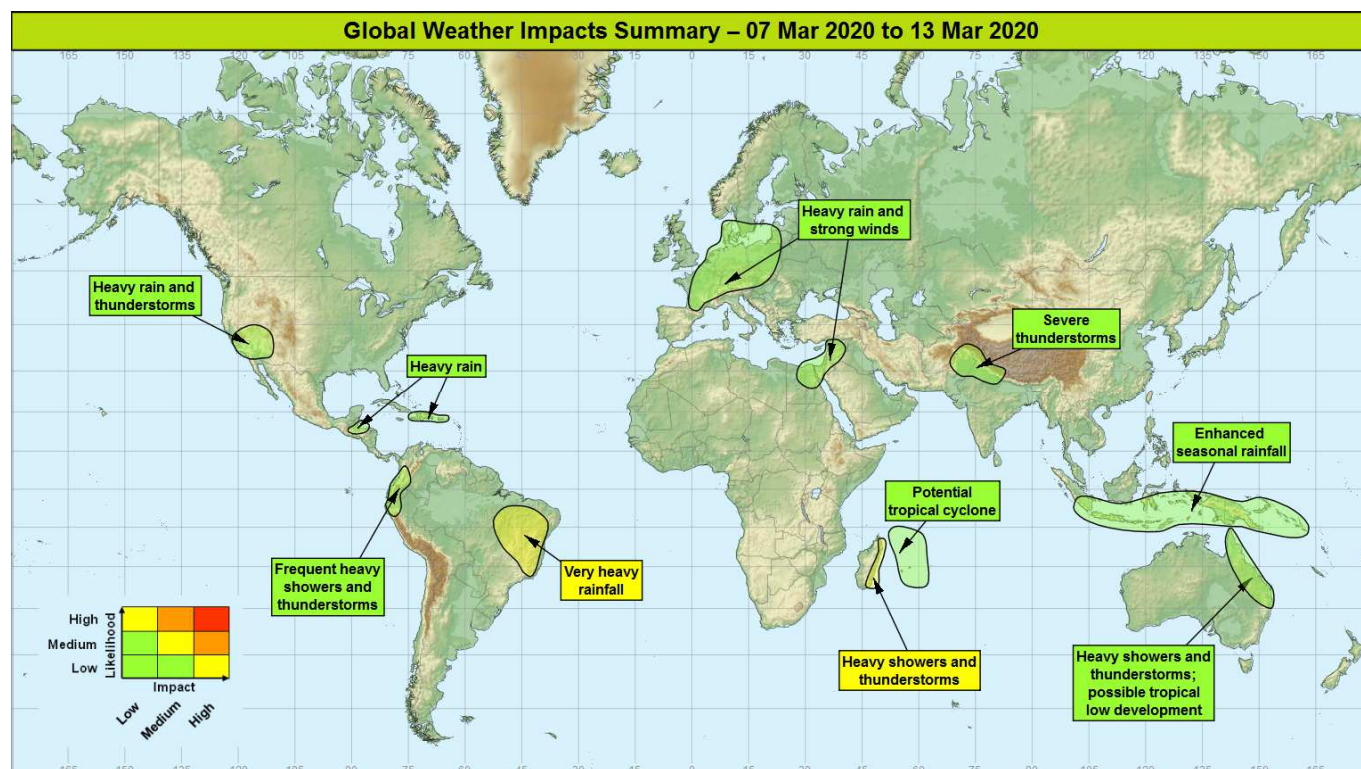


Global Weather Impacts – Saturday 7th to Friday 13th March 2020

Issued on Saturday 7th March 2020

HEADLINES

- Further heavy rainfall for Madagascar and possible tropical cyclone development.
- Heavy rainfall continues across parts of eastern Brazil.
- Further enhanced seasonal rainfall for parts of Indonesia.
- Possible tropical low development in northeast Australia next week.



DISCUSSION

Tropical Cyclones

There are currently no active tropical cyclones.

The following areas are being monitored for potential tropical cyclone development affecting land over the next week:

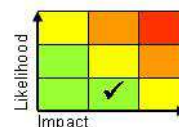
Southwest Indian Ocean

Weather

An area of disturbed weather is located to the east of Madagascar and north of La Reunion, with potential for a tropical cyclone to develop over the next week. Confidence is currently very low with respect to the track/intensity of any system should it develop.

Discussion

The combination of an equatorial Rossby wave and above normal SSTs in this region is leading to increased convective activity, but the development of a tropical cyclone over the next few days seems to be mitigated against by strong vertical wind shear across the region. Models have been very inconsistent with developments in this region, and have lately backed away from the idea of any system impacting northeast Madagascar. As shear relaxes later this week/early next week, there is a greater threat of a more substantial system which could bring strong winds and large rainfall to this region.



