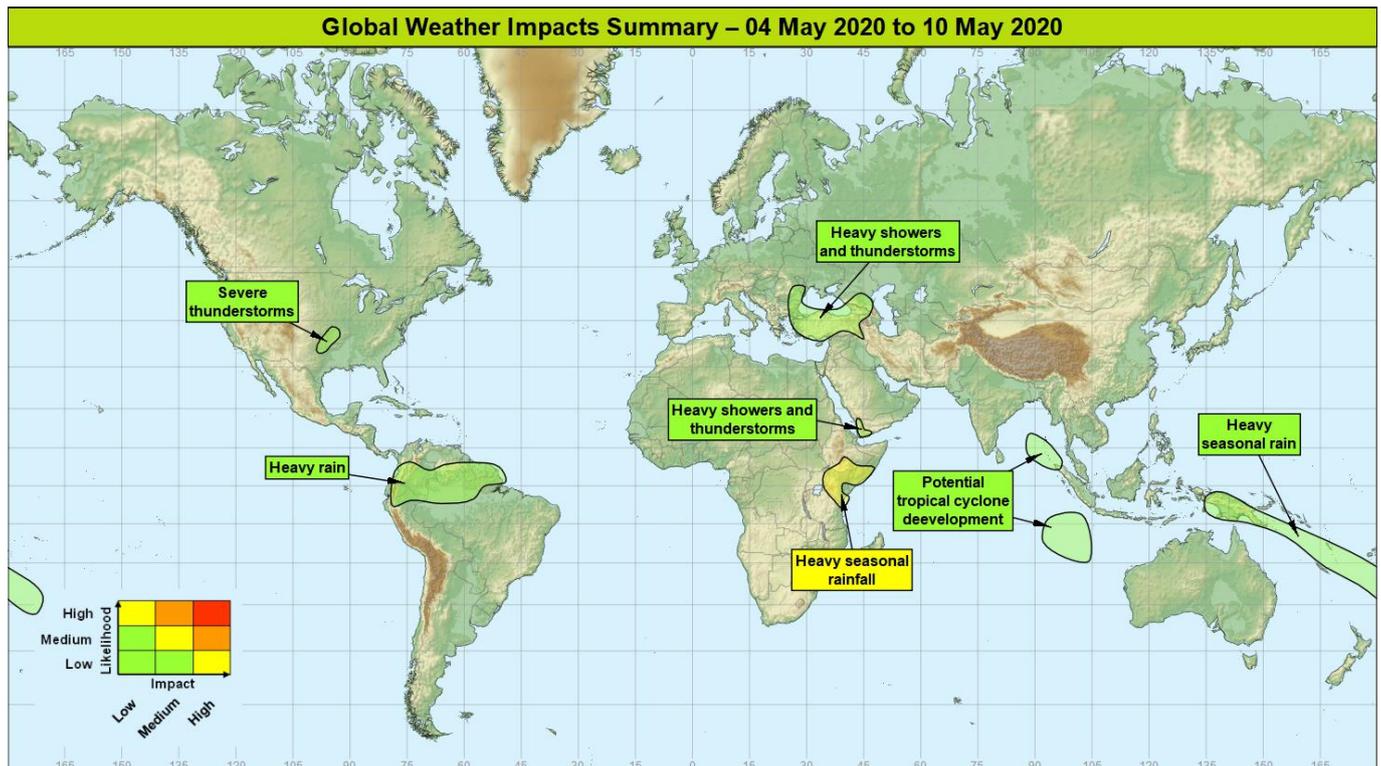


Global Weather Impacts – Monday 4th to Sunday 10th May 2020

Issued on Monday 4th May 2020

HEADLINES

- Heavy seasonal rainfall continues across parts of eastern Africa and parts of South America, exacerbating ongoing flooding.
- Low likelihood of a tropical cyclone developing in the Bay of Bengal, and perhaps also southwest of Indonesia this week.



