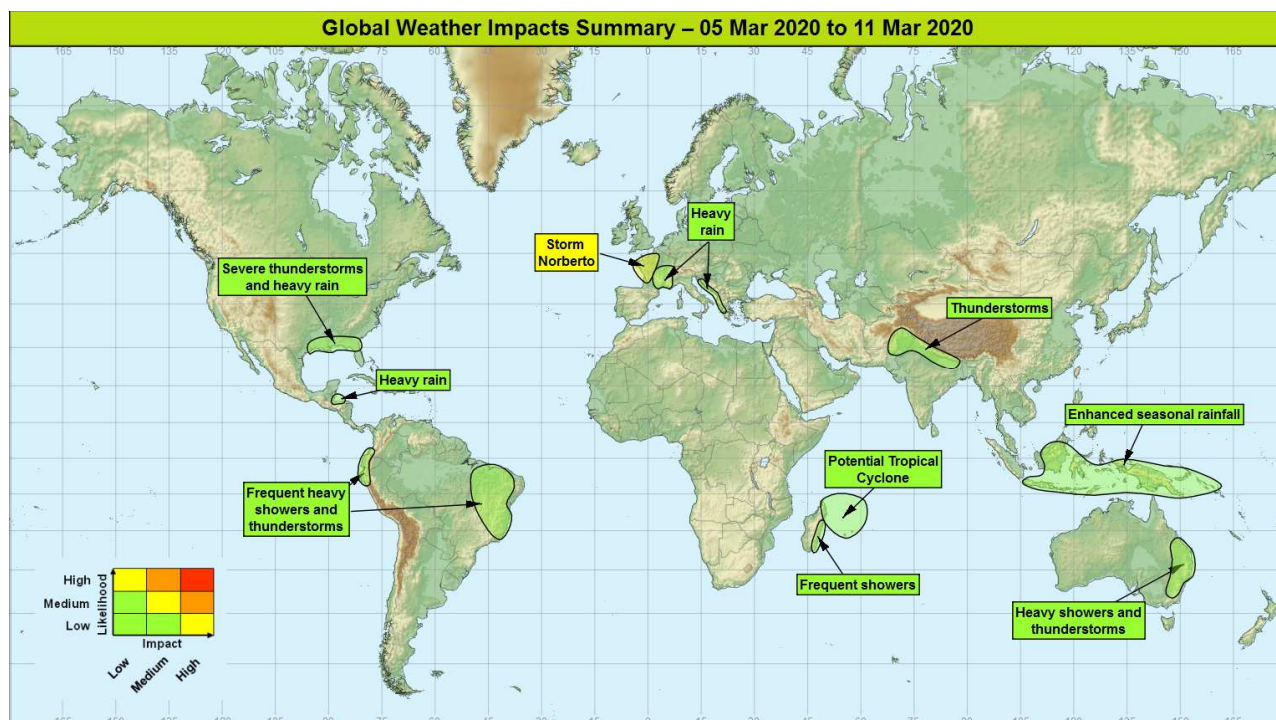


Global Weather Impacts – Thursday 5th to Wednesday 11th March 2020

Issued on Thursday 5th March 2020

HEADLINES

- Storm Norberto; very strong winds to parts of western and central France today.
- Further enhanced seasonal rainfall for parts of Indonesia.
- Further heavy rainfall for Madagascar and possible Tropical Cyclone development.



DISCUSSION

Tropical Cyclones

There are currently no active tropical cyclones.

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

Southwest Indian Ocean (Madagascar, Mascarene Islands)

Weather

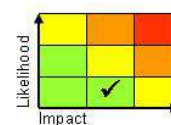
An area of disturbed weather is located to the east of Madagascar and north of La Reunion, with potential for a tropical cyclone to emerge over the coming week. Confidence is currently very low with respect to the track/intensity of any system should it develop.

Discussion

The combination of an ERW and above normal SST's in this region is leading to increased convective activity, but the development of a tropical cyclone over the next few days seems to be mitigated against by strong vertical shear across the region. Models have been very inconsistent with developments in this region, and have lately backed away from the idea of any system impacting NE Madagascar. As shear relaxes later this week/early next week, there is a greater threat of a more substantial system which could bring strong winds and large rainfall to this region.

Expected Impacts

Low risk of flooding and damaging winds.



This forecast may be amended at any time

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Europe

Northern and central France

Weather

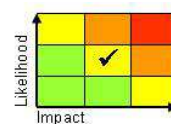
Very strong winds and locally heavy rain will move across parts of western and central France today. Widespread gales or severe gales are expected, especially over and close to the Bay of Biscay. Widespread gust of 50 to 60mph are likely, with gusts of up to 80mph along the coastal fringes of western France, especially Brittany. Météo France has named this system Storm Norberto.

