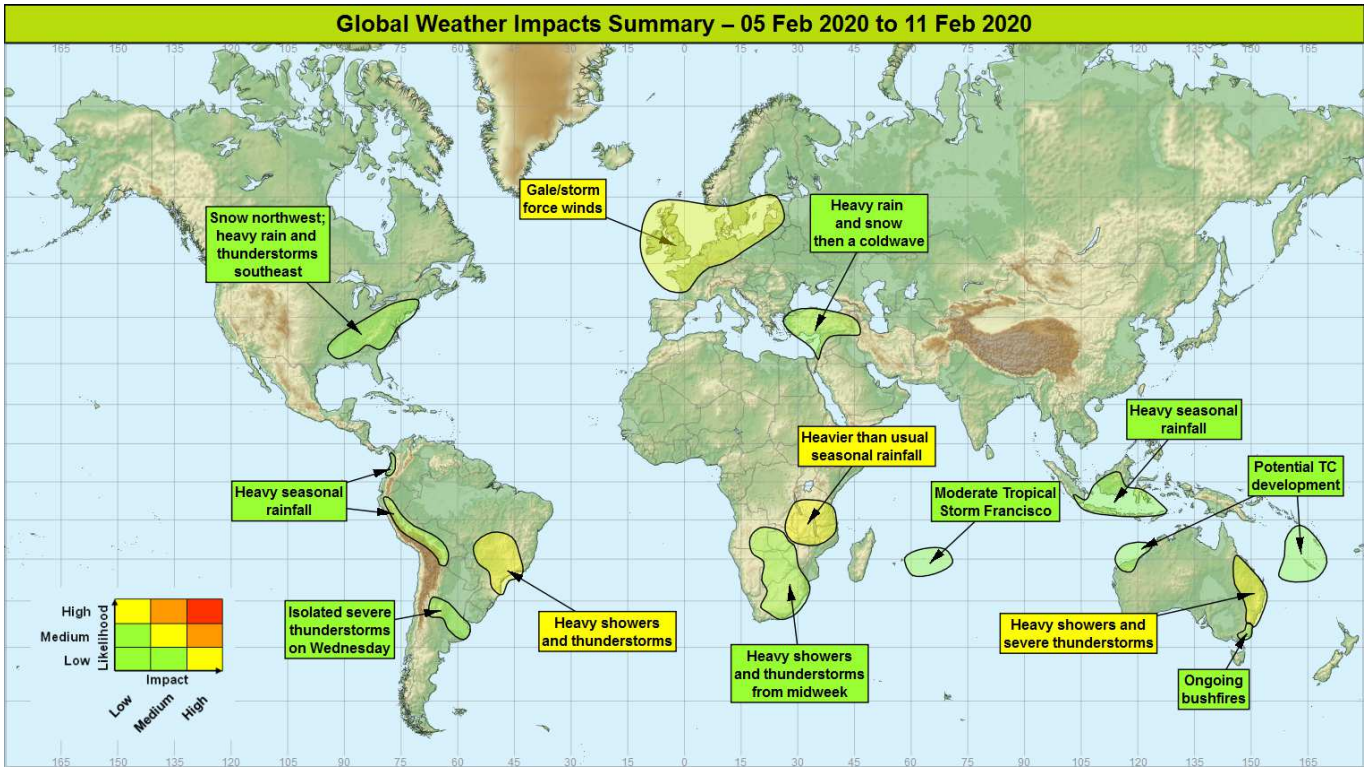
Met Office Daily Global Weather Impacts Assessment

Global Weather Impacts – Wednesday 5th to Tuesday 11th February 2020

Issued on Wednesday 5th February 2020

HEADLINES

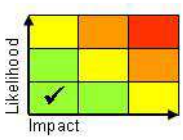
- Widespread gales from Saturday across parts of northern Europe, with locally stormy conditions.
- Very unsettled and becoming colder across Turkey, eastern Mediterranean and parts of the Levant.
- Heavy and locally severe thunderstorms for a time in parts of South America and eastern Australia.
- Continued heavy seasonal rainfall for parts of eastern Africa and the Maritime Continent.



DISCUSSION

Tropical Cyclones

Moderate Tropical Storm Francisco



Weather

Moderate Tropical Storm Francisco formed Tuesday night to the northeast of Rodrigues Island. This is expected to track southeastwards today before turning westward in the next day or two. The indications are currently that this will not directly impact land over the coming week, passing to the south of Rodrigues later in the weekend as a weakening storm or remnant low.