DISCUSSION

Tropical Cyclones

There are currently no active tropical cyclones. The following areas are being monitored for possible development:

Bay of Bengal

Weather

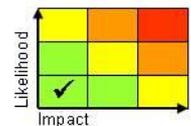
There is still a low likelihood of tropical cyclone development across the eastern Bay of Bengal this week. Should a tropical cyclone form, the greatest risk is early this week in the vicinity of the Andaman and Nicobar Islands (i.e. mostly over the sea). Irrespective of development, well above average rainfall is expected to affect the highlighted region.

Discussion

An Equatorial Rossby Wave (ERW) is currently organising thunderstorms in the region, with these moving through a low shear environment and warm SSTs that would support tropical cyclone development. The signals for TC development in the Bay of Bengal, have now decreased, however IMD is watching this area (Invest 96S).

Expected Impacts

Should a tropical cyclone develop here, it would most likely be offshore – at least initially. Should it move over land, strong winds could cause damage to property and infrastructure, as well as lead to large waves and coastal flooding. Heavy rain would likely cause some surface water and riverine flooding.



This forecast may be amended at any time

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Southwest Indian Ocean**Weather**

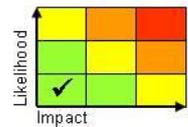
There is a low probability that a tropical depression could develop to the southwest of Indonesia near the Cocos Islands next week.

Discussion

With the MJO now in the Maritime Continent, there is an increased likelihood that it will spawn a Rossby wave couplet in its wake. The combination of a developing low shear environment and warm SSTs would support tropical cyclone development. ECMWF and GFS have probabilities of > 20 %, whereas the GM is slightly less keen with < 20 %.

Expected Impacts

Should a tropical cyclone develop here, it would most likely be offshore – at least initially. Should it move over land, strong winds could cause damage to property and infrastructure, as well as lead to large waves and coastal flooding. Heavy rain would likely cause some surface water and riverine flooding.

**Europe & Turkey****Romania, Bulgaria, Turkey, Georgia and northern Iraq****Weather**

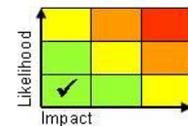
Whilst scattered daily heavy showers and thunderstorms are fairly typical at this time of year, thunderstorms could become heavier and more organised especially around the start/middle of this week. This could result in torrential downpours of rain with 50-75 mm falling within a few hours in places, and perhaps in excess of 100 mm overall. Lightning and strong gusts of wind are also potential hazards.

Discussion

A large upper trough will transfer east across the region over next few days. This combined with strong surface heating, high ground, and local convergence effects brings an increased chance of severe, deep convection developing in response to diabatic heating during daytime. Moderate to high vertical wind shear in GM profiles suggests the potential for organisation and upscaling at times, bringing gusty winds and a risk of hail. In addition, tall, skinny CAPE would favour torrential downpours.

Expected Impacts

Low risk of flash flooding in a few places. Hail could damage crops. Potential impacts on transport.

**North America****Southern Plains, USA****Weather**

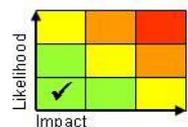
Severe thunderstorms are possible today (Monday) across parts of eastern Kansas, Oklahoma, Missouri, Arkansas and north Texas. Very large hail, in excess of 5-8 cm may accompany some thunderstorms in addition to locally damaging winds and a couple of tornadoes.

Discussion

Strong elevated convection is expected at first in association with a shortwave trough located over northern Kansas with further forcing likely to contribute to further elevated (severe) convection developing east-southeast in association with an area of low-level warm advection. Meanwhile, intense surface heating further south will likely support extreme instability (CAPE >5000 J/kg) ahead of an approaching cold front and dry line with an associated large hail risk. During the evening, initially discrete convection is likely to merge into a linear band with bowing segments, increasing the likelihood of damaging wind.

Expected Impacts

Severe thunderstorms will be capable of localised property and infrastructure damage, as well as crops, from a combination of heavy rain, strong winds, frequent lightning and large hail.



