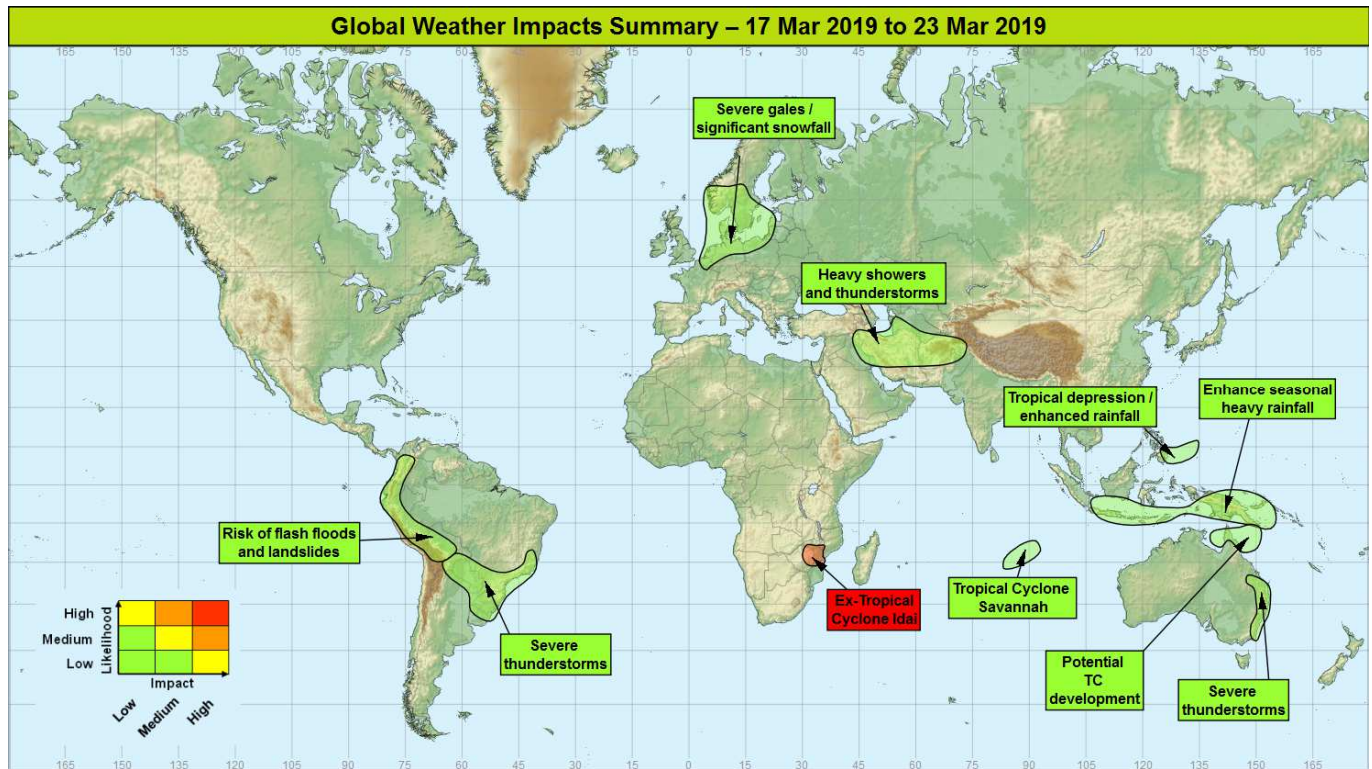


Global Weather Impacts – Sunday 17th to Saturday 23rd March 2019

Issued on Sunday 17th March 2019

HEADLINES

- Torrential rainfall associated with Ex-Idai continues over parts of Mozambique, eastern Zimbabwe and southern Malawi.
- Enhanced seasonal heavy rainfall across parts of South America and the Maritime Continent.



DISCUSSION

Tropical Cyclones

Ex-Tropical Cyclone Idai - See *Africa* Section below.

Tropical Cyclone Savannah (Southeast Indian Ocean)

Weather

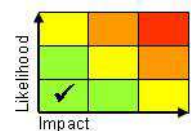
Savannah has intensified further and is now a category 4 tropical cyclone. Savannah is expected to drift west-southwest and remain over open waters in the Indian Ocean over the coming days whilst slowly weakening.

Discussion

Good model agreement that Savannah will remain well away from land with the likelihood that Savannah is now in its most intense phase.

Expected Impacts

None expected.



The following areas are being monitored for Tropical Cyclone development:

This forecast may be amended at any time

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Papua New Guinea and far northeast of Australia

Weather

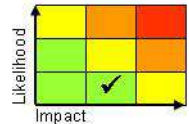
A tropical low which has crossed the southeastern tip of Papua New Guinea and is now in the Coral Sea is expected strengthen over the coming days. The system is likely to drift southwest across the Coral Sea, probably reaching the Cape York Peninsular region of Queensland, Australia, most likely during Tuesday.

Discussion

An area of convection over the Coral Sea has now formed into a tropical low. With low to moderate shear and the warm waters there is good agreement from models that the system will develop into a tropical cyclone over the next 24-48 hours. The development is then likely to track south-west, across the Coral Sea, probably reaching the Cape York Peninsula during Tuesday.

Expected Impacts

Enhanced rainfall across the eastern end of Papua New Guinea could lead to some flash flooding today. Depending on how developed the system becomes there is a risk of damaging winds, flash flooding and coastal impacts over parts of Cape York Peninsula, Queensland.



Western Pacific

Weather

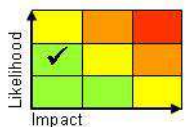
A tropical depression in the western Pacific is expected continue west over the coming days towards the southern Philippines. This system is unlikely to become a tropical cyclone, but may bring some enhanced rainfall to parts of the Philippines early next week.

