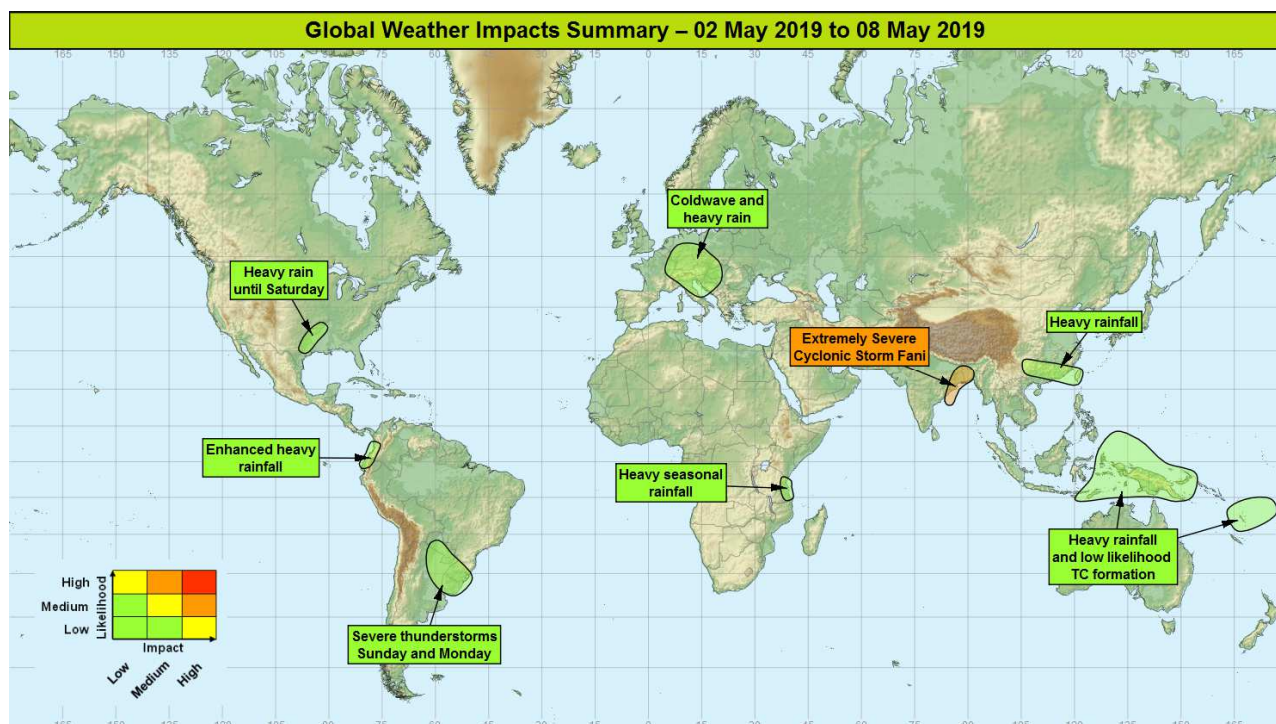


Global Weather Impacts – Thursday 2nd to Wednesday 8th May 2019

Issued on Thursday 2nd May 2019

HEADLINES

- Extremely Severe Cyclonic Storm Fani expected to make landfall in Odisha, eastern India on Friday bringing a combination of destructive winds, storm surge, heavy rain and large waves.



DISCUSSION

Tropical Cyclones

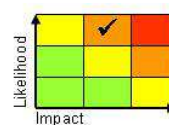
Extremely Severe Cyclonic Storm Fani (Bay of Bengal)

Weather

Fani was centred around 450 miles southwest of Kolkata, India on Thursday morning with estimated sustained (3-minute) winds of 115 mph with gusts of 130 mph, equivalent to a category 3 system on the Saffir-Simpson Hurricane Wind Scale. Fani is expected to maintain a similar intensity until landfall on Friday. The most likely track is for Fani to make landfall in Odisha, northeast India and then weaken as it moves inland across West Bengal and Bangladesh (fringing Dhaka) over the weekend. The heaviest rainfall is expected to fall within around 40 miles of the centre of Fani with accumulations decreasing inland. Along this track, 100-200 mm of rainfall is expected quite widely with locally 500-700 mm along the coast. A storm surge of 1-2 metres is likely to affect a wider part of the northern Bay of Bengal, including Bangladesh as far east as Chittagong.

