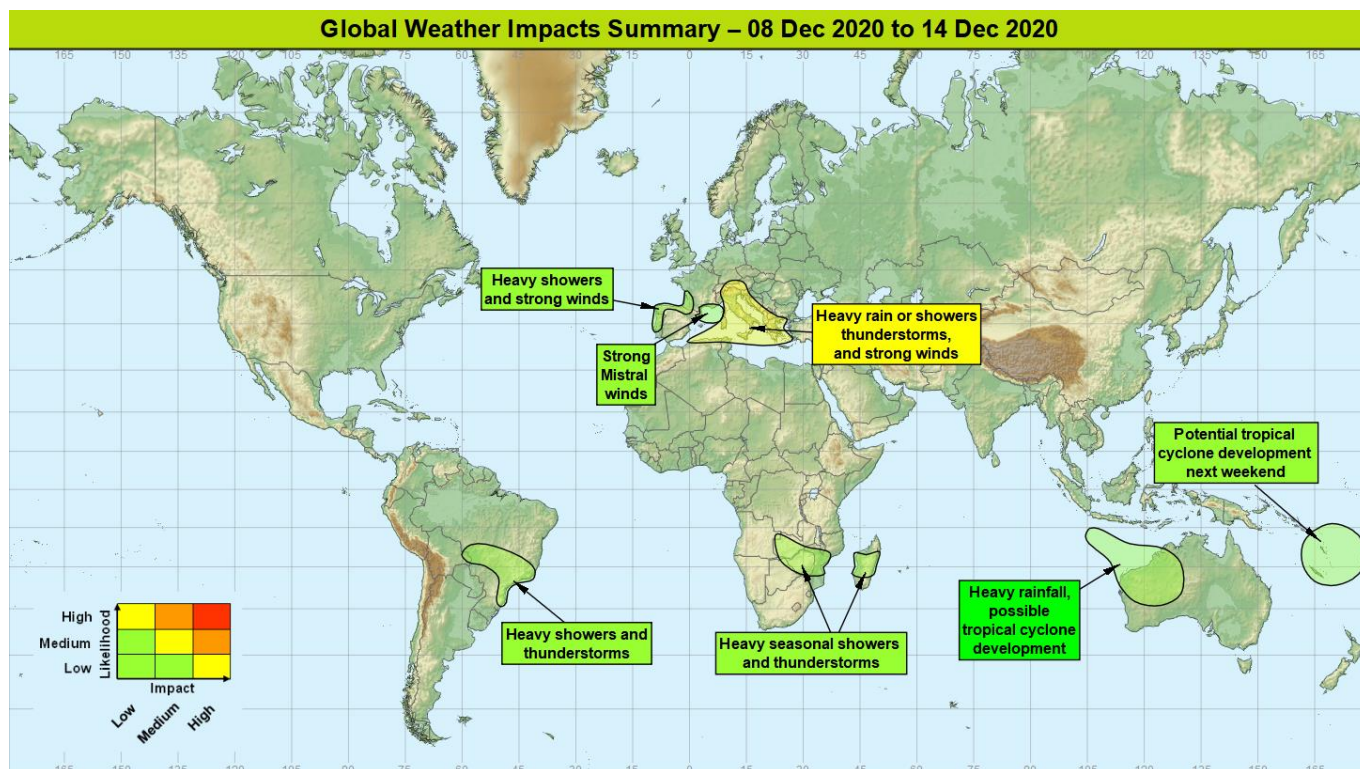


Global Weather Impacts – Tuesday 8th to Monday 14th December

Issued on Monday 8th December 2020

HEADLINES

- Heavy rain and thunderstorms with a low likelihood of a tropical cyclone heading for NW Australia later this week
- Remaining very unsettled across many parts of Europe and the Mediterranean basin, with heavy rainfall, thunderstorms, strong winds, and mountain snow.



DISCUSSION:
Tropical Cyclones

No currently active tropical cyclones currently affecting land.

The areas over the page are being monitored for development that may impact land.

This forecast may be amended at any time

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The following areas are being monitored for development that may impact land:

Timor Sea (eastern Indian Ocean) and northwestern Australia

Weather

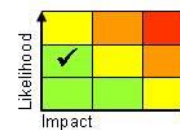
A broad area of active shower and thunderstorm activity currently lies between Java Island and Australia within which two weak areas of low pressure have formed. The most southeastern low centre is expected to be drawn across NW Australia through the next 24-48hrs bringing some very heavy rainfall (100-200mm across a wide area) and strong winds. There is a low to moderate likelihood for the second low centre to develop into a tropical cyclone and be drawn southeastwards across a similar area of sparsely populated north-western Australia by the end of the week.