Discussion

High SSTs and low vertical wind shear along the Indian Ocean Convergence Zone have assisted the development of Francisco across the southwestern Indian Ocean. It is not anticipated to strengthen further; indeed it is expected to slowly weaken from Thursday and there are no signs of significant a threat to land over the coming week.

Expected Impacts

Locally rough seas and dangerous beach conditions on Rodrigues, otherwise nil.

This forecast may be amended at any time

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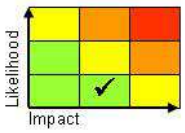
Northwestern Australia



Weather

A tropical low currently close to the Kimberley Coast of northwestern Australia is expected to continue to intensify into a tropical storm by Thursday, bringing heavy rainfall to the northern coast of Western Australia. It is possible that locally 200-400 mm of rain could fall as it tracks southwestward over water near the coast. As it continues to strengthen, destructive winds with gusts over 90 mph could develop late this week as the system moves nearer the Pilbara coast, with landfall possible over the weekend.

Discussion

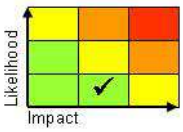
An Equatorial Rossby Wave is likely to have aided the development of this system. Model signals support a track over the sea adjacent to the coast, allowing the system to strengthen over favourable SSTs. Ensembles support the forecast of a turn inland this weekend, with the likelihood currently that it will be a Severe Tropical Cyclone by that stage.

Expected Impacts

Damage to some buildings, property and infrastructure. Short-term disruption to utilities and services. Transport routes and services affected with some communities temporarily cut-off.

The following area is being monitored for development:

Southwest Pacific – Vanuatu and New Caledonia



Weather

There is a developing signal for a tropical depression for form to the northwest of Vanuatu by the end of this week. There is a low probability that this will strengthen into a tropical cyclone. There is much uncertainty, but if one does form it may track towards New Caledonia later in the weekend or early next week. Regardless of whether a tropical cyclone develops, enhanced rainfall is expected across parts Vanuatu and New Caledonia. Damaging winds, and associated rough seas, may affect New Caledonia if the cyclone develops.

Discussion

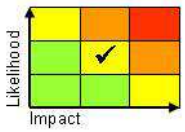
There has been a growing signal from the models for the development of a tropical feature well to the west of Vanuatu from an Equatorial Rossby Wave later this week. However there are significant model differences for the evolution, with the GM the most developmental at this time.

Expected Impacts

Potential for very heavy rainfall along across parts of Vanuatu and New Caledonia, leading to flash flooding and an increased risk of landslides. There is a risk of significant wind impacts if the cyclone forms, and associated rough seas could impact marine travel in the region.

Europe

Ireland, northern France, northern Germany, Denmark, southern Scandinavia and Baltic States



Weather

A particularly windy period across the region from Saturday through until Tuesday. Widely very windy with coastal and land gales, along with pulses of storm force winds, especially on Sunday and Monday.

Discussion

An Atlantic weather system will bring very strong winds across Ireland later on Saturday, that then sweeps quickly westward across northern France, northern Germany, Denmark, southern Scandinavia and the Baltic States on Sunday. Continuing very windy into Monday and Tuesday, with potentially further stormy conditions for Ireland again later on Monday. Widespread 40 to 60 mph through this period, with locally 70 to 85mph in the strongest winds. For the UK refer to NSWWS for guidance.

Expected Impacts

Very strong or storm force winds may lead to some structural damage and impact on travel (especially aviation) in and out of the region. Heavy seas are also expected with large waves (impacting marine travel) and some coastal flooding.

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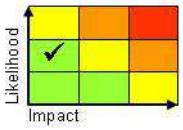
Cyprus – See Middle East section

North America

Southeastern and eastern USA



Weather

A significant winter storm will develop later today and overnight across the south and east of the USA. The leading to heavy rain and severe thunderstorms, with the possibility of heavy snow and/or freezing rain on the northern fringes of this zone. 50-100 mm of rain is expected to fall widely with the possibility of 150 mm in parts of the southern states. Heavy snow (15-30 cm) is possible on Thursday and Friday close to major urban areas in the northeast.

Discussion

Good model agreement for a marked long wave upper trough to push east across the Rockies, engaging a warm plume across southern and eastern parts of the USA to develop a marked winter storm. Forecast profiles support the development of severe thunderstorms in the broad warm sector of system. Moist profiles with low CAPE suggest storms will be capable of producing high rainfall rates, although with large amounts of low-level wind shear, a few tornadoes are also possible. On the northern flank of the system warm air aloft, with a marked cold undercut leads to a significant risk or snowfall and freezing rain.