Discussion

Fani remains in environment conducive to maintaining its intensity with SSTs of 30-31 °C and low vertical wind shear. Whilst SSTs decrease along the Odisha and West Bengal coast to around 28-29 °C no significant weakening is expected prior to landfall. There has been a narrowing in the forecast track envelope and it appears most likely that the Odisha coast near Puri is the most likely landfall location. The rate at which Fani then weakens and its track across Bangladesh is slightly less certain, but is expected to remain well to the west of Cox's Bazar.



This forecast may be amended at any time

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Expected Impacts

Any well-built framed buildings may incur major damage and any poorly built structures are likely to be destroyed near where the centre of Fani makes landfall. Trees are likely to be uprooted leading to transport disruption and damage to power poles leading to isolation of some communities. Storm surge is likely to lead to significant coastal flooding of low-lying areas, potentially including heavily populated cities such as Puri (population 200k and elevation <1m). Rainfall totals could lead to some flash flooding and small river flooding over the weekend. Significant impacts to Cox's Bazar are no longer expected.

Europe

Central Europe

Weather

Significantly colder than average conditions are expected this weekend and early next week across much of northern and central Europe with maximum temperatures widely 5°C below average and overnight frost. Accompanying the change to colder weather will be a spell of heavy rain and thunderstorms that will be most active around the northern Adriatic region and over the Alps. These may be accompanied by hail, strong winds and possibly one or two waterspouts or tornadoes.

Discussion

An airmass of Arctic origin is expected to spread south across much of Europe this weekend with the associated cold front strongly forced by an upper trough. This is expected to lead to a Genoa Low forming with the additional heat/moisture from the Adriatic supporting the development of locally severe thunderstorms. As the low moves southeast, a strong Mistral and Bora will follow. Temperatures are expected to gradually recover through next week.

Expected Impacts

Overnight frost this late into spring is likely to have an adverse effect on agricultural industry following a similar late freeze last year. Heavy rain and thunderstorms will be associated with an increased likelihood of flash flooding and localised property/infrastructure damage. Strong winds may cause some disruption to maritime transport in the region.



North America

Arkansas and eastern Texas

Weather

Whilst the threat of severe thunderstorms will ease compared to recent days, there is a continued risk for heavy rainfall across portions of the Southern Plains and Mississippi, Tennessee and Ohio Valleys through to Saturday. Many areas will receive 30-50 mm of rainfall but some locations in Arkansas and eastern Texas may see up 100-200 mm over 48 hours.

Discussion

The upper trough anchored across the northern Rockies will continue to feed moist and unstable air across the Southern Plains northeastward through the next three days. Shortwave troughs embedded within the flow will interact with the slow-moving frontal zone and be the axis for shower and thunderstorm activity.

Expected Impacts

Increased risk of flash flooding, particularly in urban areas and around small rivers/streams. Some minor transport disruption may affect airports in the region due to thunderstorm activity, particularly Dallas-Fort Worth.



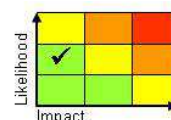
Central America and Caribbean

Nil significant.

South America

Ecuador and western Colombia

Weather



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Frequent heavy showers and thunderstorms are expected to affect the coastal plain west of the Andes through the remainder of this week. As much as 100-150 mm of rainfall could locally fall per day, often falling in a few hours although many places will receive significantly less.

Discussion

A Kelvin wave is likely contributing to an increase in shower and thunderstorm activity across the eastern equatorial Pacific.

