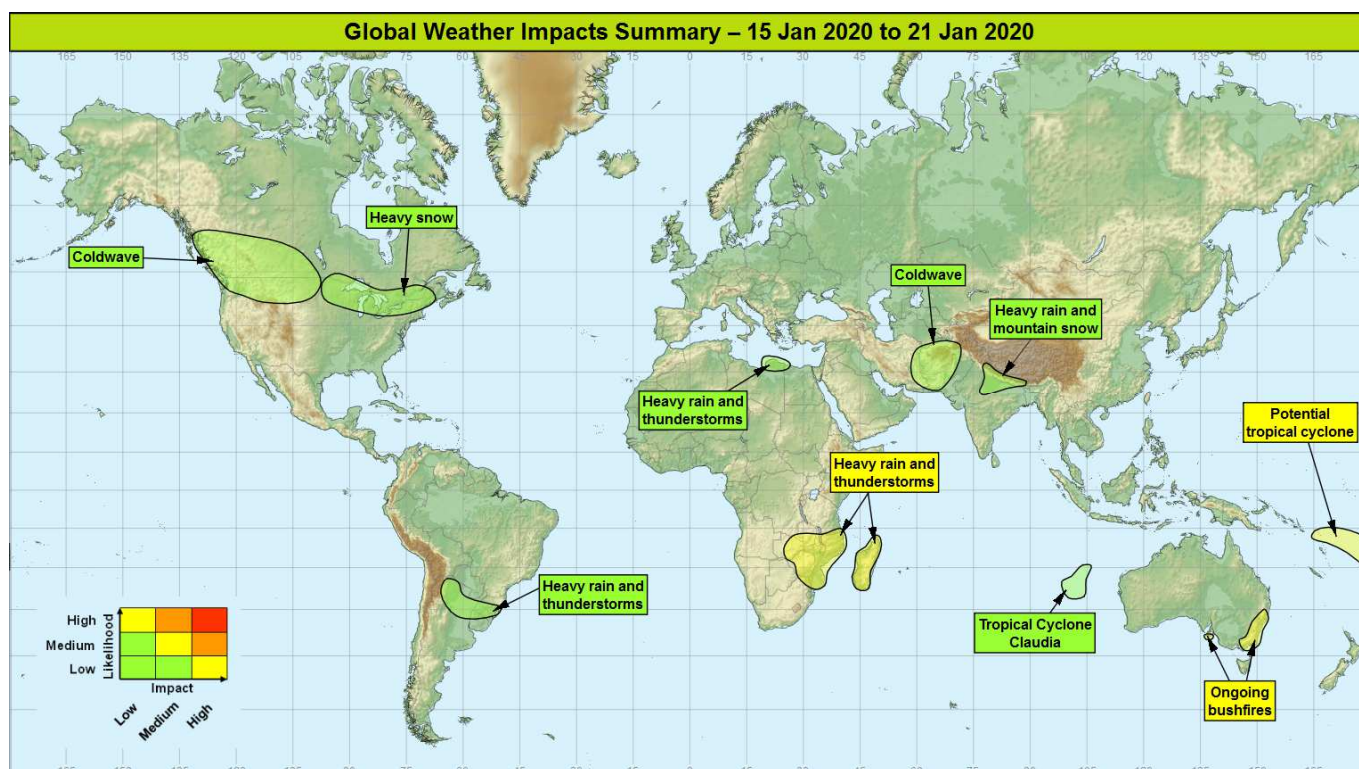


Global Weather Impacts – Wednesday 15th to Tuesday 21st January 2020

Issued on Wednesday 15th January 2020

HEADLINES

- Bushfires continue across southeast Australia.
- Potential tropical cyclone for Fiji later this week.
- Further heavy rain across parts of southeast Africa.



DISCUSSION

Tropical Cyclones

Tropical Cyclone Claudia

Weather

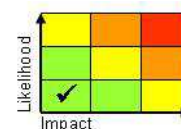
Tropical Cyclone Claudia is in the open Indian Ocean west of Australia. Claudia is expected to continue to track west-southwestwards and gradually weaken.

Discussion

Nil.

Expected Impacts

Nil.

