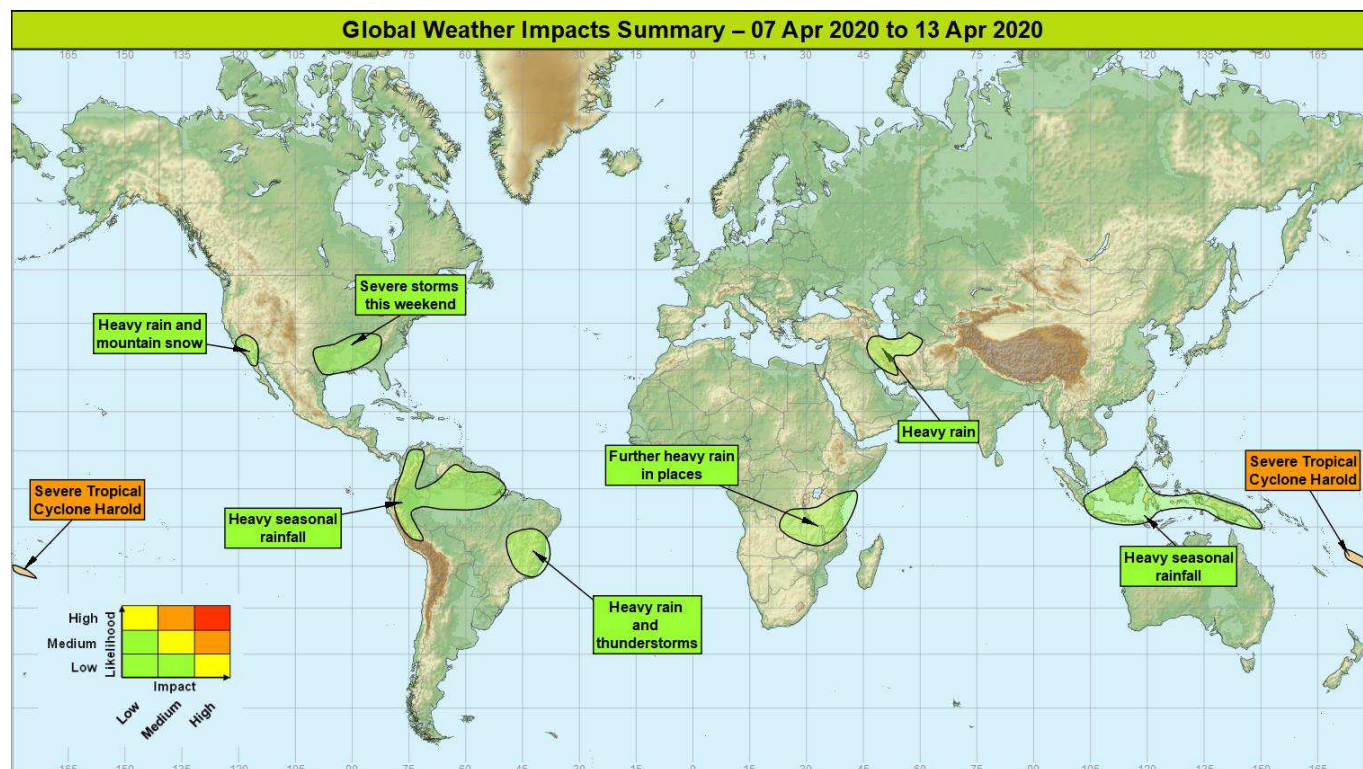


Global Weather Impacts – Tuesday 7th to Monday 13th April 2020

Issued on Tuesday 7th April 2020

HEADLINES

- Severe Tropical Cyclone Harold has cleared Vanuatu, but expected to move towards Fiji (especially Kadavu Island) later today (Tuesday) and Tonga on Wednesday.

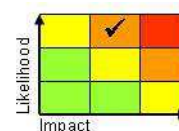


DISCUSSION

Tropical Cyclones

Severe Tropical Cyclone Harold (Southwest Pacific Ocean including Vanuatu and Fiji)

Harold has now cleared to the southeast of Vanuatu archipelago with its centre located around 500 kilometres east of Port Vila at 0600 UTC. The latest official advisory (from RSMC Nadi, Fiji) has downgraded Harold to a Cat 4 cyclone with sustained winds of 120 mph. It is expected that Harold will continue to weaken as it tracks east-southeast, passing close by to Fiji (and probably directly across Kadavu Island) later today (Tuesday), and Tonga tomorrow (Wednesday). There remains a small degree of uncertainty over the precise track, but it looks most likely that the core of the cyclone will stay just to the south of the main islands of both these island groups. Nevertheless, 100-200, locally 400 mm (most likely Kadavu Island) seems likely in 24 hours, along with damaging winds and dangerous sea/coastal conditions.



