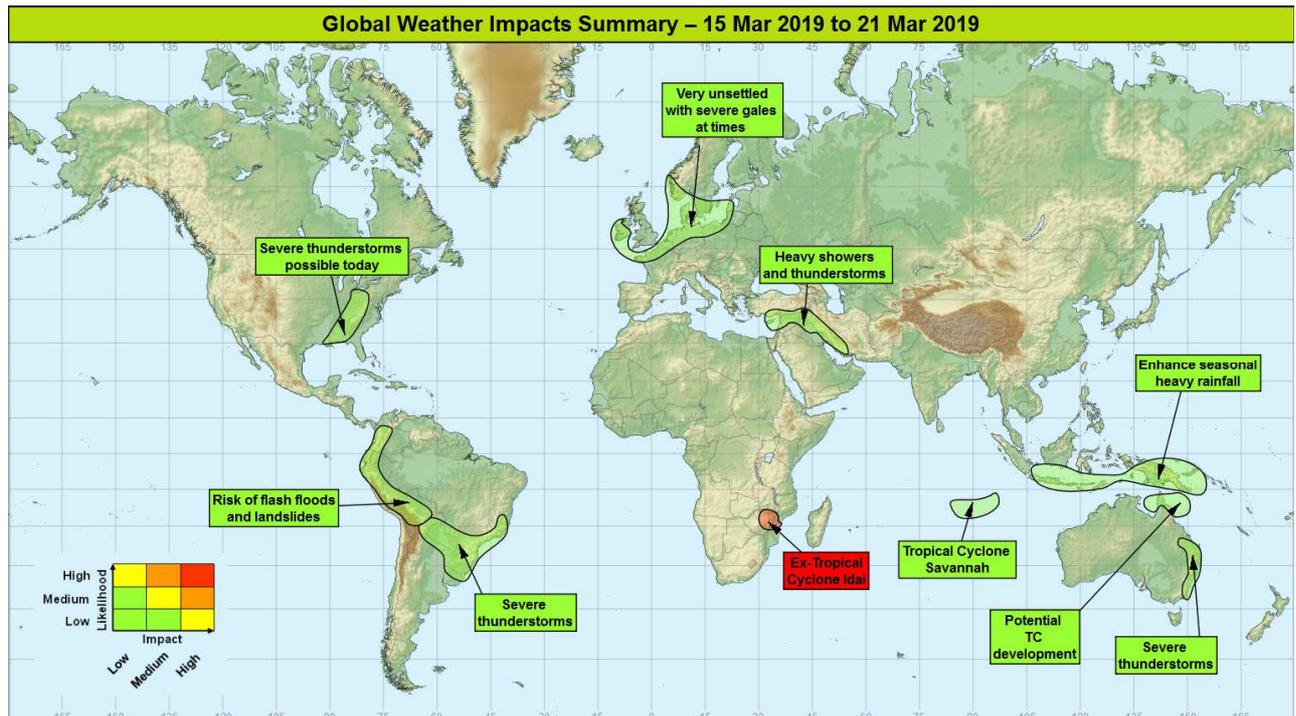


Global Weather Impacts – Friday 15th to Thursday 21st March 2019

Issued on Friday 15th March 2019

HEADLINES

- Tropical Cyclone Idai has made landfall near Beira, Mozambique with severe impacts expected.
- Enhanced seasonal heavy rainfall across parts of South America and the Maritime Continent.



DISCUSSION

Tropical Cyclones

Ex-Tropical Cyclone Idai (Mozambique Channel, Mozambique, Malawi and Zimbabwe)

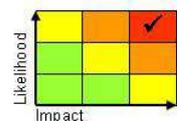
Weather

Idai made landfall over central Mozambique last night with its 'eye' passing over the city of Beira around 0000 UTC. Whilst no ground based observations are available official guidance estimates sustained 10 minute winds were around 100 mph as Idai moved over land. Wind speeds have rapidly decreased since landfall, with Idai now considered an ex-tropical cyclone with sustained winds lower than 39 mph. Idai is forecast to slowly track west-northwestwards, and whilst the system continues to slowly decay attention now turns to exceptional rainfall which is expected to persist across central Mozambique and may also spread in parts of eastern Zimbabwe and the far south of Malawi. Over the next 4 or 5 days some locations could receive in excess of 1000mm of rainfall (generally these areas see 150-300 mm of rainfall in a typical March). In addition, parts of the Mozambique coast near Beira are likely to continue to be affected by an ongoing storm surge and large waves through today.

