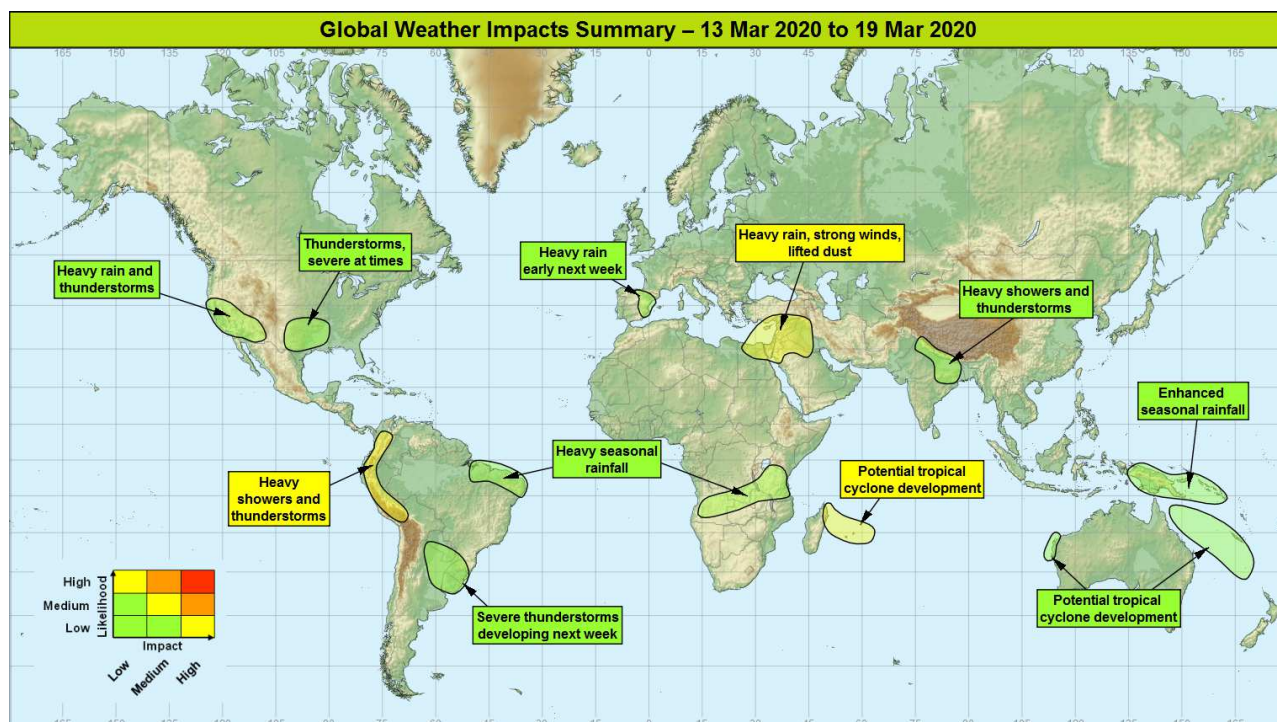


Global Weather Impacts – Friday 13th to Thursday 19th March 2020

Issued on Friday 13th March 2020

HEADLINES

- Very unsettled over Egypt, eastern Mediterranean and Levant in the next few days.
- Further heavy seasonal rainfall for the northern Andes in South America.
- Potential tropical cyclone formation in the southwest Indian Ocean and Coral Sea.



DISCUSSION

Tropical Cyclones

There are currently no active tropical cyclones.

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

Southwest Indian Ocean (Northeastern Madagascar, La Reunion and Mauritius)

Weather

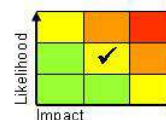
A tropical low pressure area currently located to the northeast of Madagascar is likely to slowly track southeastwards through the next week. There is an increasing likelihood that this system will become a tropical cyclone during the next day or two, with this system then expected to track southeast to affect Mauritius (with a lower threat to La Reunion) early next week. There remains some uncertainty regarding the intensity of this potential system, and its future track, but it does bring an increased risk of damaging winds and, more likely, torrential rainfall.

Discussion

Consistent signal from NWP for a gradual development of the tropical low as it heads southeast through the remainder of the week although there is large spread in its trajectory southeast as it undergoes potentially rapid development over the weekend and early next week.

Expected Impacts

Threat of flash flooding, with a lower likelihood of damaging winds.



This forecast may be amended at any time

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Coral Sea
Weather

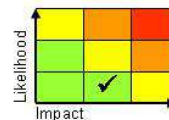
Heavy showers and thunderstorms have become better organised over the past few days, consolidating into a tropical depression. This system seems highly likely to develop into a tropical cyclone as it tracks southeast through the Coral Sea and towards New Caledonia. There is a low probability for this to fringe very close to New Caledonia on Sunday. Damaging winds and intense rainfall will be associated with this tropical cyclone.