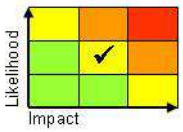
Expected Impacts

Flash flooding looks likely in southern and eastern states, with a lower threat of severe storm impacts (frequent lightning and strong winds and an isolated tornado). Northwestern fringes will be at threat of power and transport network disruption from heavy snow and freezing rain.

Central America -Nil

South America

Southeast Brazil



Weather

Heavy showers and thunderstorms will affect parts of southeast Brazil through the next 2 or 3 days. There is the potential for 50-100mm of precipitation to fall quite widely, with some locations seeing as much as 200-300 mm. Rio de Janeiro (on the northeast edge of this zone) typically sees around 100mm through the whole of February. There is a signal for the heaviest rain to become confined to inland areas from Thursday, and away from the main urban areas along the coast.

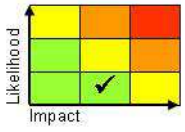
Discussion

Several pulses of activity along the South Atlantic Convergence Zone (SACZ) will bring an enhanced heavy showers/thunderstorm threat to central/southeastern Brazil. This will be aided by a trough extension and eventual disruption in the sub-tropical jet, which will likely lead to a cut-off upper vortex developing just to the east of this region by the end of the week. Later in the week a strong and moist onshore flow from the tropical Atlantic.

Expected Impacts

Heightened threat of flash flooding and landslides, including across some of densely populated regions, with large cities such as Sao Paulo, Rio de Janeiro, and Belo Horizonte at risk.

Peru, Bolivia, Ecuador and Colombia



Weather

Heavier than usual shower and thunderstorm activity is expected to affect this region through much of the coming week, bringing up to 200-300mm of rain (up to twice the February average) in places.

Discussion

Good model agreement for this region continuing to see heavier than average rainfall through the coming week, especially over the Andes.

Expected Impacts

Increased threat of flash flooding and landslides, particularly in mountainous terrain.

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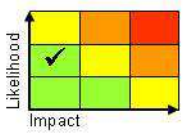
Northern Argentina and southern Uruguay



Weather

Severe thunderstorms likely developing across parts of northern Argentina and southern Uruguay. In addition to the potential for up to 100 mm of rain fall in 6-12 hours these storms will produce additional hazards of hail, strong winds and frequent lightning. By the weekend the main focus for these storms is likely to be across the northwest of Argentina.

Discussion

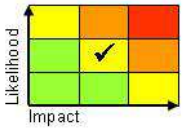
The strong sub-tropical jet is expected to interact with the monsoon plume. Strong vertical wind shear within the profiles signals the potential for some severe storms, with accompanying hail and strong winds. By the weekend the monsoon plume is expected to transfers west, with the heaviest and most frequent showers most likely in the northwest of Argentina.

Expected Impacts

Flash flooding looks likely, with a threat of severe storm impacts including frequent lightning, hail, strong wind gusts and an isolated tornado).

Africa

Central and East Africa



Weather

More widespread / frequent heavy showers and thunderstorms are expected to continue across the region through the coming week. Rainfall will vary significantly across relatively small distances but there is the potential for locally 50-75 mm to fall in a 24-hour period, with up to 225 mm accumulating through the next week in places. This would result in many places seeing the average February rainfall in just a week.

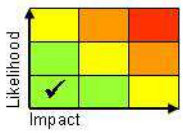
Discussion

High SSTs in the western Indian Ocean is continuing to enhance convection along the ITCZ and Indian Ocean Convergence Zone, bringing above-average rainfall to the region. This region has been very wet in recent months, with multiple reports of ongoing severe flooding.

Expected Impacts

Rainfall is likely to cause further flash flooding with some significant river flooding also possible. There will also be a heightened risk of landslides in areas where the terrain is steep.

Parts of southern Africa



Weather

From Thursday showers and thunderstorms are signalled to increase to above normal frequency across this area. 20-40 mm of rain per day is expected quite widely, but with isolated spots seeing 100-150 mm in heavy showers and thunderstorms. Although much of this rainfall will be welcome, with the potential for this to fall in a short duration it may bring some impacts.

Discussion

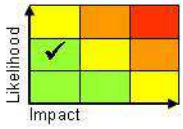
The resident plume of warm tropical air across the area will interact with the predominately slightly cyclonic upper flow allowing the formation of heavy diurnal showers and thunderstorms each day. On the cold front across the south shower activity is likely to be enhanced further.

