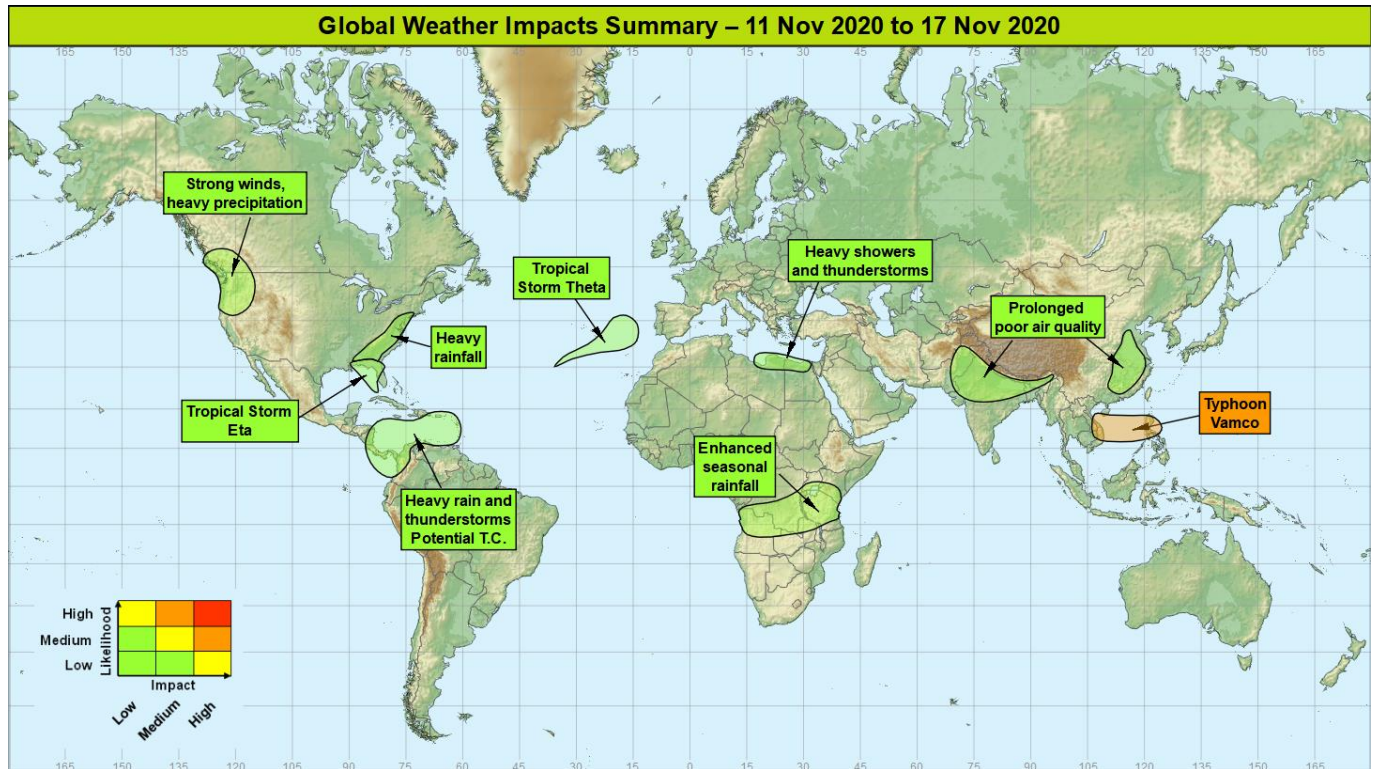


Global Weather Impacts – Wednesday 11th November to Tuesday 17th November 2020

Issued on Wednesday 11th November 2020 – **Correction to North America section**

HEADLINES

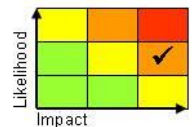
- Typhoon Vamco will cross the Philippines today, then continue towards Vietnam – which is still suffering from the remnants of Tropical depression Etau.
- Tropical Storm Theta is a record breaking 29th storm of the Atlantic season, with a high chance that a further tropical storm will form in the Caribbean in the coming days.



