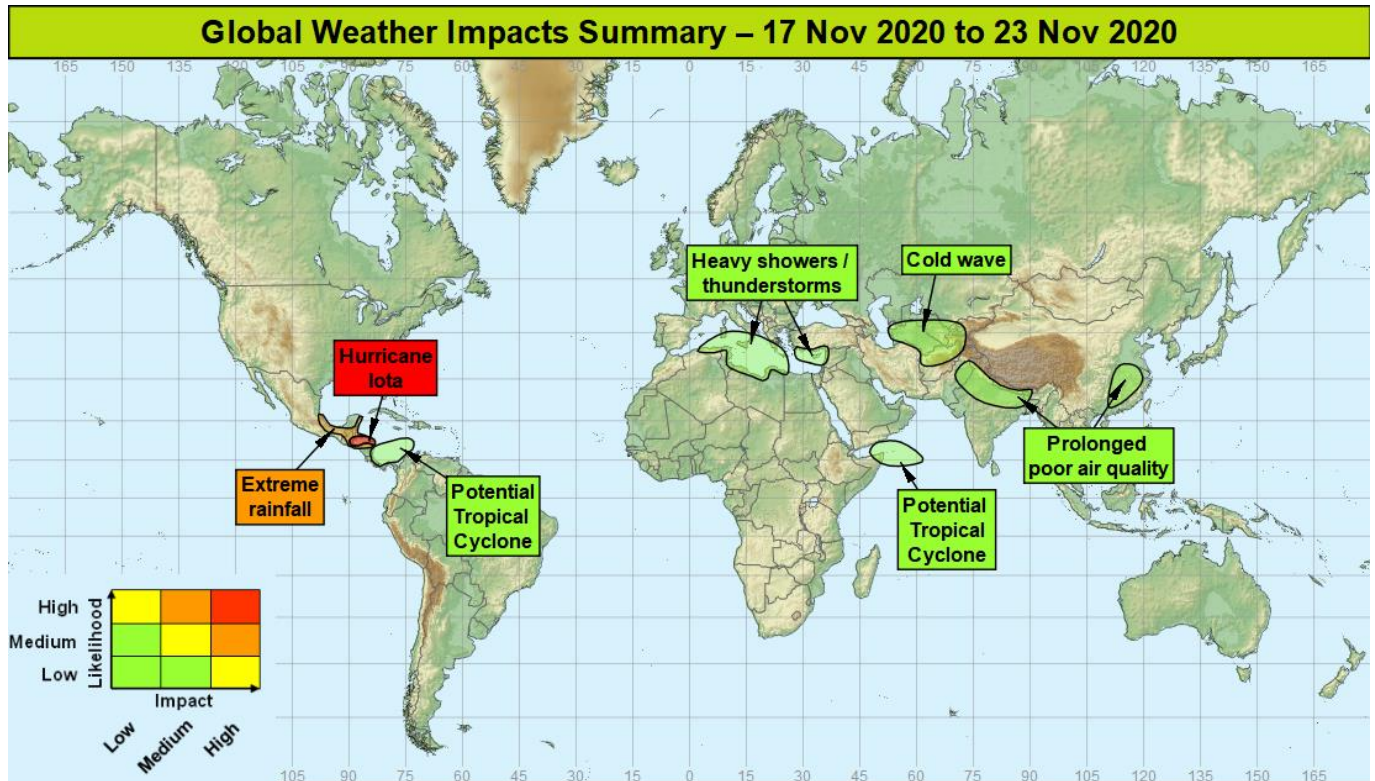


Global Weather Impacts – Tuesday 17th to Monday 23rd November 2020

Issued on Tuesday 17th November 2020

HEADLINES

- Hurricane Iota are likely bringing catastrophic impacts to parts of Central America.
- Extreme rainfall extends well ahead of Iota and will impact a wider part of the Central America region.