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Central America

Nil.

South America

Northern parts of Peru and Brazil, French Guiana, Surinam, Guyana, Venezuela, Colombia and Ecuador

Weather

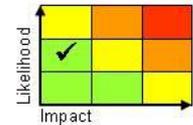
Rainfall will continue to be heavier and more widespread than usual for the time of year across the northern Andes and much of the north of the South American continent. Generally 100-150 mm of rain will fall widely, with locally precipitation accumulations exceeding 200-300 mm. The highest rainfall accumulations are expected to be west of the Andes where population densities are generally lower.

Discussion

As has been the case for several months, the ITCZ is expected to remain south-shifted and active over the next week or so, feeding further heavy rainfall into the region.

Expected Impacts

Further isolated flash flood and landslides likely within the mountainous terrain of the region.



Africa

Kenya, Ethiopia, Somalia, Uganda and Tanzania

Weather

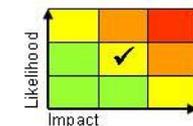
Following a recently active period in the Long Rains season, rainfall will return back to nearer normal over the next week. However, daily heavy showers and thunderstorms will still develop. Locally 50-100mm of rain may still fall in places each day (often within a few hours). Through the next 4 or 5 days the Kenyan and Ethiopian Highlands along with coastal fringes of both Tanzania and Kenya will be wettest with 100-150 mm building up in these areas.

Discussion

Above-average SSTs in the western Indian Ocean will maintain enhanced convection across the region, although this is not expected to be as heavy or as widespread as recently now the MJO has moved further east into phase 5 (Maritime continent), and this downward trend is expected to continue.

Expected Impacts

An ongoing enhanced risk of both flash flooding and some riverine flooding is likely, with the additional risk of landslides in mountainous terrain. Due to recent and ongoing flooding these areas will be particularly sensitive to further heavy rainfall.



Middle East

Turkey and northern Iraq – see *Europe* section.

Yemen

Weather

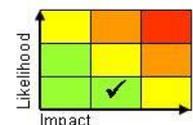
Through the next three days more numerous than usual showers and thunderstorms are expected to across this region each afternoon, before slowly decaying in the evening. These could locally bring 25-50mm of rainfall, likely falling in a short duration. From Thursday onwards activity will reduce to near or below climatology.

Discussion

In response to a major upper trough and surface low crossing the eastern Mediterranean and Levant on Tuesday, a warm moist plume is drawn northeast from tropical Africa across the southwest of the Arabian Peninsula. Strong diurnal heating will lead to this plume destabilising over the mountains of Yemen, and producing numerous heavy showers. By Thursday the plume edges away to the west, with activity returning a near or slightly below normal levels

Expected Impacts

An enhanced risk and flash flooding as well as landslides in areas where terrain is steep.



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Asia

Andaman Sea, Bay of Bengal and Southwest Indian Ocean – see *Tropical Cyclones* section.

Eastern Indonesia, Papua New Guinea and Vanuatu**Weather**

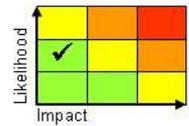
Shower and thunderstorm activity is expected to be more frequent than usual over the next week. The heaviest rainfall is expected to fall across Papua New Guinea where between 200-300 mm of rain could fall by the end of this week.

Discussion

With the MJO currently in the vicinity, it will drive more active than usual convection through the coming days. Even as the MJO continues to propagate away to the east, tropical waves which form in its wake such as Equatorial Rossby Waves (ERW) will continue to enhance deep convection across the region.

Expected Impacts

Flash flooding causing damage to property and infrastructure, as well as an increased likelihood of landslides in more mountainous areas.

**Australasia**

Vanuatu – see *Asia* section.

Additional Information:

Nil.

Issued at: 040720 UTC **Meteorologists:** Nick Silkstone / Chris Almond / Matthew Lehnert **Global Guidance Unit**

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