Discussion

The weak MJO will move from over the Maritime Continent and into the Pacific in the next few days. This is likely to provide the trigger for a tropical cyclone development across the Coral Sea. Another factor in favour of a tropical cyclone development is the sea surface temperatures are around 2°C above average at the moment.

Expected Impacts

There is the potential for flash flooding, damaging winds and coastal storm surge flooding.

**Timor Sea (Western Australia)**
Weather

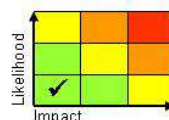
There is the low probability for a tropical cyclone to develop close to the far west of Australia, hugging the coast as it tracks south on Friday and into the weekend. If a system forms, it is not expected to be an intense cyclone, though heavy rain is expected along its track. Potentially 60-100 mm of rain may fall in a day or so near the coastal fringes.

Discussion

An ERW has triggered convection over the Timor Sea in the last few days forming a shallow tropical low. This has tracked south into an area of low vertical wind shear and high SSTs which makes development more favourable. One common theme from NWP output is its likely track will take this system south along the coast of western Australia.

Expected Impacts

Small risk of flash flooding and damaging winds.

**Europe**

Turkey and Cyprus – See *Middle East* section.

Spain
Weather

Heavy showers, thunderstorms and spells of more prolonged rain are expected to affect northern and eastern parts of the country early next week. The heaviest and most persistent rain is likely to be in east, along the coastline between Barcelona and Valencia, during Monday. Here around 50-100 mm is possible, with up to 150 mm in a few locations. Should this amount of rain fall, this would be around 2 to 3 times more than the monthly average in the region.

Discussion

Over the weekend a well-marked trough disruption will take place over western Europe, culminating in a cut-off upper vortex forming over Iberia by Monday. The vortex will destabilise the airmass allowing heavy showers and thunderstorms to develop. In addition, a cold front will be driven southeast across the country, with heavy, persistent rain develop along and ahead of the front in the high WBPT airmass. This front has the potential to become slow-moving over eastern parts of the country, bringing very heavy and prolonged rainfall here.

Expected Impacts

Flash flooding likely bringing disruption to travel in the region, with a lower likelihood of more significant river flowing around fast responding catchments.



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North America**Southwest USA****Weather**

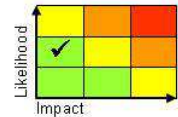
Further heavy showers and thunderstorms are likely to affect the normally arid regions of south-western USA during Friday. Up to 100 mm could accumulate in a few places, which is up to three times the average March rainfall. A drier spell of weather will develop over the weekend, before further heavy showers develop early week. Whilst not as widespread or intense, an additional 50-100 mm could fall in places, with the focus across California.

Discussion

A Pacific cut-off upper vortex will interact with a high WBPT plume moving north from Mexico to generate areas of heavy showers and thunderstorms. The heaviest rain is likely to be over southern California, but desert regions further inland, including cities such as Las Vegas and Phoenix, could also have some unusually heavy rainfall. Further trough extension next week will result in another cut-off vortex becoming centred over the region, aiding the development of heavy showers and thunderstorms.

Expected Impacts

Flash flooding is the main impact, which could affect major cities in the area.

**Southern Plains, USA****Weather**

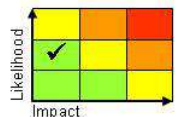
Further heavy showers and thunderstorms, perhaps severe at times, are expected to affect the region over the next week. Overall storms probably not as impactful as earlier in the week, but the cumulative effect of repeated heavy rainfall events could lead to accumulations of 100-200 mm in places by the middle of next week.

Discussion

A cold front will remain slow-moving across the southern states of the USA over the next week. Pulses of activity will develop along the front, particularly across Texas and Oklahoma as a series of shortwave troughs relax NE from the Rockies to the Great Lakes. By the middle of next week, CAPE and vertical windshear increases sufficiently to support organised intense convection with the potential for large hail and tornadoes increasing around that time.

Expected Impacts

Main impact will be flash flooding, but towards the middle of next week damage to crops and property from strong winds and large hail become more probable.

**Central America**

Nil significant.

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

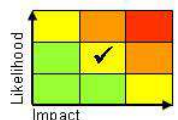
Enhanced shower and thunderstorm activity will continue across the northern Andes through the next 7 days. Rainfall could reach 250-350 mm in places, which would represent more than the average for the whole of March.

Discussion

Northerly flow across Central America is expected to continue, leading to stronger than normal convergence along the ITCZ that will be south-shifted compared to climatology, bringing enhanced precipitation to this region. The likely passage of the MJO through this region is also likely to contribute to enhanced rainfall. This continues the trend of above average precipitation in recent weeks making impacts more likely.

Expected Impacts

Ongoing enhanced threat of flash flooding and landslides.