Discussion

An area of low pressure will move eastwards across Northern France today. This will bring some heavy rain, but the main impact is expected to be the very strong winds on the southern flank of the low across parts of western and central France. There are some signs of sting jet characteristics bringing the threat of very strong and potentially damaging winds to parts of northwestern France. Météo France has named this storm Norberto this morning and highlights Brittany as the most prone to see the strongest winds.

Expected Impacts

Potential for property/infrastructure damage, plus rough seas and associated coastal flooding.



Southern France

Weather

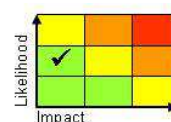
An area of wind and rain is expected to move eastwards across France today, with the western facing high ground in the south of the country particularly prone to seeing large rainfall totals. 40-70mm is likely in a 12-18 hour period, with the most prone spots seeing as much as 100mm. Conditions should improve by early Friday.

Discussion

An area of low pressure is expected to move across the country today. Strong winds within the warm sector and well forced frontal zones are expected to give widespread rainfall, with a particular focus on western high ground of the Massif Central and the French Alps (where much will fall as snow above 1500M). As the cold conveyor clears overnight Thurs into Fri, conditions should improve markedly.

Expected Impacts

Increased risk of flash flooding in faster responding catchments. Increased risk of river flooding, particularly given recent wetter than normal conditions. Rapid rise and fall in freezing levels will increase avalanche risk in the Massif Central, and French Alps in particular.



Eastern Adriatic coastline countries.

Weather

An area of wind and rain is expected to spread across this region on Friday and early Saturday, with a particular focus on the high ground of the Dinaric Alps for large rainfall totals. 100-150mm of rain could build up over a 24 to 36 hour period in many places. This will be followed by heavy, thundery showers, but these will be more scattered and not focussed over high ground in particular.

Discussion

The area of low pressure moving across France today will continue eastwards, its occluding frontal plume remaining well forced as the narrowing warm sector heads towards this region. As the upper trough extends, the low-level system will decelerate, to give a more prolonged spell of orographic rain/snow over the Dinaric Alps. Heavy showers associated with the trough will follow the front, giving some short period large totals on top of that already fallen.

Expected Impacts

Increased risk of river, and later flash flooding as the showers arrive on top of the recent heavy rain. Increased avalanche risk in the Dinaric Alps.



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North America

Southern portions of US States adjacent to the Gulf of Mexico

Weather

Heavy rain and isolated severe thunderstorms are expected to affect this region today, with a threat of large hail, damaging wind gusts, and an isolated tornado. Where the thunderstorms occur, 50-75mm is possible in 1-2 hours, with the more widespread rain (southern Alabama, southern Georgia, and Florida Panhandle) generating 125-175mm in the course of 18-24 hours. Conditions will improve through Friday.

Discussion

A well defined and small scale upper low has induced cyclogenesis within a plume of very warm, moist, Gulf of Mexico air. With a fairly zonal flow surrounding it, this has generated a strong E/W oriented frontal boundary, which is expected to generate a lot of rain today as the upper low relaxes ENE across it. Deep instability through insolation is expected to generate isolated supercells to the S of the front, whilst strong vertical speed shear elsewhere will generate more linear modes of convection on and N of the front with hail and damaging straight-line winds more of a threat. As the forcing relaxes away from the Low, which itself moves out into the Atlantic early Friday, the severe weather threat will cease.

Expected Impacts

Flash flooding possible, along with damage to property and infrastructure from hail and/or strong winds. Very low prob of property/infrastructure damage and threat to life associated with a strong tornado.



Central America

Belize and northern Honduras

Weather

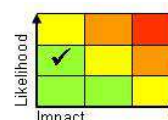
Heavy showers and thunderstorms are expected to become more frequent from Saturday through to Tuesday with the heaviest rainfall affecting coastal parts of Belize and the north Honduras coast. During this period, 150-250 mm of rainfall is possible, much of which is likely to fall in short periods. This is the dry season for this region and whilst monthly averages exceed 100 mm during the months of May to December, this is nearer 30-50 mm in March.

Discussion

Cyclogenesis over southeast USA and a strong build of pressure in its wake will drive a cold front into the tropics with a strengthening of the trade winds ahead of it across the western Caribbean Sea. This will support an out-of-season increase in shower and thunderstorm activity driven onshore across Belize and northern Honduras.

Expected Impacts

This spell of heavy rain follows flooding that affected northern Honduras at the end of February. This may exacerbate existing relief efforts and cause further flash and river flooding.



South America

Southwest Colombia, Ecuador and Peru

Weather

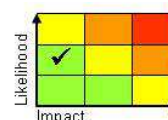
Enhanced shower and thunderstorm activity will continue across the northern Andes through the next week. Precipitation totals could reach 200-300 mm in places, which would represent more than the average for the whole of February.