Tropical Cyclones

Typhoon Vamco – Philippine Sea, Vietnam, Laos and Cambodia

Severe Tropical Storm Vamco was upgraded to a typhoon early this morning (Wednesday) and continues to move west across the Philippine Sea. It is forecast to make landfall across Luzon by the end of the day. High confidence that the system will bring impactful rainfall with another 100-200mm widely along the system's path and 400-600mm over the region's mountains. Parts of Vietnam, Laos and Cambodia are still suffering from the remnants of Etau, but may have a little respite before Vamco arrives. Given the potential for a typhoon to develop there is also a risk of destructive winds and a storm surge across the east of Luzon Island near the centre of the system. The track looks likely to be a little further north than Molave and Goni but nevertheless sensitivity is likely much higher than normal. After continuing west later this week, Vamco is then forecast to reach Vietnam this weekend, with current guidance indicating it will remain at typhoon strength, albeit perhaps weakening slightly. Another spell of heavy rain looks likely with the greatest chance of this across central and northern Vietnam, then spreading further inland over the weekend.



This forecast may be amended at any time

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Discussion

Vamco is very easily identified in Satellite imagery, with a well-defined eye now visible with the surface low located beneath the centre of the region of deep convection. The high terrain of Philippines will significantly disrupt the circulation likely weakening it into a tropical storm before it emerges into the South China Sea tomorrow, where environmental conditions are again favourable to allow the system to redevelop into a strong typhoon. In addition, on approach to Vietnam the ingestion of dry air and increased vertical wind shear may mean the storm is on a weakening trend by this time.

Expected Impacts

An enhanced threat of flash/riverine flooding and landslides as well as infrastructure damage from typhoon strength winds across the Philippines, and potential for further flood and landslide related impacts across Vietnam this weekend. Risk of a storm surge inundating low lying areas across eastern Luzon.

Tropical Storm Eta – Gulf of Mexico, including far southeastern parts of the USA

Weather

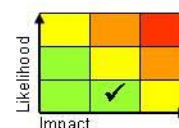
Eta now sits in the southeastern Gulf of Mexico, just northwest of Cuba, and is currently slow moving. Shower and thunderstorm activity associated with the remnants of Eta's outer bands continues to extend well to the east and northeast of the system over Cuba and Florida, although the main activity is now more consolidated near the centre of the system. Surface winds are currently around 70mph and Eta looks likely to strengthen over open waters over the next couple of days with a low/medium chance of reaching hurricane strength again. The track of this system over the coming days is much more uncertain than is normal. The latest guidance from NOAA NHC suggests Eta will reach the Florida Panhandle as a tropical depression by Friday (this reflected in the map above). However, there remains a lower chance that Eta could track further west or even southwest into the western Gulf of Mexico.

Discussion

Having shed much of its outer banding Eta is now more compact in size with deep convection developing around the low level centre. Small storms such as Eta can spin up very quickly, with a chance this to reach hurricane strength while sitting over the warm waters of the southeastern Gulf of Mexico. Conversely, small storms are also more likely to be impacted by dry air entrainment, of which there is plenty in the vicinity. After a couple of days of weak steering current the circulation is likely to be drawn north into a region of high vertical wind shear. This means that even if Eta regains hurricane strength some weakening is subsequently likely before it makes landfall over Florida.

Expected Impacts

Small chance of some minor flash flooding across parts of Cuba and Florida.



Tropical Storm Theta - North Atlantic

Weather

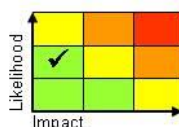
Theta is the 29th named storm of the season. This means 2020 now holds the record for the most storms in an Atlantic hurricane season. Theta is expected to track east-northeast over the coming days most likely staying over open water this week. From Friday, there is an increased likelihood of Theta reaching some of the islands in the east Atlantic with Madeira currently looking most probable to see heavy rainfall and strong winds associated with Theta.