Expected Impacts

Since we are nearing the end of the wet season across Ecuador and western Colombia, soil in the region will already be saturated and therefore more prone to flash flooding, mud and landslides.

Paraguay, Uruguay, northeast Argentina and southern Brazil

Weather

Another spell of heavy showers and thunderstorms, potentially severe, are expected to develop across northeast Argentina, Paraguay, Uruguay and southern Brazil through Sunday and Monday. These could produce locally high rainfall accumulations of up to 75 mm in a few hours and perhaps 125-150 mm over a couple of days.

Discussion

An upper trough currently is expected to cross the Andes and engage a low level moisture plume leading to a further outbreak of severe convection along the South Atlantic Convergence Zone from Sunday.

Expected Impacts

Localised flash flooding increased chance of landslides in mountainous areas. Large hail, strong winds and frequent lightning are additional hazards which may cause damage to property and disruption to transport and utilities.



Africa

Eastern Tanzania

Weather

Following the remnants of Tropical Cyclone Kenneth, shower and thunderstorm activity is expected to remain more frequent than normal across eastern Tanzania over the next week. 75-100 mm of rainfall is possible per day, but some locations could receive as much as 300-400 mm of rain by the middle of next week. Whilst May represents climatologically the wettest month of the year, this would represent more than the entire monthly rainfall (around 250 mm).

Discussion

Whilst the remnants of Tropical Cyclone Kenneth have dissipated, the inter-tropical convergence zone will maintain the focus for frequent heavy showers and thunderstorms through the next week across eastern Tanzania.

Expected Impacts

Whilst the focus for the heaviest rainfall is now moving away from the worst affected areas associated with the landfall and decay of Tropical Cyclone Kenneth, there is still expected to further flash flooding and damage to property and infrastructure in locations further north. However, these impacts are expected to be nowhere near as severe as that seen in Mozambique from either Kenneth or Idai.



Middle East

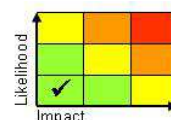
Nil significant

Asia

Northeast India and Bangladesh – See *Tropical Cyclones* section.

Southeast China and Taiwan

Weather



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A further spell of heavy rain and thunderstorms is expected to affect southeast China and Taiwan from Saturday through to Tuesday. Much of the region will receive a further 100-150 mm of rainfall during this period, locally 250-300 mm. Whilst May is the wettest month of the year for inland southeast China these higher totals would represent around an entire month of rainfall for this event alone.

Discussion

Moisture is expected to return northward across the region later in the week but disturbances embedded within the west-northwesterly upper flow will support widespread rainfall and thunderstorm activity.

Expected Impacts

Increased likelihood of flash flooding, exacerbated by recent heavy rainfall earlier this week. There is also an increased risk of landslides in more mountainous regions.

Eastern Indonesia, Timor-Leste, Papua New Guinea and Vanuatu

Weather

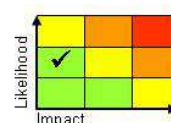
The usual shower and thunderstorm activity is likely to be more frequent and intense with 50-100 mm of rain in a 24 hour period (mostly falling in a 6-hour period) across portions of eastern Indonesia, Timor-Leste, Papua New Guinea and Vanuatu. There is a low likelihood of one or more weak tropical storms developing in the region next week.

Discussion

An active phase of the MJO will transfer east across the region over the next week leading to enhanced rainfall. Western parts of Indonesia are likely to become somewhat drier by the weekend. As seen in the Indian Ocean, the MJO may spawn equatorial Rossby waves which present a low likelihood of tropical cyclogenesis around Timor-Leste, the Philippine Sea and also Vanuatu by early next week.

Expected Impacts

Increased threat of flash flooding and landslides, particularly should shower and thunderstorm activity becomes more organised into next week.



Australasia

Papua New Guinea and Vanuatu – See *Asia* section.

Additional information

Nil.

Issued at: 020720 UTC **Meteorologists:** Matthew Lewis and Brent Walker

Global Guidance Unit

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