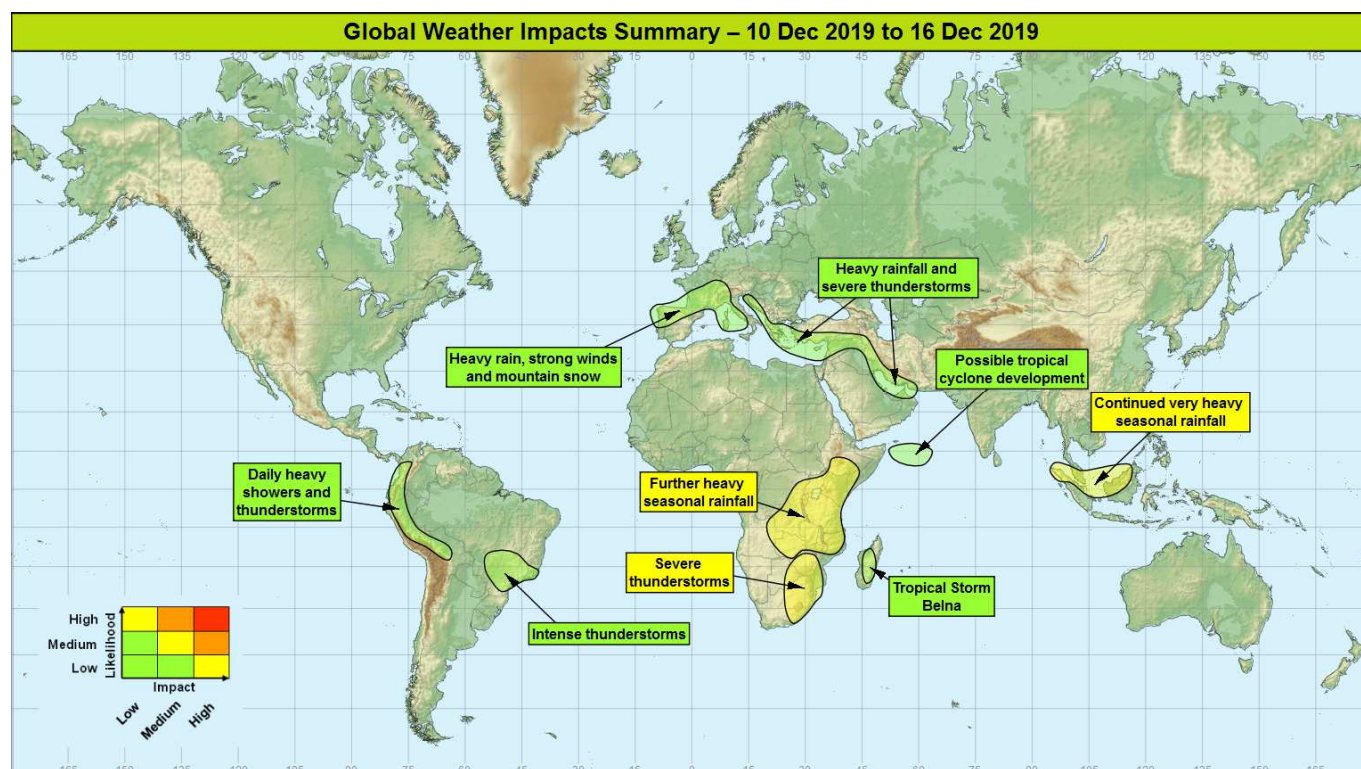


Global Weather Impacts – Tuesday 10th to Monday 16th December 2019

Issued on Tuesday 10th December 2019

HEADLINES

- Areas of heavy rain continuing to impact parts of eastern and southern Africa.
- Turning very unsettled again across large parts of western and southern Europe.