This forecast may be amended at any time

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Expected Impacts

Low risk of flooding and damaging winds.

Coral Sea – see *Australia* section for more details

Europe**Central Europe****Weather**

Early next week, rain and mountain snow is expected to affect central parts of Europe, with the western Alps prone to seeing the larger rainfall totals. 40-70 mm is likely in a 12-18 hour period, with the most prone spots seeing as much as 100 mm. Conditions should improve midweek. Strong winds are also expected, particularly for Denmark and northern parts of the Netherlands, Germany and Poland. Some easing of the rainfall is expected on Wednesday but a further spell could affect similar areas on Thursday.

Discussion

A complex area of low pressure is expected to move across the UK into Scandinavia early next week. Well-forced frontal zones are expected to give widespread rainfall, with a particular focus on parts of the Massif Central and the western Alps. As the forcing overruns the frontal zone on Wednesday the rainfall should ease, but another wave depression could form along the trailing baroclinic zone into Thursday to bring another spell of rainfall to these areas.

Expected Impacts

Increased risk of flash flooding in faster responding catchments. Increased risk of river flooding, particularly given recent wetter than normal conditions. Rapid rise in freezing levels will increase avalanche risk in the mountainous regions.

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

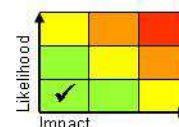
Heavy rain and thunderstorms are likely to affect the normally arid regions of southwestern USA around the middle of next week, along with parts of southern California. 50-100 mm, perhaps up to 150 mm in a few locations, of rain could fall.

Discussion

A cut-off upper vortex is likely to interact with a high WBPT plume, moving north from Mexico, generating areas of heavy showers, thunderstorms and perhaps some more organised spells of rain. Whilst the heaviest rain is likely to be over southern California, desert regions further inland, including cities such as Las Vegas and Phoenix, could also have some heavy rainfall.

Expected Impacts

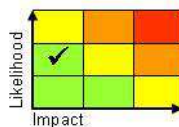
Flash flooding is the main impact, which could affect major cities such as Los Angeles, Las Vegas and Phoenix.

**Central America****Belize, Guatemala, northern Honduras, Hispaniola and Puerto Rica****Weather**

Heavy showers and thunderstorms are expected to become more frequent and intense than usual for the time of year until around the middle of next week. During this period, 150-250 mm of rainfall is possible, much of which is likely to fall in short periods. This is the dry season for this region and whilst monthly averages exceed 100 mm during the months of May to December, this is nearer 30-50 mm in March.

Discussion

Cyclogenesis over southeast USA and a strong build of pressure in its wake will drive a cold front into the tropics with a strengthening of the trade winds ahead of it across the Caribbean Sea. This will support an out-of-season increase in shower and thunderstorm activity in the region where low-level convergence is the strongest.



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Expected Impacts

This spell of heavy rain follows flooding that affected northern Honduras at the end of February. This may exacerbate existing relief efforts and cause further flash and river flooding.

South America

Southwest Colombia, Ecuador and Peru

Weather

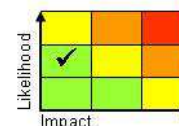
Enhanced shower and thunderstorm activity will continue across the northern Andes through the next week. Precipitation totals could reach 200-300 mm in places, which would represent more than the average for the whole of March.

Discussion

Continued northerly flow across Central America will lead to stronger than normal convergence along the ITCZ, bringing enhanced precipitation, especially in the north of this region. Precipitation across parts of this area has been above average in recent weeks, with impacts from flash flooding and landslides.

Expected Impacts

Ongoing enhanced threat of flash flooding and landslides.



Eastern Brazil

Weather

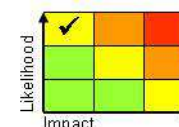
Heavy showers and thunderstorms will affect the region during this week. Around 50-100 mm could fall each day, with a few locations having up to 300 mm in total for the week, equivalent to a month's worth of rain. The heaviest rain should remain to the north of the major cities of Rio de Janeiro and Sao Paulo.

Discussion

The South Atlantic Convergence Zone (SACZ) will remain active through this week with several mid-latitude upper troughs relaxing northeast and to interact with the monsoon plume. Forecast profiles are very moist at depth, with relatively modest CAPE, suggesting high rainfall efficiency and the potential for large accumulations.

Expected Impacts

Heavy rain will bring a risk of flash flooding and landslides, particularly in mountainous terrain.