Discussion

An elongated area of low pressure currently lies from the Timor Sea to northwest and central Australia and this will be the focus for developments this week. The northern portion is currently marked by a disorganised area of thunderstorms over the Timor Sea, but through the rest of this week conditions are ripe for tropical cyclone development, with SSTs in excess of 30°C in places, and little vertical wind shear. Confidence is low at the moment, but it is expected to move slowly southwards, possibly making landfall over northwest Australia towards the end of the week. Strong winds and heavy rain would be expected, with best estimates at the moment for a further 150 to 200 mm falling over northwest Australia fairly widely, with the risk of up to 250 to 300 mm near the north Western Territory coast by the weekend. Although this is usually the wettest time of year, this would still be more than double the normal monthly amount.

Expected Impacts

Dangerous sea and coastal conditions in the region, as well as some wind damage, with the potential for some flash flooding across parts of northwestern and central Australia.



Southwest Pacific, including New Caledonia, Vanuatu and Fiji

Weather

There is the potential for a tropical cyclone development next weekend in this region. Even if a tropical cyclone does not develop we are likely to see very heavy rainfall which could produce up to 200mm in a few places at the weekend, which is around the average December rainfall in this region.

Discussion

There is a signal for all models for a tropical cyclone development next weekend along the South Pacific Convergence Zone, although differences in the intensity and track are apparent. This is an area to monitor since islands in this region are susceptible to significant tropical cyclone impacts.

Expected Impacts

Potential for flash flooding rainfall, landslides and damaging winds.



The following areas are being monitored for tropical cyclone development that will remain over open water:

Southern Indian Ocean

Tropical Cyclone *Bongoyo* was named over the weekend in the southern Indian Ocean well away to the northwest of Madagascar. However it will remain well away from land and out over the open ocean before decaying.

Arabian Sea

The remnants of Cyclonic Storm *Burevi* are now in the Arabian Sea as a disorganised area of convection. There is a small chance that they may redevelop into a tropical cyclone. However any system is expected to remain over the Arabian Sea through this period.

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Europe

Southern Alps, Italy, Corsica, Sardinia, the Balkans, Greece, Algeria and Tunisia

Weather

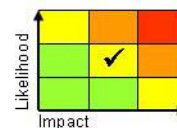
A succession of low pressure systems will move/develop from west to east across this area during the rest of the week. Further spells of heavy rain and thunderstorms are likely to affect this region at times through the rest of week, bringing another 50 to 100 mm of rainfall each day, although the locations affected are likely to vary from day to day. Further snow is likely across the Dinaric and Italian / Austrian Alps with some large accumulations here as well as what has already fallen. Showers across North Africa may not be as heavy as those farther north, although given typically lower rainfall amounts here flooding impacts may occur, particularly in urban areas. Gales are likely in the Mediterranean Adriatic Sea, although these are not unheard of at this time of year they will likely produce large waves and a perhaps a high surge across the northern Adriatic.

Discussion

The upper pattern will remain cyclonic, though with the weekend's activity associated with a plume of relatively high WBPT will continue moving away to the east today. Further heavy showers are likely at times, with snow on many mountains, especially as WBFLs fall behind this initial trough. A further trough extension takes place later today in to Wednesday and will engage another plume of high WBPT over the western Mediterranean, bringing another more organised spell of heavy rain, strong winds, showers with more heavy snowfall across the Dinaric and Italian / Austrian Alps, particularly the southern Alps (though WBFLs rise dramatically after the front, so snow not likely to be as widespread or disruptive as earlier this week).

Expected Impacts

Risk of flash flooding, with fluvial impacts increasingly likely. Landslides are possible as well as avalanches, with snow causing disruption to travel on higher routes. Hazardous sea conditions at times, particularly around Corsica/Sardinia and the Adriatic where coastal flooding is possible during the second half of the week.



Northwestern Iberia and southwest France

Weather

Frequent, heavy showers along with some longer spells of rain are expected to affect the region for much of this week. Rainfall will vary somewhat, but a further 150mm could fall in places by the end of the week on top of what fell at the weekend. Precipitation will fall as snow above 800 to 1000 metres, with some significant falls likely (another 50 to 75cm) over the far west of the Pyrenees. Northwesterly gales easing today but strong winds are likely around the Bay of Biscay again at the end of the week.