Discussion

Theta is being steered east-northeastwards with the most likely track between the Canaries and the Azores, the closest approach to land being Madeira on Friday. Despite moving over cooler sea surface temperatures, other factors such as low vertical shear and cooling aloft means that Theta will likely maintain its strength (current ten-minute winds near the centre are estimated at 60KT) into the weekend before weakening.

Expected Impacts

Rainfall may bring some minor flooding issues to Madeira – very low risk at the moment.



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The following area is being monitored for tropical cyclone development that has the potential to impact land.

Caribbean Sea, parts of Central America

Weather

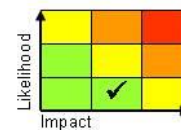
An area of enhanced shower and thunderstorm activity will continue west across the central and western Caribbean today. Within conditions marginally favourable, there is an 80% chance that this feature could develop into a tropical storm over the next five days. This area is yet to form so confidence is low, however regardless of development, there is high confidence for some very heavy rainfall over this wider area, extending to parts of Central America from Colombia to Honduras.

Discussion

A tropical wave continues west across the Caribbean, in this area underlying SSTs remain high (28-29°C), the wave initially sits within a broad pocket of moisture, and low vertical wind shear. However if a circulation forms it will probably draw dry air south on its forward flank with a significant chance of this being ingested into the circulation impeding deep convection. As such we remain unsure about the potential for development of this feature at the current time.

Expected Impacts

Increased risk of some minor flash flooding across northern Venezuela and Colombia.



The following areas are being monitored for tropical cyclone development that will remain over open ocean.

Southwest Indian Ocean

Weather

There are clusters of showers and thunderstorms in the area which have the potential to develop into one, or perhaps two tropical cyclones in the region, both would likely be steered south or southeastwards and remain well away from land.

Discussion

Two Equatorial Rossby Waves (ERW) or two vorticity maxima around a single ERW may well develop at least one tropical cyclone in this region in the coming week, conditions are marginally favourable for gradual development. The official season for Southwest Indian Ocean cyclones begins on the 15th November.

Expected Impacts

Nil.

Europe

Nil.

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**North America****Gulf of Mexico, including far SE parts of the USA-** See *Tropical Storms section (Eta)***Northwest USA – Oregon, Washington (state) and southwest Canada****Weather**

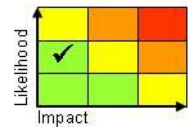
While it will be an unsettled week generally, there are growing signs that a particularly active area of low pressure will arrive from the Pacific by the end of the week, with the potential to bring damaging winds and isolated flooding. As the system pushes inland a period of heavy snow is expected, mainly on high ground but potentially to lower levels as well.

Discussion

A very strong jet-stream, with winds approaching 200mph will lead to conditions very favourable for the associated baroclinic zone to buckle and develop in to a deep area of low pressure by Friday. Not all models are as strong as the GM, but all have some degree of cyclogenesis in the area, which is not unexpected with such a thermal boundary and a very strong jet. Mean surface winds could reach 60 mph, with gusts to 80 or 90 mph possible – mainly near the coast and over mountains. Some heavy rain is also expected with quite widespread totals 25-50mm, with some places seeing as much as 150 mm by the weekend – almost a month's worth of rain. Over the mountains, 50 to 100cm of snow could fall by the weekend

Expected Impacts

Wind damage to homes and infrastructure would be expected should the storm develop in this way, with very large waves also perhaps damaging infrastructure in coastal parts. It is generally the wettest time of year, but some minor flooding impacts could still occur, mainly river flooding. Snowfall amounts over the mountains are significant, but not unusually so for the time of year.