Tropical Cyclones

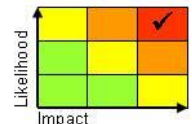
Hurricane Iota - Honduras, Nicaragua, Guatemala and El Salvador

Weather

Iota made landfall at 03:40 UTC over northeastern Nicaragua (around 30 miles to the south of Puerto Cabezas) as a Category 4 hurricane with sustained winds of 155mph. Now over land Iota's wind field is quickly weakening, with this trend continuing as the circulation travels westwards over Nicaragua and Honduras today, with complete decay into a tropical depression tomorrow. Catastrophic impacts have likely occurred from wind and 3-5m storm surge along the northeastern Nicaraguan and Honduran coastlines overnight, with extreme rainfall and associated hazards continuing through the next couple of days across a wide area stretching well inland. The area affected is largely the same as impacted by Hurricane Eta less than 2 weeks ago. Across this area which has seen 2-4 times the normal rainfall in the past 30 days (much of this in the past 14), a further 200-400mm is expected to fall widely within a day or two, with isolated totals of the order of 800mm expected across some of the regions higher ground.

Discussion

Under near ideal environmental conditions Iota has continued to strengthen during Monday to become the Atlantic Basins first Category 5 hurricane of 2020. Weakening only a touch before landfall (due to impinging upon topography), over land conditions are now hostile with a rapid weakening of the system to a tropical storm today and then tropical depression as the remnants of the circulation continue westwards by tomorrow. Rainfall remains the primary meteorological hazard, with extreme totals building up across this region in the next 48 hours.



This forecast may be amended at any time

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Expected Impacts

Close to the landfall location extremely destructive winds, storm surge and large waves will have likely damaged or destroyed many properties and a lot of infrastructure. Extreme rainfall will bring extremely severe flooding across a wide area, with a much enhanced likelihood of landslides, and also the possibility of lahars (volcanic debris flows) in the west of the area.

The following tropical cyclones that will remain over open ocean:

Southwest Indian Ocean – Tropical Storm Alicia is gradually moving southwest across the open southwest Indian Ocean. The system will gradually weaken into a tropical depression today and will not impact land.

Immediately to the north of Alicia is another tropical disturbance (93S) but like its southern counterpart – will stay over the ocean regardless of any development.

Eastern Pacific – An area of showers and thunderstorms is being watched for potential development into a tropical storm in the coming days. Any development is expected to remain well away from any land.

The following areas are being monitored for tropical cyclone development that may impact land:

Northeast Indian Ocean – Somalia and Socotra Island (Yemen)

Weather

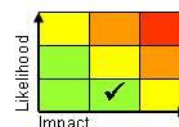
A cluster of showers and thunderstorms moving northwestwards across the northwest Indian Ocean has a small chance of developing into a tropical cyclone this weekend as the area approaches the Horn of Africa. If this cyclone forms this could bring heavy rainfall across the usually dry northeast of the Somalia and Socotra Island, with 100-200mm possible.

Discussion

An Equatorial Rossby Wave in the northwest Indian Ocean will likely continue to progress slowly northwestwards. As it does so it will move through a marginally favourable environment for the development of a tropical cyclone with reasonable warm underlying SSTs (26-28°C), and fairly good other environmental factors. Regardless of the degree of development some enhanced rainfall is expected across the region this coming weekend.

Expected Impacts

Increased risk of minor riverine and potentially more significant flash flooding.



Southwestern Caribbean

Weather

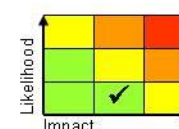
There is a medium risk (currently around 40%) for the development of a further tropical cyclone across the central or western Caribbean from midweek. Again the environment in this region looks relatively favourable for at least some development, however not as favourable as it was for Iota in part due to slightly cooler SSTs in the wake of Iota crossing the region – so even though this is in a similar area to which has been affected by Iota, there are no indications that this will be anywhere near as destructive, if it forms at all.

Discussion

On the eastern edge of a fairly broad gyre (within which Hurricane Iota is embedded) there is signalled to be a zone of enhanced low level vorticity where the southwesterly flow circulating around the gyre meets the easterly trade winds of the Caribbean. This is likely to lead to enhanced shower and thunderstorm activity, with the potential that this could consolidate into a tropical cyclone later in the week in fairly favourable atmospheric conditions. As this system has yet to form confidence in its evolution is low, however anything which did form would be steered westwards towards the coast of Central America once again.

Expected Impacts

A risk of further most likely rainfall related impacts with flash and riverine flooding across parts of Central America.



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**Europe****Central and Eastern Mediterranean and adjacent coasts****Weather**

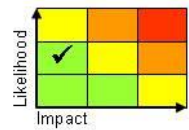
An unsettled week ahead across the central and eastern Mediterranean with enhanced shower and thunderstorm activity across much of the basin, and some periods of strong winds too. Although there are always marked localised variations with showers, 25-50mm is signalled to fall fairly widely, with peaks over 100mm in some spots. The greatest impacts from this are more likely across the usually drier areas of North Africa, for example northern Libya typically only sees 15-30mm of rainfall in November.