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Northeast Brazil

Weather

Heavy showers and thunderstorms will affect the region for much of the coming 7 days. Around 50-100 mm could fall within a few hours in places with a few locations having up to 300 mm in total for the seven-day period, equivalent to a month's worth of rain.

Discussion

The ITCZ is likely to remain very active over the next week or so, mainly due to high SSTs in the South Atlantic, but possibly also some influence of the MJO as it moves into the western hemisphere through the next week. Forecast profiles are very moist at depth (precipitable water around 65 mm), with relatively modest CAPE, suggesting high rainfall efficiency and the potential for large accumulations.

Expected Impacts

Heavy rain will bring an enhanced threat of flash flooding and landslides, particularly in mountainous terrain.



Northeast Argentina, Uruguay, southeast Brazil and Paraguay

Weather

Severe thunderstorms will begin to affect parts of northern Argentina this weekend, before this activity becomes more widespread and extends northwards next week. Up to 150 mm of rain could fall in 12-24 hours, with frequent lightning, large hail, strong winds and a threat of tornadoes also possible.

Discussion

The South Atlantic Convergence Zone (SACZ) will transfer north and become more active as forcing from an upper trough associated with a north shifted jet engages the SACZ.

Expected Impacts

Flash flooding is the most likely impact, but with damage from lightning, strong winds and large hail possible too.



Africa

Northeastern Madagascar, La Reunion and Mauritius – see *Tropical Cyclones* section.

Parts of central and eastern Africa

Weather

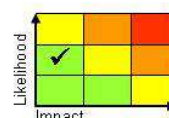
Heavy showers and thunderstorms are likely to affect a broad region of central and east Africa through the next week. These could produce 50-75 mm of rainfall in a few hours, with over 200 mm through the week in places. This would represent the March average falling in the space of a few days.

Discussion

Increased activity along the south shifted ITCZ will lead to above average rainfall across this region, possibly as a result of the approach of the MJO. A sample of forecast profiles show over 3000 J/kg CAPE in places, so there is the potential for some severe storms to develop.

Expected Impacts

Increased risk of flash flooding should these thunderstorms affect a major population centre.

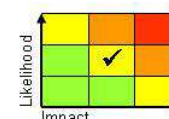


Middle East

Egypt, Levant, Cyprus and southern Turkey

Weather

Further heavy showers, thunderstorms and strong winds will affect the region over the next few days. Where rain falls to fall, the strong winds are expected to generate large dust storms. A few places could see 20-40 mm of rainfall in just a few hours, with 50-70 mm building up over a couple of days. The heaviest rainfall is expected across northern Egypt and southern Turkey. The average March rainfall in the area is around 50-100 mm. Another active weather system could impact southeast Turkey and Iraq next week.



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Discussion

A complex interaction of an eastward travelling upper vortex has produced a deep depression in the eastern Mediterranean, which is now expected to ease across southern parts of the Levant over the next few days. This will bring strong winds, lifted/blowing dust and areas of elevated CB/TS activity to many parts of northern Egypt, eastern Med, coastal Levant and southern Turkey. The heaviest rain is expected across northern Egypt in the next 12-18 hours, but the elevated nature of convection adds uncertainty to totals. A similar event is likely next week, affecting eastern parts of this region as another extended upper trough engages a warm plume.

Expected Impacts

Flash flooding is likely, with lifted dust potentially impacting human health and aviation in the region.

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

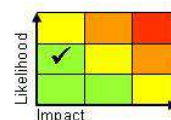
Heavy showers and thunderstorms will continue to slowly transfer eastwards across northern India and Nepal in the next few days. There is the potential for 50-75 mm of rain to fall in a couple of hours, and up to 100-150 mm in a few days for parts of northwest India. The average March rainfall is between 50 and 150 mm in this region. There is also potential for large hail, frequent lightning and strong, gusty winds within these thunderstorms.

Discussion

A portion of a mid-latitude upper trough is extending south, then southeast across the Himalayas, activating a plume of warm, moist air, and bringing frequent/heavy showers/thunderstorms to the area.

Expected Impacts

Flash flooding likely in places along with damage to property and infrastructure from hail and/or strong winds. This region has already seen significant impacts from heavy rain, snow and flooding in recent days.

**Eastern Indonesia, Papua New Guinea and Solomon Islands****Weather**

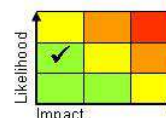
Enhanced seasonal rainfall is expected to continue across this region. Rainfall totals of widely 50-100 mm, and locally 200-300 mm are expected in frequent daily rounds of showers and thunderstorms.

Discussion

The active phase of the MJO is currently moving slowly through this region, providing a backdrop of enhanced convection and rainfall.

Expected Impacts

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

**Australasia**

Parts of Australia and New Caledonia – see *Tropical Cyclones* section.

Additional Information

Nil.

Issued at: 130805 UTC **Meteorologists:** Brent Walker / Paul Hutcheon

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