Discussion

A combination of marginal sea surface temperatures and increasing upper level shear are likely to restrict further development of this system as it heads west across the Pacific. Models are in good agreement for it to reach the southern Philippines early next week.

Expected Impacts

The main impacts are likely to be enhanced rainfall across eastern parts of the central and southern Philippines, most likely on Monday. This could give some flash flooding.



Europe

Northwestern Europe

Weather

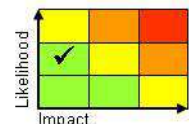
The recent spell of often very wet and very windy conditions across north-west Europe will continue on Sunday as another potent low pressure system moves into southern Scandinavia. This will again produce gales or severe gales, with some especially strong winds looking likely across Denmark and perhaps southern Sweden on Sunday and Monday. In addition, there will be some significant falls of snow across parts of Scandinavia. As we head into next week a build of pressure from the south-west should bring the very disturbed weather to an end.

Discussion

The low which crossed the British Isles on Saturday has continued to deepen as it crossed the North Sea, and an intense sub 970 hPa centre just off south-western Norway this morning. The low will then fill slowly as it drifts east across southern Scandinavia, with a lengthy spell of gales, perhaps severe gales likely across Denmark and southern Sweden. An amplification of the upper pattern across The Atlantic should bring an end to the disturbed weather next week.

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. Snowfall is likely to cause some disruption across parts of Scandinavia with significant drifting likely in the strong winds.



North America

Nil significant.

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Central America and Caribbean

Nil significant.

South America

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

Weather

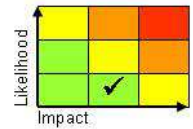
Heavy showers and thunderstorms are expected to continue to affect the northern Andes region for the next week. Rainfall accumulations will vary by location due to the showery nature of the rainfall, but locally a further 200-300 mm of rain is possible through the week.

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

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, Uruguay and far northeast of Argentina

Weather

Further bouts of showers and thunderstorms are expected to affect the region over the next few days. 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. Concepcion in central Paraguay recorded 105 mm on Saturday.

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.



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Africa

Central Mozambique, southern Malawi and eastern Zimbabwe

Weather

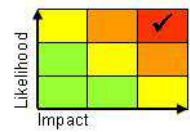
After making landfall close to Beira, Mozambique on Thursday evening, the remnants of Ex-Idai have remained slow moving across central Mozambique, eastern Zimbabwe and southern Malawi. Over the coming days exceptional rainfall is expected to continue across these areas with models suggesting a further 500-750 mm may fall in places (generally these areas see 150-300 mm of rainfall in a typical March). Whilst the highest rainfall totals looks likely occur through Sunday and Monday, heavy rain is expected to linger in this area throughout next week. Through the week rainfall will turn increasingly 'showery' with severe thunderstorms likely to develop daily during the afternoon and evenings.

Discussion

The remnant moisture from this Ex-cyclone Idai will remain slow moving across this region for much of the coming week producing torrential and prolonged spells of rain. Models differ slightly as to where and how much rain will fall, although the border region between Mozambique and Zimbabwe looks most prone, along with southern Malawi. 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. The full impacts from Idai are yet to emerge. With many roads and bridges impassable or completely destroyed reaching the worst affected areas is proving difficult. Through the week as Ex-Idai continues to break up rainfall will become increasingly convective with severe thunderstorms and potential MCS developments over central Mozambique.

Expected Impacts

Flash and fluvial flooding, with major river systems such as the Zambezi, Pungwe, Revue and Save likely to be affected. The impact Idai has already had on Mozambique is still to become clear with the worst affected areas proving difficult to reach. However it is likely that the country and population will be especially vulnerable at this time.



Middle East

Eastern Iraq, Iran, Afghanistan, Turkmenistan, northern Pakistan

Weather

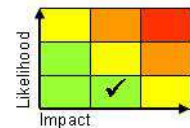
Areas of heavy rain, thunderstorms and in places strong winds will make eastward progress across this region through the next few days. 50 to 100 mm of rainfall is possible, perhaps 150 mm in places, this combined with snow melt over mountains. This latest disturbed weather follows recent heavy rain and flooding across this region which caused significant impacts across parts of Afghanistan especially.

Discussion

A potent upper trough will progress east today before disrupting and leaving a cut off vortex over Turkmenistan. A surface low is likely to form on the tip of a warm plume over Iran, with an intense feature expected over Turkmenistan early next week. Heavy rain and thunderstorms will progress east, with models suggesting in excess of 100 mm likely across northern Iran and western Turkmenistan, perhaps northern Pakistan. While amounts across Afghanistan may be lower, given recent events here sensitivity is heightened.

Expected Impacts

Flash flooding is likely with a risk of landslides in mountainous areas. Following recent flooding in Afghanistan, further rainfall and snowmelt is likely to have a greater impact than normal here.

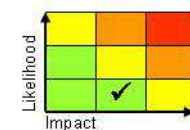


Asia

Central and eastern Indonesia and Papua New Guinea (see also Tropical Cyclone section)

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.



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Discussion

The MJO, although weakening, will continue to help 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 and Tropical Cyclone* section.

Far northeast of Australia – See *Tropical Cyclones* section.

Eastern fringes of Australia

Weather

Severe thunderstorms are expected to affect the far eastern part of Australia on Sunday 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, with a risk for major cities including Brisbane and Sydney, could see up to of rainfall build up which would be almost 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: 160820 UTC **Meteorologist:** Mark Sidaway

Global Guidance Unit

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