DISCUSSION

Tropical Cyclones

Tropical Storm Belna (Madagascar)

Weather

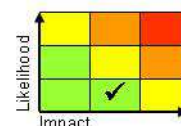
After making landfall as a cyclone on Madagascar's north-west coast on Monday, Belna has now weakened to a tropical storm. Whilst the worst of the conditions have now passed, an additional 100-150mm of rain could fall across central parts of the island.

Discussion

Belna weakened significantly after landfall and poses no further threat in terms of damaging winds. The remnant moisture from the cyclone will allow further heavy rain to fall over the next couple of days, especially across the interior of the island.

Expected Impacts

Further flooding is possible and the risk of avalanche will remain high for the next few days.



This forecast may be amended at any time

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Possible tropical cyclone development areas:

Arabian Sea

Weather

The possibility of a further tropical cyclone developing across the Arabian Sea now look small. The area of low pressure being watched for potential development is likely to bring some heavy showers to parts of north eastern Somalia and perhaps Socotra Island, Yemen through the next couple of days.

Discussion

An Equatorial Rossby Wave engaged an area of enhanced convection across the southwest Arabian Sea. A hostile wind shear environment looks likely to prevent this system forming into a tropical storm, with weakening likely over the coming days,

Expected Impacts

Some enhanced shower and thunderstorm activity may affect parts of north-eastern Somalia and Socotra Island, Yemen through today. Low risk of flash flooding.



Europe

Parts of southeast Europe across the north and east of the Middle East

Weather

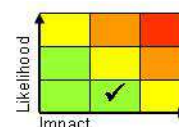
This region will see heavy showers and thunderstorms at times through the next seven days. Up to 50-100 mm could fall in 24 hours, with the highest rainfall totals likely for south-western Turkey. These sorts of values are around the average December rainfall for this area. The thunderstorms could be severe at times, producing a threat of large hail, frequent lightning and strong, gusty winds. These winds could lift dense dust storms in the Middle East.

Discussion

The combination of a south shifted PFJ and a strong STJ will produce areas of deep convection across this region, with the potential for long lived, severe thunderstorms in places.

Expected Impacts

Flash flooding is possible across this region, with frequent lightning impacts possible too. Waterspouts and tornadoes are possible across and around the Mediterranean, with dense lifted dust plumes likely in the Middle East. Heavy mountain snowfall likely in the mountain ranges of the Iran/Iraq border and southern Turkish border.



Western Europe

Weather

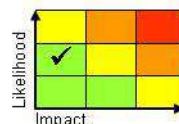
Conditions will turn very unsettled during Thursday and Friday, with heavy, strong winds and mountain snow affecting large parts of the region. The wettest and stormiest weather will be across France and northern Iberia on Thursday, transferring to Italy and The Alpine region on Friday. Around 50-75 mm of rain will fall quite widely, with 150-200 mm possible in some of the wetter parts of northern Iberia and The Alps; here heavy mountain snowfall is also expected.

Discussion

A south-shifted powerful trans-Atlantic jet will drive active frontal systems into western Europe through the second half of this week. As the upstream pattern amplified slightly there is potential for frontal waves to move into the left exit region of the jet and develop rapidly, producing a threat of very strong winds, with severe gales over large parts of France, northern Iberia and the western Mediterranean for a time. Extensive snow is expected in the Alps above 800-1000 metres.

Expected Impacts

Flash flooding is likely, with disruption to travel expected. Marine transport, in particular, could be severely disrupted due to strong winds which could also cause some power outages.



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**North America**

Nil.

South America**Ecuador, western Colombia, Peru and Bolivia****Weather**

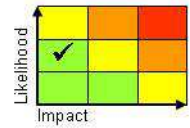
Frequent heavy showers and thunderstorms will affect these regions through the rest of this week, with the showers each day bringing 50-75 mm in just a few hours, with some locations receiving over 200 mm (around the December average rainfall). As is the nature of showers, spatial coverage on any one day will be highly variable.

Discussion

With the South American Monsoon extending well south now, daily rounds of showers and thunderstorms are expected to form to the west of the Andes of Colombia and Ecuador, and to the east of the Andes further south. The region highlighted has seen above average rainfall during the past week, and is also forecast to receive the highest rainfall totals.