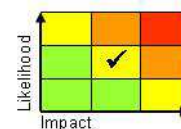


The following area is being monitored for potential development:

Southwestern Pacific

Weather

There is a consistent and strengthening signal for a tropical depression currently close to the South Solomon islands to intensify to become a tropical cyclone as it transfers southeastwards towards Fiji over the next couple of days. Should a system form it looks most likely to threaten Fiji with torrential rainfall (250-350mm) and very strong winds from later on Thursday (UK time) and into the weekend.



This forecast may be amended at any time

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Discussion

There is a developing model signal for a tropical depression within the monsoon trough to strengthen in the coming few days. This is currently close to the southern Solomon islands and is expected to intensify in to a tropical cyclone as it approaches Fiji by Thursday. This seems reasonable given the favourable environmental conditions (SST 31C and low to moderate shear) across the region. RSMC Nadi currently suggest a moderate risk of a tropical cyclone development in the next 24 to 48 hours, with any storm likely to be steered southeastwards, and could impact Fiji later this week and into the weekend.

Expected Impacts

Risk of torrential rainfall, flash floods and destructive winds, most likely for Fiji by Thursday.

Europe

Nil.

North America**Northern USA and southern Canada****Weather**

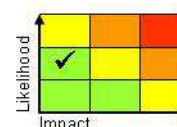
Heavy snow is likely to affect the region over the weekend, with 20-40 cm falling fairly widely. Some freezing rain is also possible in places, but not on the scale or severity as the event across Canada last Sunday.

Discussion

A sharp trough in the buckling polar jet is signalled by all models to spin up a large depression over Central USA on Friday, which will run east-northeastwards over the weekend. Very warm air sourced from the Gulf of Mexico will be advected northwards over frigid Arctic air on the eastern flank of this system leading to a risk of snow. Freezing rain is a lower risk.

Expected Impacts

Snow and ice are likely to cause some disruption to travel and possibly some interruptions to power supplies.

**Western Canada and northwest USA****Weather**

The prolonged cold spell is expected persist through this week, with all-time low temperature records under threat of being broken in places, especially in British Columbia. Temperatures will widely be 5-10°C below average and as much as 15-20 °C across parts of western Canada.

Discussion

A persistent blocking pattern, with a weaker than normal Aleutian low, has allowed conditions to turn exceptionally cold across western Canada, potentially reaching a nadir around the middle of the week, with all-time low temperature records for the region under threat.

Expected Impacts

Cold weather related health impacts are possible in some of the major population centres in western Canada, e.g. Calgary, especially for vulnerable groups.

**Central America**

Nil.

South America**South-eastern Brazil, northern Argentina, Uruguay and Paraguay****Weather**

Heavy showers and thunderstorms will continue to affect the region this week. The most intense and frequent thunderstorms are likely to be across southern Brazil, Uruguay and parts of northern Argentina; here 150-300 mm of rain could accumulate through the week. Elsewhere, rainfall amounts will be typically lower, with daily accumulations of 25-50 mm with up to 100-150 mm in places through the period. By the end of the week the heaviest rainfall likely to become confined to the east coast of Brazil.



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Discussion

After a lull in activity, heavy showers and thunderstorms will become more widespread again as cold front approaches the region from the south. Without significant troughing aloft, profiles are deeply moist and unstable but lack the wind profile require for supercell/tornado development.

Expected Impacts

Increased likelihood of flash and river flooding, and landslides in steeper terrain. Frequent lightning strikes may be an additional local hazard.

Africa**Southeast/southern Africa, including Madagascar****Weather**

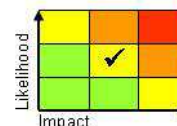
Heavy showers and thunderstorms are expected to be more frequent than normal across the region until early next week. Rainfall will vary significantly across relatively small distances but there is potential for locally 100-150 mm to fall in 24 hours, much of this falling in a few hours, especially with thunderstorms, and may produce large hail and frequent lightning. From today (Wednesday) enhanced heavy rain is expected to affect parts of northern and eastern Madagascar with potentially 200-400mm in places by the weekend.