Discussion

A markedly amplified pattern Europe will see at least two troughs (and associated upper cold pools) extend and disrupt across the Central Mediterranean, with these features then relaxing eastwards across the eastern Med. As such a couple a cyclogenesis events are expected across the Med, bringing precipitation from both dynamic and convective means and some strong winds. The impact from this rainfall most likely across the usually drier parts of North Africa, especially if enhanced rainfall affects an urban area.

Expected Impacts

Enhanced risk of flash flooding, especially across urban areas. Strong winds will lead to some rough seas, which will be hazardous small craft.

**North America**

Nil.

Central America and Caribbean

Honduras, Nicaragua, Guatemala and El Salvador - See Tropical Cyclones section

An area from Nicaragua to southern Mexico, (parts that are not already included in the Tropical Cyclone section) including El Salvador and Belize

Weather

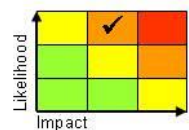
Within the enhanced northeasterly winds which extend well northwest of Hurricane Iota, much more frequent than usual showers and thunderstorms will be advected across the area. These are expected to bring 200-400mm of rainfall widely to the Caribbean coastlines of Belize and the Yucatan Peninsula of Mexico, with as much as 600 – 700 mm over mountainous parts, with similar amounts driven inland from the Bay of Campeche. This region experienced extremely high rainfall in the past 14 days during a similar event that occurred in association with Hurricane Eta.

Discussion

An enhanced northeasterly flow has developed across a wide region between a strong surface high located across the southern USA, and the broad low pressure gyre within which Hurricane Iota is embedded across southern Central America. A slow moving cold front extends from the Florida Strait to the northern Bay of Campeche, which a moist tropical airmass to the south of this. As such frequent showers and thunderstorms within the tropical airmasses will push onto the coastlines, and be further enhanced by orographic ascent in the northeasterly flow.

Expected Impacts

A much increased risk of flash and riverine flooding, and landslides in areas where terrain is steep. In addition across the west of the area rainfall may mobilise some lahars.

**South America**

Nil.

Africa

Somalia - See Tropical Cyclones section

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Mediterranean Coastline from Algeria to Egypt - See Europe section

Middle East

Mediterranean Coastline of Syria and Lebanon - See Europe section

Socotra Island, Yemen - See Tropical Cyclones section

Asia

Northern India, Pakistan, Bangladesh, Nepal and parts of eastern China

Weather

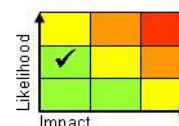
After a brief respite in some places thanks to some precipitation (particularly in the northern parts of these areas), very poor air quality is likely to return readily as light winds, increased particulate emissions, and seasonal crop burning combine to bring hazardous conditions, particularly by night.

Discussion

Particulate emissions remain elevated due to an increase in fires/heating/lighting and ongoing seasonal crop burning. As the post-monsoon dry season progresses light winds and overnight inversions will trap particulates near to the ground fairly widely in this area. Only minimal improvements in air quality are now occurring by day. As temperatures fall through this week, it is expected that emissions will increase further.

Expected Impacts

Human health issues (both short and long term) are likely, and not only be limited to those more susceptible to poor air quality.



Northeast Iran, Afghanistan, Turkmenistan, Uzbekistan and Kazakhstan

Weather

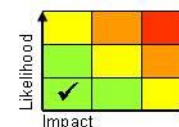
A marked cold wave is expected from mid-week bringing temperatures 10-15°C below average. This represents maximum temperatures failing to exceed 0°C particularly in the north of the region highlighted and very low overnight minimums. These temperatures are more typical of those experienced in the colder spells in December and January.

Discussion

A marked pattern amplification sees cold air of originating from central/northern Russia being drawn southwards across this region. The peak in the cold is likely to be on Thursday and Friday with a gradual recovery in temperatures beginning as the cold airmass begins to warm out over the weekend.

Expected Impacts

Some cold weather health related impacts likely for vulnerable or exposed people.



Australasia

Nil.

Additional Information

Nil.

Issued at: 170830 UTC

Meteorologists: Chris Almond / Nick Silkstone

Global Guidance Unit

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