**Eastern USA****Weather**

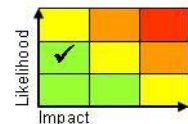
Heavy rain will fall widely across this region today and tomorrow with wide areas likely seeing between 25-75mm of rain across the two days, and peaks likely in the order of 200mm. Average rainfall in this region in the whole of November is typically 70-90mm.

Discussion

A cold front trailing from a major cyclone moving across the Great Lakes has drawn moist Caribbean air into its warm conveyor. This feature will become aligned to the upper level flow for a time, making the feature slow moving and prone to flat northeast running frontal waves over a couple of days. This will likely bring very heavy rainfall to a broad region before a more zonal upper pattern becomes established and pushes the frontal zone away to the east into Friday.

Expected Impacts

Increased risk of both flash and some minor riverine flooding.

**Central America and Caribbean****Caribbean Sea, parts of Central America (from Honduras to Panama)***-See Potential development of Tropical Storm section***South America****Northern Colombia***-See Potential development of Tropical Storm section*

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Africa

Northern Libya and Egypt

Weather

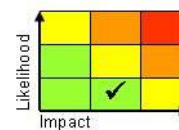
Heavy showers and thunderstorms have recently brought flash flooding to African coastal regions of the eastern Mediterranean. Further heavy showers and thunderstorms are possible from late Thursday onward with rainfall totals in excess of 25-50mm in places by the end of the weekend. The typical monthly rainfall along the north African coastline is just 20-40mm.

Discussion

After a respite in activity today (Wednesday), an upper trough moving in from the west will bring a renewed enhancement to showers from late Thursday onward.

Expected Impacts

Impacts largely confined to populated urban areas where this unusual and short duration rainfall could will cause some significant flash flooding.



Central parts of Africa

Weather

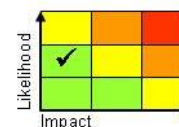
The African short rains season is well underway and above average rainfall looks likely through the coming week. Rainfall accumulations will be very variable with the majority of the highlighted region seeing 25-50mm during this time, and some location such as coastal Tanzania (including Dar es Salaam) have the potential of seeing 200-250 mm of rainfall during this time. Typical November rainfall totals in this region are 50-100 mm.

Discussion

The passage of the MJO across the western hemisphere is leading to increased shower and thunderstorm activity across much of Africa through the coming week. The extension and subsequent disruption of a mid-latitude upper trough across the south of this region during the weekend, will further enhanced shower activity into next week.

Expected Impacts

Some flash flooding is likely, especially in some of the regions larger and more poorly planned urban centres. There will be an increased risk of landslides in regions where terrain is steep.



Middle East

Nil.

Asia

Philippines, Vietnam and southern China - See *Tropical Cyclones* section

Northern India, Pakistan, Nepal and parts of southeastern China

Weather

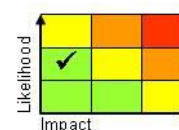
Very poor air quality is being reported and is expected to continue over this week, as light winds and increased particulate emissions, and seasonal crop burning combine to bring hazardous conditions, particularly by night.

Discussion

Particulate emissions are increasing now due to an increase in fires/heating/lighting and ongoing seasonal crop burning, and as the post-monsoon dry season progresses, light winds and overnight inversions will trap particulates near to the ground fairly widely in this area. Minimal improvement in air quality are now occurring by day.

Expected Impacts

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



Australasia

Nil.

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Additional Information**Cox's Bazar, southeast Bangladesh**

Conditions largely dry and fine with temperatures slightly above average.

Yemen

Predominantly dry conditions are expected inland, with a few showers affecting the far south and western coasts at times as is normal at this time of year.

Sudan/South Sudan

The dry season has developed across much of Sudan and the north of South Sudan with showers only likely to continue close to the Red Sea coast. Across the south of South Sudan showers continue much reduced in frequency compared to recent times, with a good deal of dry weather even here.

Issued at: 110915 UTC **Meteorologists:** Chris Almond / David Oliver

Global Guidance Unit

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