Discussion

Continued northerly flow across Central America will lead to stronger than normal convergence along the ITCZ, bringing enhanced precipitation, especially in the north of this region. Precipitation across parts of this area has been above average in recent weeks, with impacts from flash flooding and landslides.

Expected Impacts

Ongoing enhanced threat of flash flooding and landslides.



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Eastern Brazil

Weather

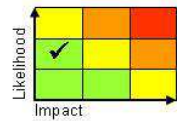
Heavy showers and thunderstorms will affect the region during this week. Around 50-100 mm could fall each day, with a few locations having up to 300 mm in total for the week, equivalent to a month's worth of rain. However, drier conditions will develop across major urban areas such as São Paulo and Rio de Janeiro compared to recently.

Discussion

The South Atlantic Convergence Zone (SACZ) will remain active through this week with several mid-latitude upper troughs relaxing northeast and to interact with the monsoon plume. Forecast profiles are very moist at depth, with relatively modest CAPE, suggesting high rainfall efficiency and the potential for large accumulations.

Expected Impacts

Heavy rain will bring a risk of flash flooding and landslides, particularly in mountainous terrain.



Africa

Eastern Madagascar (particularly south-east)

Weather

A temporary increase in shower/thunderstorm activity blown in by a strengthening easterly wind is expected in this region from Friday or Saturday, with conditions probably improving somewhat by Monday, although this latter aspect is somewhat dependent on any tropical cyclone developments (see Tropical Cyclones section). 50-75mm is possible in some places per day, with 175-250mm building up on west facing mountainous regions through a 3-4 day period.

Discussion

Within the background of a more active pattern generally in this region (see Tropical Cyclone section), an Equatorial Rossby Wave is expected to generate enhanced shower and thunderstorm activity as it drifts slowly westwards across south Madagascar over the next few days. This aspect carries more confidence than any enhanced rainfall associated with tropical cyclone activity, which should it occur will probably more impact the north-east anyhow. Showers will ease late in the weekend/early next week as the ERW passes by.

Expected Impacts

Increased risk of flash, and later river flooding, plus an increased landslide risk in mountainous areas.



Middle East

Nil.

Asia

Indonesia, Malaysia, Papua New Guinea, and Solomon Islands

Weather

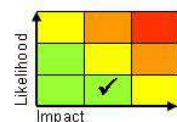
Enhanced seasonal rainfall is expected to continue fairly widely across this region. Rainfall totals of widely 50-100 mm, and locally 150-250mm are expected in frequent daily rounds of showers and thunderstorms

Discussion

The MJO is currently moving through this region, providing a backdrop of enhanced convection and rainfall. Smaller scale features, such as a Kelvin Wave, will also locally enhance rainfall over the coming days as it moves through Sulawesi and Papua New Guinea. Further tropical waves are likely over the coming days. Some parts of this region, including West Java, have recently seen severe flooding, although it seems likely that the worst of the conditions will stay south of Jakarta in this current episode.

Expected Impacts

Flash flooding possible in places. Also a risk of landslides in mountainous areas.



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Northern Pakistan, northern India and Nepal**Weather**

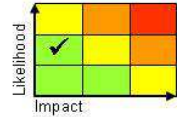
Heavy showers and thunderstorms are expected to develop across Pakistan today before extending east towards Nepal and northern India through Friday and Saturday with drier conditions following in their wake. There is the potential for 50-75 mm of rain to locally fall in a couple of hours, in addition to frequent lightning, gusty winds and large hail.

Discussion

A Western Disturbance (upper trough in the subtropical jet stream) is expected to move east across the region from today through to Saturday, engaging the increasingly warm low-level airmass south of the Himalayas. Forecast profiles exhibit steep mid-level lapse rates supportive of some hail, with vertical wind shear supportive of upscale development into one or more MCSs.

Expected Impacts

Flash flooding possible along with damage to property and infrastructure from hail and/or strong winds.

**Australasia****Eastern Australia****Weather**

Further heavy rain and severe thunderstorms associated with the remnants of Tropical Cyclone Esther are expected today, with 50 to locally 100mm of rain in some places, and a risk of frequent lightning and large hail across parts of Central/Northern Queensland. Conditions will steadily improve from the west tomorrow as this system finally clears eastwards.

Discussion

The remnants of Tropical Cyclone Esther are now heading out across the open ocean south and east of Tasmania, but has left a plume of tropical moisture stretching from the Gulf of Carpentaria down towards the east coast of New South Wales. Within this plume, further heavy showers and thunderstorms are expected given forecast profiles support moderate instability and shear. The plume will finally clear east later Friday.

Expected Impacts

Localised flash flooding is expected, with potential for mudslides/debris flows should the rain impacts areas recently scarred by bushfires. Isolated large hail/frequent lightning impacts possible.

**Additional Information**

Nil.

Issued at: 050830 UTC **Meteorologists:** D J Harris / Tony Wardle

Global Guidance Unit

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