Expected Impacts

Although much of the rainfall will be welcome across areas that have experienced rainfall deficits in recent times, some flash flooding is possible, especially in urban areas.

Middle East

Turkey, Syria, Iraq Lebanon, Israel and Cyprus



Weather

Potential for a multi-hazard severe weather event across large parts of southeast Europe from Wednesday to Friday. Across southern Turkey, Cyprus and the Levant locally heavy rain, thunderstorms and strong winds will be the main hazards with 50-150mm of rain falling in places. To the north, heavy snow is expected with 10-20 cm falling quite widely, perhaps up to one metre in a few locations across northern Turkey. In the wake of the precipitation a marked coldwave will follow with temperatures across the region around 10°C below average.

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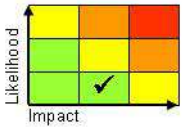
Discussion
A major trough extension will transfer across the region. This will interact with a frontal wave over central Europe allowing cyclogenesis to take place, and for this to move southeast transferring its cold front across area later in the week. Snow will fall on the northern flank of the system and then more widely to the rear of the cold front, with a marked coldwave sweeping the region.
Expected Impacts
Widespread disruption to travel is possible either due to flash flooding or heavy snowfall. Some interruptions to power supplies are also possible. Coldwave likely to have impacts for vulnerable populations groups in the region unable to access adequate shelter and heating.

Asia

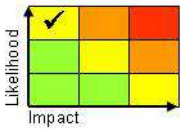
Indonesia



Weather
Pulses of enhanced showers and thunderstorms are expected across this region during the coming week. During this period up to 150-250 mm of rain is expected fall in some spots, with up to 50-100 mm falling in just 6-12 hours in places. This is not untypical for the region, but this follows recent weeks where it has been very wet
Discussion
The main driver of the wetter than average signal looks to be an enhanced NE'ly monsoon phase across the South China Sea that enhances the convergence along the ITCZ that lies across much of Indonesia. The MJO moving towards the Maritime Continent and the late onset of the Australia monsoon is possibly allowing a more active ITCZ to currently sit at a slightly more northerly latitude than usual. These factors enhancing the impacts of cold surges over Java in particular.
Expected Impacts
Flash flooding and a heightened risk of landslides are the principle hazards from this event; Jakarta has suffered multiple impacts from heavy rainfall over recent weeks, and appears to be at risk once more.

Australasia

Eastern Australia



Weather
Heavy showers and thunderstorms are expected along the eastern coast in the coming week. These storms will be capable of producing up to 100-200 mm of rain, with some significant totals likely in a few hours. Frequent heavy showers and the threat of severe thunderstorms will also extend further inland, perhaps accompanied by hail and strong winds, with the potential for some locations seeing accumulations of up to 250 mm per day. This is just above average for the whole of February for the Gold Coast, and well above for inland parts and much of New South Wales. Much of the areas impacted by this spell of very wet weather have been in drought over recent years, so it is felt likely that much of this rainfall (especially in the interior) will be welcome.
Discussion
A developing upper trough will engage with a WBPT plume across eastern Australia. Despite the air being sourced from the moist southwest pacific, profiles highlight the risk of heavy showers and thunderstorms along the coast and the potential for some severe convection inland. CAPE values lead to a significant risk of hail.
Expected Impacts
Flash flooding along with hail and wind damage, perhaps some river flooding. Aviation and power networks could be disrupted by lightning damage.

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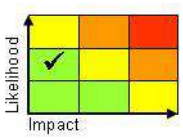

New South Wales, Australian Capital Territory, Victoria

Weather

Temperatures will remain suppressed through the coming week, plus showers across SE Australia, will limit the potential for new wildfires to develop. Overall, BoM have much lower fire danger ratings, mostly low-moderate over the coming days.

Discussion

A cold front has now moved northeast of the region where fires continue and introduced much cooler conditions, although winds will remain rather strong in the coming days. Later in the week, temperatures could rise again but this will be accompanied by higher levels of moisture being drawn in off the Pacific Ocean leading to a risk of showers, especially across eastern parts of NSW. Overall fire danger ratings will be lower than recently.

Expected Impacts

Existing fires will continue to produce fine particulates and contribute to localised areas of very poor or hazardous air quality.

Additional Information

Nil.

Issued at: 050830 UTC **Meteorologists:** Tony Wardle / Laura Ellam **Global Guidance Unit**

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