Discussion

This forecast may be amended at any time

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

VPN: n6225 4319 Email: ggu@metoffice.gov.uk

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Low vertical wind shear and warm sea surface temperatures contributed to the rapid intensification of Harold over the weekend into a category 5 cyclone as it crossed Vanuatu yesterday causing significant damage. At that time this was a relatively slow moving feature, but is now being swept up in the sub-tropical westerlies, transferring Harold towards Fiji and to the south of Tonga in the coming days. During this time increasing wind shear and lowering SSTs will likely result in steady weakening. There is now good agreement from the models for the main impacts from Harold to pass just to the south of Fiji (across Kadavu Island) and Tonga on Tuesday and Wednesday respectively.

Expected Impacts

Destructive winds are likely to disrupt 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 and Baja California, Mexico

Weather

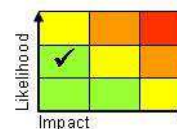
Further heavy rain and mountain snow is expected to affect parts of southern California, and the far northwest of Baja California, Mexico in the next 3 to 4 days. San Diego and Tijuana could see 50-80mm during this time, with snow (~0.5m) over 1600m across the far south of the Sierra Nevada range.

Discussion

A slow moving cut-off vortex will remain close or across the area in the next 4 or 5 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, particularly in burn scar regions. Heavy snow may affect some transport routes.



Central USA

Weather

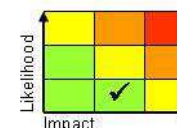
Severe thunderstorms are probable over this region from this coming weekend, with associated hazards (including large hail, damaging winds, and tornadoes).

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.

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

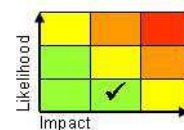
Enhanced shower and thunderstorm activity are signalled to continue across much of the northern Andes and Amazon through this period. A further 150-300mm of rainfall is likely to fall across the area. This represents locally more than double the average rainfall for parts of this region which have been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

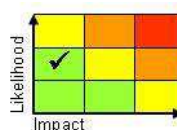
Slow-moving heavy showers and thunderstorms are expected to develop across eastern parts of Brazil from Thursday. This should remain just to the north of Rio de Janeiro, but is likely to impact Brasilia. As much as 100-150mm of rain could fall in a few places each day. This is roughly equivalent to a month's worth of rainfall.

Discussion

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

Expected Impacts

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



Africa

Zambia, southern DRC, northern Zambia, Tanzania, Kenya and northern Malawi

Weather

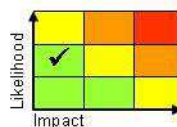
Following a wet March where much of the region received around double the average rainfall for the month, shower and thunderstorm activity is expected to remain above normal through this week. Of note is a potential area of enhanced showers and thunderstorms moving from the Indian Ocean towards the coastline of northern Tanzania and southern Kenya over the weekend.

Discussion

The northern portion of an upper trough in the mid-latitude flow well to the south will engage tropical moisture across Angola initially. Further east, despite being at a time of year when the ITCZ bodily shifts northward across Africa, a temporary southward shift is signalled bringing renewed rainfall further south to prolong the wet season a little longer. Towards the weekend there are signals for a tropical depression to transfer westwards towards the coastline of northern Tanzania and southern Kenya, with this potentially the focus for enhanced heavy showers and thunderstorms.

Expected Impacts

Given recent heavy rainfall that has already caused flooding impacts to some communities in the region, this additional rainfall will likely maintain high river levels and saturated ground for a little longer. Crops in the region may also be adversely affected.



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Middle East**Northern and western Iran****Weather**

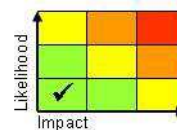
Further spells of persistent and locally heavy rain are expected to affect the northern and western provinces of Iran this week. Heavy rain is expected along the Caspian Sea coast, including cities such as Rasht and Sari, in the next day or so, with Tehran at risk around the middle of the week. 40-60 mm of rainfall is expected quite widely over the next week, equivalent to the average monthly rainfall for April, with locally 80 mm along the coast.

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**

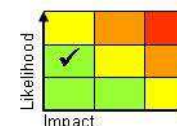
Shower and thunderstorm activity is expected to remain more widespread than normal over this week with many places receiving 50-100 mm during this time, with 300 mm for a few spots. The heaviest rainfall is expected to affect coastal regions around the Java Sea, particularly southern Borneo and East Java, including Surabaya.

Discussion

Whilst the MJO is now moving east into the western Pacific, the ITCZ remains quite active across parts of the Maritime Continent and will act to maintain the theme of above average rainfall over this week.

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: 070800 UTC **Meteorologists:** Tony Wardle / D J Harris

Global Guidance Unit

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