Discussion

Cyclone Idai has now made landfall with a decaying eye wall apparent in imagery, indicative of a rapidly decaying system. There is good model agreement that ex-Idai will continue to track slowly west-northwest and gradually dissipate over the coming days but the system will remain a focus for intense rainfall for some days to come. This region has already seen very heavy seasonal rainfall in recent weeks with severe and deadly flood impacts. So further very heavy rainfall will just exacerbate the situation.

Expected Impacts



This forecast may be amended at any time

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Flash and fluvial flooding, with major river systems such as the Zambezi, Pungwe, Revue and Save likely to be affected. There are already early reports of damage to infrastructure and buildings with further reports of impacts from destructive winds likely to become apparent through today including a danger to life. Extremely large waves and a storm surge are likely to have caused significant coastal flooding.

Tropical Cyclone Savannah (Southeast Indian Ocean)

Weather

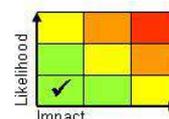
Savannah has intensified to a category 2 cyclone as it moves southwest away from the Cocos Islands. Savannah is forecast to continue west-southwest and remain over open waters in the Indian Ocean over the coming days.

Discussion

Good model agreement that Savannah will track away from the Cocos and remain over open waters through this period but may intensify further.

Expected Impacts

None expected.



The following area is being monitored for Tropical Cyclone development:

Coral Sea and far northeast of Australia

Weather

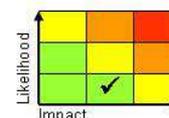
There is the potential for a tropical cyclone development later this weekend or early next week across the Coral Sea or perhaps in the Gulf of Carpentaria. If a system develops it could affect the northeast of Queensland, Australia, bringing very strong winds, intense rainfall and a storm surge.

Discussion

The MJO, that will be moving into the Western Pacific by the weekend, is likely to produce a strong Equatorial Rossby Wave in the next few days that could help develop a tropical cyclone. Most deterministic models indicate cyclone forming but with significant differences in the timing, location and intensity.

Expected Impacts

Threat of flash and coastal flooding as well as destructive winds.



Europe

Northwestern Europe

Weather

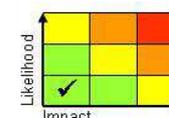
Further spells of heavy rain and strong winds will move east across northwest Europe over the coming days. Whilst not particularly unusual for the time of year, swathes of strong to gale force winds will move across the area. In addition, on Sunday there is the potential for an even more potent low pressure system to develop bringing an increase risk of severe gales.

Discussion

There remains some uncertainty in the development of individual systems, but there is a good signal for a period of unsettled and potentially very windy weather across much of the near continent. The greatest uncertainty comes from a frontal wave crossing the UK over the weekend, which is signalled to cross on to the cold side of the jet and undergo significant cyclogenesis during Sunday, most likely over the N Sea. Models vary on track and depth of the resultant low.

Expected Impacts

The main impacts are likely to be wind related, so disruption to travel, especially aviation and marine seems likely. There is a lesser risk of disruption to power supplies from fallen trees as well as damage to buildings.



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Southern Turkey, Cyprus, Lebanon, Syria, northern Iraq and western Iran

Weather

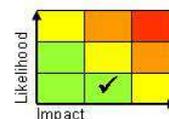
Spells of heavy rain and thunderstorms will move east across this region on Friday and over the weekend, producing up to 50 mm in a 6-12 hour period, and in places up to 100 mm during the period (which is double the average March rainfall in the region). Strong winds or gales are possible at times, producing rough seas, as well as lifting dense dust plumes.

Discussion

A succession of marked upper troughs will sweep east across this region until the weekend, pushing active frontal systems and deeply unstable airmasses across the region.

Expected Impacts

Some flash flooding is possible, especially in mountainous regions. The strong winds will be hazardous to shipping in the area, and may cause local land disruption, lifting dense dust plumes across Syria and Iraq.



North America

Eastern USA

Weather

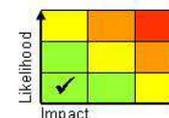
The exceptional area of low pressure which has brought a number of reported impacts across central and southern parts of the US over the last 48 hours continues to move north-eastwards across the country. The main threat of further severe weather from this system comes from the potential for severe thunderstorms to develop over some eastern states, particularly during today (Friday). These thunderstorms will bring some localised very heavy rainfall (30-40mm in a few hours) along with a threat of large hail, damaging wind gusts. There is also a small risk of isolated tornadoes developing.