Discussion

An enhanced phase of the ITCZ is expected to bring above average thunderstorm activity across the highlighted region. This is likely to be enhanced by a weak tropical depression as it moves across Madagascar from Wednesday.

Expected Impacts

Whilst parts of this region have been experiencing severe drought and rainfall would be welcome, the intensity of rainfall is likely to cause some flash flooding. Large hail and frequent lightning may lead to transport disruption, damage to property, infrastructure and crops.

**Libya and Egypt****Weather**

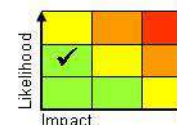
Heavy rain, thunderstorms and strong winds are expected to continue over the next few days. Around 50-75 mm of rain is likely to fall in places during the next few of days, similar to average for the entire month.

Discussion

A disrupted upper trough has now become established across the eastern Mediterranean. This will interact with a high WBPT plume to produce a deep depression, with areas of heavy rain and embedded thunderstorms developing in the plume. In areas where ppn fails to become heavy, some areas of lifted dust may form.

Expected Impacts

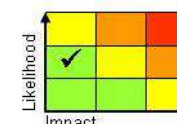
Flash flooding will be the main hazard. Where rainfall is light some dense areas of lifted dust could develop, impacting heath and travel across the region.

**Middle East**

Nil.

Asia**Northern India and Nepal****Weather**

Heavy rain, snow and thunderstorms across parts of northern India in the next few days, especially on Thursday. Around 30-50 mm of rain will fall quite widely, with perhaps 75 mm in places. Over high ground some significant snowfall is expected with 50-100cm over higher parts of Nepal. Widely colder than average (typically 5-10°C below normal) weather is expected to follow, and as more settled conditions develop air quality is likely to deteriorate significantly in urban areas.



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Discussion

A plume of very warm, moist air is being engaged by an upper trough, especially on Thursday across northern India. Forecast profiles indicate strong synoptic ascent and high precipitable water but convective instability is fairly modest, with the primary hazard being heavy rainfall. Precipitation is likely to fall as snow over northern Pakistan, mainly above 1500 metres.

Expected Impacts

Flash flooding likely with disruption to property, infrastructure and transport links. Heavy snow may cause further travel disruption and heighten the risk of avalanche. Below average temperatures are also likely to have a human health impact to vulnerable people exposed to freezing overnight temperatures.

Afghanistan, Pakistan and parts of Iran

Weather

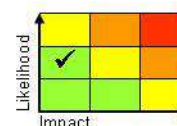
Prolonged cold spell is expected to continue through this week. Temperatures will be widely 5-10°C below average. Very cold overnight in places where snow cover is present.

Discussion

Colder-than-average conditions have prevailed across the region so far this winter and little change is expected in the coming weeks. With the jet displaced to the south of the region, cold surges from central Asia will repeatedly bring cold air outbreaks from more northern latitudes.

Expected Impacts

Heightened cold weather related health impacts.



Australasia

Southern and eastern Australia

Weather

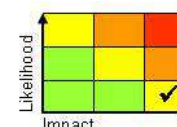
Numerous bushfires continue across parts of South Australia, Victoria and eastern New South Wales. Lower temperatures, lighter winds and higher humidity are resulting in lower fire danger ratings being issued by Australian authorities for this week. Conditions will turn increasingly unsettled later this week, with heavy showers and thunderstorms breaking out more widely and becoming more intense.

Discussion

Whilst fire weather conditions have improved in the very recent cooler airmass, it looks increasingly likely that gradual warm advection in combination with height falls aloft will support an increased likelihood of thunderstorms developing. The high-based nature of these thunderstorms will mean that dry lightning-induced fires are possible, but locally heavy rainfall falling on scorched, hydrophobic soil could lead to flash flooding and debris flows.

Expected Impacts

Existing fires will continue to produce a large amount of fine particulates and contribute to areas of very poor or hazardous air quality. Localised heavy rainfall could lead to flash flooding and debris flows if falling on burn scars whilst lightning activity poses a risk of new fire development.



Fiji – See *tropical guidance section*.

Additional Information

Nil.

Issued at: 150800 UTC **Meteorologists:** Laura Ellam / Chris Bulmer

Global Guidance Unit

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