Africa

Eastern Madagascar

Weather

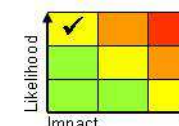
Heavy showers and showers and thunderstorms will continue to affect eastern parts of the island, including around the capital Antananarivo. 50-100mm is possible in some places per day, with 200-300mm building up on east facing mountainous regions through a 3-4 day period.

Discussion

A developing tropical depression will allow moist, easterly winds to persist, these bringing a near continuous feed of heavy showers and thunderstorms into eastern parts of the island. The rainfall has the potential to be further enhanced should a tropical storm develop in the region, although this is more likely to the east near Mauritius and/or Reunion.

Expected Impacts

Increased risk of flash and later river flooding. Increased landslide risk in mountainous areas.

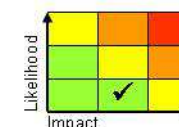


Middle East

Western Levant and Egypt

Weather

Heavy showers and thunderstorms, these intense and prolonged, could affect large parts of the region later next week. 50-100 mm of rain could fall, much of this within 6 hrs and would be equivalent to well over a month's worth of rain. Strong winds are also possible, leading to risk of some dust storms.



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Discussion

Potential for an active cold front to be driven E/SE by a disrupting upper trough later next week. Heavy showers and thunderstorms are probable in the high WBPT plume, which is drawn north ahead of the cold front, with upscale growth into large MCS possible. The cold front will be very active, with line convection and gusty winds. Where significant precipitation fails to fall, dense, lifted plumes could be generated, especially across Egypt.

Expected Impacts

Flash flooding is the primary impact, although where precipitation is light, areas of lifted dust could form, disrupting air travel and impacting human health.

Asia**Indonesia, Malaysia, Papua New Guinea, and Solomon Islands****Weather**

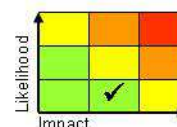
Enhanced seasonal rainfall is expected to continue fairly widely across this region. Rainfall totals of widely 50-100 mm, and locally 150-250 mm are expected in frequent daily rounds of showers and thunderstorms

Discussion

The active phase of the MJO is currently moving through this region, providing a backdrop of enhanced convection and rainfall. Some parts of this region, including West Java, have recently seen severe flooding, although it seems likely that the worst of the conditions will stay clear of Jakarta in this current episode.

Expected Impacts

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

**Northern Pakistan, northern India and Nepal****Weather**

Heavy showers and thunderstorms are expected to develop across during Saturday. Drier conditions will then follow for the early part of next week, before turning increasingly wet once again from around Wednesday. There is the potential for 50-75 mm of rain to locally fall in a couple of hours, in addition to frequent lightning, gusty winds and large hail.

Discussion

A Western Disturbance (upper trough in the subtropical jet stream) is expected to move east across the region during Saturday, engaging the increasingly warm low-level airmass south of the Himalayas. Forecast profiles exhibit steep mid-level lapse rates supportive of some hail, with vertical wind shear supportive of upscale development into one or more MCSs. Another upper trough is likely to extend SE across the region from the middle of next week, possibly disrupting and becoming slow-moving. Once again this will interact with the warming WBPT plume over the region to produce heavy showers and perhaps some severe thunderstorms.

Expected Impacts

Flash flooding, possible along with damage to property/infrastructure from hail and/or strong winds.

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australasia**Queensland, Australia****Weather**

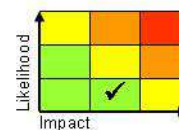
Further heavy rain and severe thunderstorms are expected in this region over the next week, with 50 to 100mm of rain and up to 200 mm possible in a few locations, along with a risk of frequent lightning and large hail. Not everywhere will see these initially, but into next week there is potential for a tropical low to form close to northern Queensland which, if it does so, will enhance the risk of showers and storms more widely.

Discussion

The gradual eastward progression of the MJO will lead to enhanced rainfall across this part of Australia for the next week or so. From around the middle of next week, conditions become more favourable for tropical cyclogenesis and there is a growing model signal for a weak tropical low to form in the Gulf of Carpentaria, cross Queensland and then move out into the Coral where it could then strengthen into a tropical storm.

Expected Impacts

Localised flash flooding is expected, with potential for mudslides/debris flows should the rain impacts areas recently scarred by bushfires. Isolated large hail/frequent lightning impacts possible. Should a tropical low form and develop into a cyclone, damaging winds could be an additional impact.

**Additional Information**

Nil.

Issued at: 070625 UTC **Meteorologists:** Brent Walker

Global Guidance Unit

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