Discussion

The trailing cold front and low level warm plume ahead of it associated with the exceptional area of low pressure that continues to move across the states is likely to be the focus of any further severe weather from this system. On or just ahead of the marked cold front will act as a focus for thunderstorm outbreaks. In addition, low-level wind shear brings a threat of tornadic developments.

Expected Impacts

Heavy rain may result in some urban flash flooding, frequent lightning may disrupt power supplies, large hail damage to crops and property, with a threat of greater disruption (albeit on a very localised scale) if any significant tornadoes form.



Central America and Caribbean

Nil significant.

South America

Northern Andes region (Colombia, Ecuador, Peru and Bolivia)

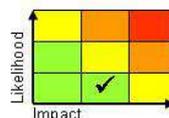
Weather

Heavy showers and thunderstorms are expected to continue to affect the northern Andes region for the next week. Rainfall accumulations will vary by location due to the showery nature of the rainfall, but some places are likely to see a further 200-300 mm of rain through the week.

Discussion

Along the Pacific coastline north of NE Peru there are positive SST anomalies, and these indicate a weakening of trade winds and the Humboldt Current in this region. This setup allows sea breezes to draw moist oceanic air to the usually dry western Andes, with an unusually high frequency of heavy showers and thunderstorms occurring here.

Expected Impacts



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Flash flooding and landslides remain an ongoing threat in the mountainous areas, as well as downstream river flooding. With much of this region now preconditioned by previous rainfall, further heavy rain will produce some additional impacts. Over recent weeks there has already been significant damage to infrastructure from flooding, with homes, bridges and roads destroyed.

Paraguay, southern Brazil and far northeast of Argentina

Weather

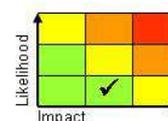
Frequent showers and thunderstorms are expected to affect the region over the next week. Thunderstorms will produce strong winds, large hail and a risk of tornadoes. Rainfall totals of 100-150 mm are possible in a few hours in places. The heaviest and most frequent rainfall looks likely to be over Paraguay over the next few days with rainfall accumulations of 250 to 300 mm possible in places, this double the average March rainfall.

Discussion

A number of disturbances embedded within the subtropical jet are expected to lead to further episodes of severe convection along the South Atlantic Convergence Zone (SACZ). The environment will often be characterised by high CAPE and shear, supporting mesoscale convective systems and supercells.

Expected Impacts

Flash flooding and increased risk of landslides and fluvial flooding are likely. Severe thunderstorms will also cause some highly localised but potentially significant property and infrastructure impacts due to strong winds, hail and lightning damage.



Africa

Central Mozambique, southern Malawi and eastern Zimbabwe - See *Tropical Cyclones* section

Middle East

Lebanon, northern Syria, northern Iraq and western Iran – See *Europe* section

Asia

Central and eastern Indonesia and Papua New Guinea

Weather

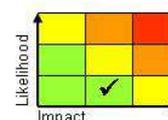
Above average rainfall is expected across many islands in this region through the next week. Whilst the heaviest downpours will be rather localised, they are likely to develop in a similar places each day with 100-150 mm of rain falling in 24 hours and some places likely to receive around 300 mm over the next week. In a typical 7-day period at this time of year, this region normally receives around 50-100 mm.

Discussion

The MJO will continue to move through the Maritime Continent and into the West Pacific through the next week, helping to organise and enhance convection across the region.

Expected Impacts

An increased likelihood of flash flooding and landslides leading to localised damage to infrastructure and property.



Australasia

Papua New Guinea – See *Asia* section.

Far northeast of Australia / Cocos Island – See *Tropical Cyclones* section.

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Eastern fringes of Australia**Weather**

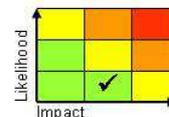
Severe thunderstorms are expected to affect the far eastern part of Australia over the next few days before activity eases early next week. These thunderstorms have the potential to produce large amounts of rain (e.g. 50-100 mm) in a few hours in places along with frequent lightning, strong gusty winds and large hail. Over the coming days some places, including a risk for major cities including Brisbane and Sydney, could see 200-300mm of rainfall build up which would be twice the average March rainfall.

Discussion

The combination of a moist onshore flow, warm low level plume and disrupting upper trough will produce conditions for high CAPE (>2000 J/kg) storms that will contain 40-50 mm of precipitable water.

Expected Impacts

Flash flooding and large hail damage look like the main impacts, although surface and air transport are also likely to be impacted.

**Additional information**

Nil.

Issued at: 150730 UTC **Meteorologist:** Chris Bulmer

Global Guidance Unit

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