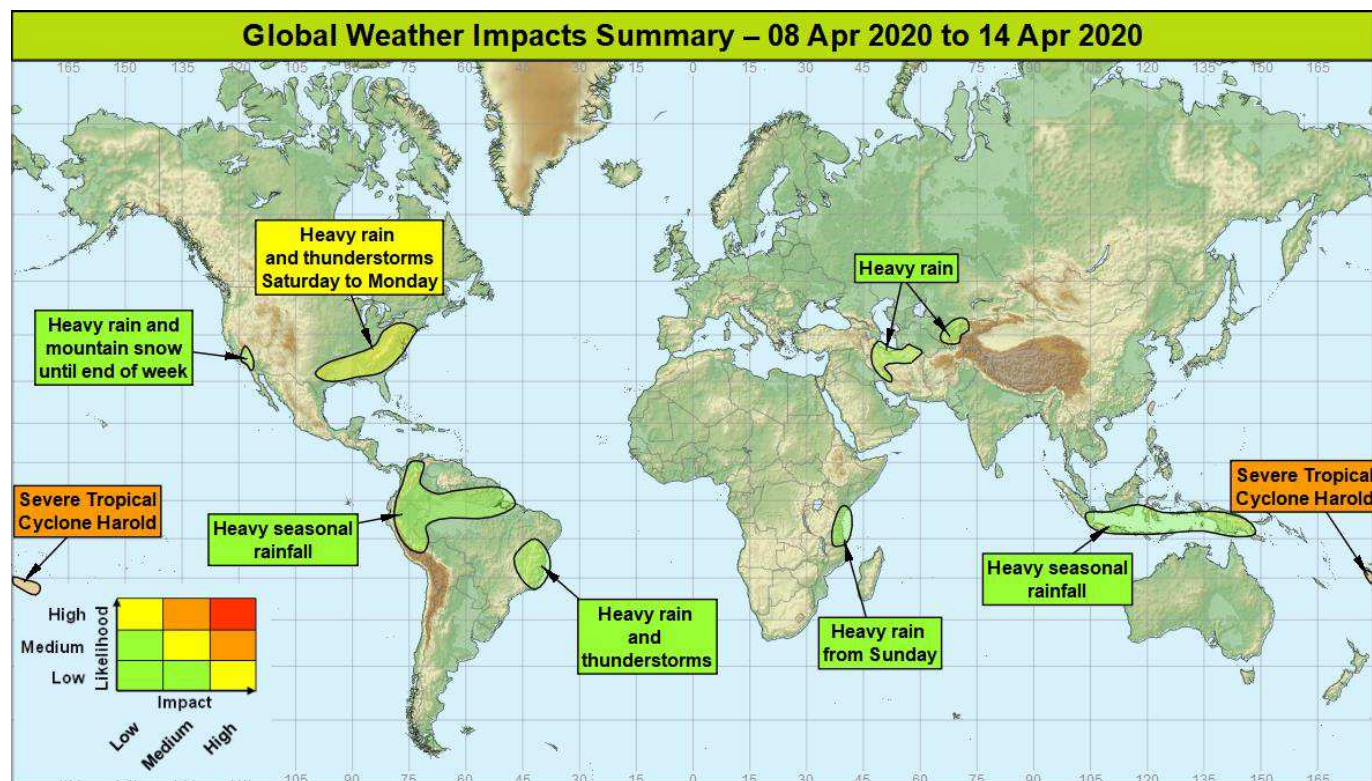


Global Weather Impacts – Wednesday 8th to Tuesday 14th April 2020

Issued on Wednesday 8th April 2020

HEADLINES

- Severe Tropical Cyclone Harold clearing from Fiji and is now heading towards Tonga.



DISCUSSION

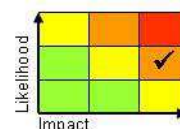
Tropical Cyclones

Severe Tropical Cyclone Harold (Southwest Pacific Ocean)

Weather

Harold remains a severe tropical cyclone with sustained winds estimated in the category 4 range of 99-123 mph (08/0000Z advisory suggested a maximum sustained wind speed of 110 mph). Harold tracked close to the southwest of Viti Levu, Fiji (main island) over the last 12-18 hours and is now (at 0600 UTC) 200 miles southeast of the island with conditions improving. Harold is expected to continue to track east-southeast which will see it pass just to the south of Tonga over the next 24 hours. Little weakening is expected during this time which means there is a continued threat of destructive winds for islands within its path. At this stage, the latest forecasts (including official guidance from RSMC Nadi, Fiji) produce a threat of the strongest winds associated with Harold affecting the southern group of islands in the Tongan island chain, including the capital, Nuku'alofa (population around 25,000). As well as the threat of damaging winds, torrential rain (100-200mm in 24 hours, which is above the average April rainfall) and dangerous sea/coastal conditions are likely.

Discussion



This forecast may be amended at any time

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Low vertical wind shear and warm sea surface temperatures contributed to the rapid intensification of Harold last weekend into a category 5 cyclone as it crossed Vanuatu on Monday causing significant damage. Harold has now being steered in the sub-tropical westerlies, which has seen it pass just south of Fiji and is maintaining a similar course towards the southern islands of Tonga. SSTs remain sufficiently high along with only low levels of vertical shear that has meant any weakening of Harold has only been very slight. However, later this week more substantial weakening is expected as it encounters increased wind shear as Harold clears southeast of the Pacific Islands from tomorrow.

Expected Impacts

Destructive winds remains a possibility disrupting communication and prevent inter-island transport until Harold has cleared. Poorly built structures, trees and crops will be impacted. Heavy rain is likely to cause some flash flooding, and perhaps landslides. High seas, large waves and storm surge are likely to cause damage to harbours and some coastal flooding.

Europe

Nil.