Expected Impacts

Flash and river flooding likely, with increased likelihood of landslides.

**Parts of southern Brazil****Weather**

Intense thunderstorms are expected to affect parts of the region, bringing up to 50-75 mm in a few hours and as much as 150-200 mm through the next few days (which would be close to the average December rainfall). Frequent lightning is likely, and a risk of localised large hail.

Discussion

A significant pulse of the SACZ is expected through the next week. CAPE and PWAT are high, with localised flash flooding likely where they occur.

Expected Impacts

Localised flash flooding, and low risk of lightning damage affecting cities such as Sao Paolo and Rio de Janeiro.

**Africa****Parts of eastern/central Africa****Weather**

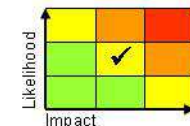
Further widespread heavy showers and thunderstorms associated with the seasonal rains are expected to continue to be heavier than normal over the next week, with a further 100-200 mm of rain falling in places from frequent heavy, thundery, afternoon downpours. This is close to the average rainfall in this region for the whole of December, with this area having already seen 200-400% of the usual rainfall over the past few weeks.

Discussion

Enhanced seasonal rainfall in association with the strong positive Indian Ocean Dipole event which, although declining, is still influencing the large scale shower distribution. Large tracts of eastern Africa have seen well above average rainfall over the past few months. The combination of all these factors dramatically increases the likelihood of further flash and river flooding along with further deadly landslides.

Expected Impacts

An increased threat of flash flooding and landslides in the region, with further river flooding likely. Frequent lightning is also likely, along with large hail and strong wind gusts.



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South-eastern Africa**Weather**

Areas of heavy showers and thunderstorms will continue to affect the region over the next few days, before conditions finally turn somewhat drier towards the end of the week. The severe storms will produce up to 100 mm in just a few hours, with some locations seeing up to 200 mm through the next 3 or 4 days, which would be around twice the monthly average in many parts of the region. There is also a threat of large hail, frequent lightning and strong, gusty winds

Discussion

The advance of a long wave upper trough will draw very warm air south from the sub-tropics that will then be engaged by increased levels of upper forcing to produce very high PWAT, high CAPE profiles that suggest some very intense downpours are likely at times, with the possibility of some long-lasting MCS due to some strong vertical wind shear profiles.

Expected Impacts

In the longer term this heavy rainfall will be welcome as this region of Africa has suffered droughts in the recent past. However, such intense downpours will generate flash flooding and landslides, potentially damaging infrastructure and crops.

Madagascar – see *Tropical Cyclones* section

Middle East

Levant coastline, northern parts of Syria, northern and eastern Iraq, western Iran, the UAE and Oman – see *Europe* section

Asia

Malaysia, Borneo, Brunei and Sumatra

Weather

Even though it is the rainy season in this region, heavy rainfall is expected to continue through the next week, with some places seeing up to 300mm (equivalent of 50-75% of the average monthly rainfall at this time of year).

Discussion

A combination of a weak MJO moving from the Indian Ocean and into the Maritime Continent along with and a surge in the Northeast Monsoon is likely to continue enhancing deep convection through this week. These rains have already caused significant impacts in parts of this region.

Expected Impacts

Increased threat of flash flooding and landslides.

Australasia

Eastern Australia – see *Additional Information* section

Additional Information

Eastern Australia – Wildfire: Numerous bushfires continue in parts of eastern New South Wales, Queensland and Australian Capital Territory with continued mostly dry weather expected through the next four or five days at least. Temperatures are likely to peak on Tuesday, ahead of a cold front that could bring strong winds and dry lightning storms. So the threat of further fire generation and spread of existing fires is likely to peak on Tuesday.



Issued at: 100820 UTC **Meteorologists:** Brent Walker / Mark Sidaway

Global Guidance Unit

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