Discussion

This region lies to the west of the cyclonic block in place across western Europe, with a cold air outbreak overspreading the region and strong northwesterly surface winds. This will lead to a near-continuous feed of heavy showers off the Bay of Biscay as well as strong winds with gusts of 60 to 70mph possible at times. Further longer spells of rain and mountain snow will occur in association with frontal systems swinging southeast cross the region during the second-half of the week, with one potential development by Friday bringing a renewed threat of very strong winds.

Expected Impacts

The main impact will be flash flooding with some disruption to travel likely, especially over mountainous regions where heavy snow will be an additional hazard. Minor wind damage and hazardous sea conditions are likely at times, with potential for sea defences to be damaged.



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Southern France, northeast Spain, western Corsica, and northwest Sardinia

Weather

A period of strong Mistral winds is expected in this area this week affecting parts of southern France and northeast Spain, with large waves and rough seas spreading as far as western Corsica/Sardinia. Wind speeds could reach in excess of 60 to 70 mph on Wednesday and Thursday.

Discussion

As low pressure over the Bay of Biscay moves southeast, a strong north to northwesterly gradient will develop, and this area is favourable for funnelling, bringing enhanced wind speeds and a higher likelihood of minor impacts – particularly over sea areas, and towards Corsica/Sardinia which has a reasonable fetch in this direction.

Expected Impacts

Minor wind damage possible, dangerous sea conditions possible offshore and around Corsica/Sardinia



North America

Nil.

Central America and Caribbean

Nil.

South America

Southern Brazil, eastern Bolivia

Weather

Further heavy showers and thunderstorms will affect this region through the coming days. These storms will be capable of bringing intense short-duration rainfall with locally 50 to 100mm possible in an hour or two, and up to 200 to 300mm by the end of the week – which is around a month's rainfall normally.

Discussion

A combination of a tropical high WBPT and forward of a minor upper trough in the subtropical jet will encourage the destabilisation of the atmosphere and deep convection to form within this zone which will move northeast across this region through the coming days. High CAPE (locally reaching >2000J/kg) and moderate vertical wind will lead to some organisation of convection into MCS features.

Expected Impacts

Flash flooding likely, with the potential for this to be hazardous if it affects any urban areas, particularly in areas built on steep hillsides with sub-standard infrastructure, where there will also be an enhanced risk of landslides.



Africa

Algeria and Tunisia – see *Europe section*

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Parts of southern Africa and parts of Madagascar

Weather

Enhanced shower and thunderstorm activity will affect this region over the coming week. Showers will be capable of locally bringing 50-100mm of rainfall in a short duration with some locations see as much as 200-400mm over the course of a week. Despite the region entering its wettest period of the year (December to February) locally these totals above the 200-250mm precipitation that this region experiences in an average December.

Discussion

A slow moving mid-latitude cold front lies across eastern South Africa to Madagascar. A surface high to the south of this generates a strong southeasterly flow, this meeting the northeasterly Indian Ocean trade winds and generating strong low level wind and moisture convergence. This will lead to the generation of widespread deep and moist convection across the region, with parts of Mozambique signalled for some particularly heavy rainfall.

Expected Impacts

Increased threat of flash flooding and riverine, an enhanced risk of landslides and lightning will be an additional hazard.



Middle East

Nil.

Asia

Southern Indian Ocean-See *Tropical Cyclones* section.

Bay of Bengal-See *Tropical Cyclones* section.

Australasia

Northwest Australia– See *Tropical Cyclones* section.

SW Pacific, including New Caledonia, Vanuatu and Fiji – See *Tropical Cyclones* section.

Additional Information

Northern India, Pakistan, Afghanistan and parts of eastern China: Urban pollution, combined with crop burning, will continue to generate high levels of air pollution in this area over the coming months. Very unhealthy air quality has continued to be reported in cities in the area including Delhi, Lahore and Kabul.

South Africa: Localised heavy thunderstorms will continue to affect parts of South Africa this week, with an increasing risk of severe storms affecting large populated areas such as Jo'burg and Pretoria by the end of the week – with an increased risk of urban flooding.

Issued at: 080800 UTC **Meteorologist:** Chris Almond / Ele Hands

Global Guidance Unit

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