North America

Southern California, USA

Weather

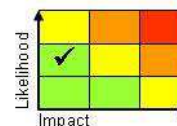
Further heavy rain and mountain snow is expected to affect parts of southern California until, and including, Friday. San Diego could see 50-80mm during this time, with snow (~0.5m) over 1600m across the far south of the Sierra Nevada range.

Discussion

A slow moving cut-off vortex will remain close or across the area in the next few days. This will interact with a slow moving frontal zone bringing persistent, and at times heavy rain and mountain snow.

Expected Impacts

Localised flash flooding and mudslides, particularly in burn scar regions. Heavy snow may affect some transport routes.



Southern and eastern parts of the USA

Weather

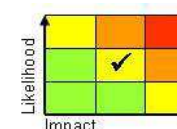
Severe thunderstorms are probable over the south of this region this coming weekend, with associated hazards including large hail, damaging winds, and tornadoes. Intense rainfall (40-75 mm) and thunderstorms with very strong winds likely for much of the Eastern Seaboard, including New York, on Monday.

Discussion

Models are in good broad agreement that a large mass of very warm, moist Gulf of Mexico air will be advected northwards across this region, to become engaged by the relaxing cut-off upper vortex (described in previous section) as it accelerates eastwards. Strong upper level winds on the periphery of this feature, and strong vertical wind shear will provide significant lift and instability to promote persistent and severe storms, and likely supercells. Given the lead time, it is not possible to be too prescriptive over regions or storms modes just yet, but significant impacts are possible as far north as New York.

Expected Impacts

Localised flash flooding, hail damage, and wind damage, in the vicinity of the severe storms.



Central America

Nil.

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South America

Colombia, Peru, Ecuador, northern Brazil, Suriname, Guyana and Venezuela

Weather

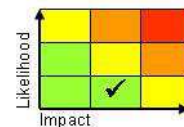
Enhanced shower and thunderstorm activity are signalled to continue across much of the northern Andes and Amazon through this period. A further 150-300mm of rainfall is likely to fall across the area. This represents locally more than double the average rainfall for parts of this region which have been very wet over recent weeks and months.

Discussion

Convective activity is forecast to remain well above average across the northern Andes over the next week. For Colombia and Ecuador, above average SSTs are likely contributing to the increased activity, with onshore winds/orographic lift triggering convection on western upslopes of the Andes.

Expected Impacts

Continued threat of landslides and flash flooding, particularly in the steep terrain of the northern Andes.



Eastern Brazil

Weather

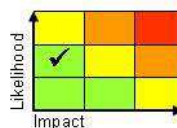
Slow-moving heavy showers and thunderstorms are expected to develop across eastern parts of Brazil over the next few days before activity eases by the weekend, but with further thunderstorms likely from Sunday. Coastal areas likely to see the heaviest rain though this should remain north of Rio de Janeiro. As much as 100-150mm of rain could fall in a few places each day. This is roughly equivalent to a month's worth of rainfall.

Discussion

An active pulse in the SACZ is well signalled to develop today (Wednesday) which will help focus heavy rain and thunderstorms across eastern parts of Brazil before activity is focused offshore.

Expected Impacts

Increased threat of flash flooding as well as landslides in areas of steep terrain.



Africa

Eastern parts of Tanzania and Kenya

Weather

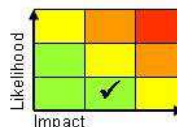
There is the potential for heavy rainfall from thunderstorms to develop along the coast of Kenya and/or eastern Tanzania associated with a weak tropical depression over the weekend and early next week. Up to 200 mm of rain could fall in just a few days, which would be around the average for the whole of April. Details are still subject to low confidence at the moment.

Discussion

Most models produce a weak tropical cyclonic circulation, possibly in association with an Equatorial Rossby Wave, that moves in from the Indian Ocean this weekend to produce a threat of enhanced heavy showers and thunderstorms to this part of the region, but timing and location details are still fairly low confidence with this feature.

Expected Impacts

Flash flooding in the major coastal cities is a threat during this event.

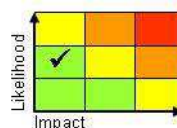


Middle East

Iran, Uzbekistan, Tajikistan and Kyrgyzstan

Weather

Further spells of persistent and locally heavy rain are expected to affect these areas over the next few days. Rain will ease by the weekend over Iran but will continue into early next week in areas further east. Across many parts of the areas highlighted 40-60 mm of rainfall will build up with as much as 100-150 mm possible over high ground. This equivalent to more than a month's worth of rainfall in the wettest areas.



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Discussion

A succession of Western disturbances embedded within the STJ will continue to transfer east across northern Iran over the next week. Increasing baroclinicity due to a cold surge across northwest Asia will be the focus for a prolonged spell of rainfall until Friday.

Expected Impacts

Whilst the focus for flooding impacts in recent weeks has been across the south of the country, localised flash flooding is likely across the northern provinces this week.

Asia

Malaysia, Indonesia and New Guinea

Weather

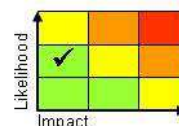
Shower and thunderstorm activity is expected to remain more widespread than normal over this week with many places receiving 50-100 mm during this time, with 300 mm for a few spots.

Discussion

Whilst the MJO is now moving east into the western Pacific, the ITCZ remains quite active across parts of the Maritime Continent and is likely to be periodically enhanced by Kelvin waves running eastwards over the next few days.

Expected Impacts

Increased risk of flash flooding and landslides, particularly in areas that have been affected by recent heavy rainfall.



Australasia

Fiji and Tonga – see *Tropical Cyclones* section.

Additional Information:

Nil.

Issued at: 080745 UTC

Meteorologists: Chris Bulmer / Paul Hutcheon

Global Guidance Unit

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