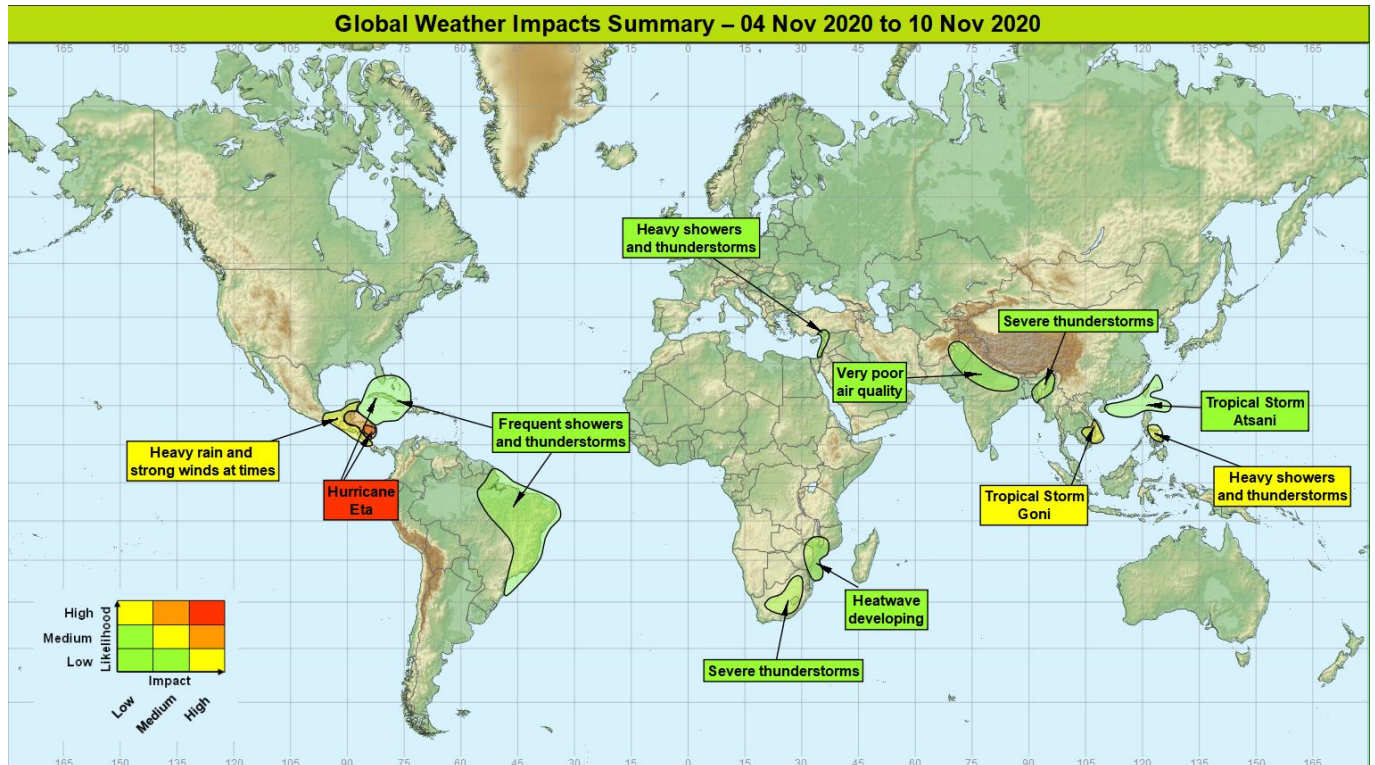


Global Weather Impacts – Wednesday 4th November to Tuesday 10th November 2020

Issued on Wednesday 4th November 2020

HEADLINES

- Hurricane Eta continuing to bringing flooding risk to parts of Central America.
- Tropical Storm Goni bringing heavy rain to central Vietnam later this week.



Tropical Cyclones

Hurricane Eta – Nicaragua, Honduras, Belize, Guatemala, El Salvador, southern Mexico and Costa Rica

Weather

Eta made landfall yesterday as a major Category 4 hurricane, with sustained winds of 140mph and gusts to 165mph, close to the small city of Puerto Cabezas, Nicaragua. Now inland, Eta is quickly weakening, but will continue to remain a significant feature with further torrential rainfall expected along its track. 200-300mm of rainfall is expected across parts of Nicaragua, north Honduras, Belize, southern Mexico and western Costa Rica in the next few days, as the decaying Eta only gradually tracks west-northwest. Some more localised spots, particularly in coastal and windward facing mountainous regions of these areas, could see around 800mm of rainfall. By the weekend the remnants of Eta are expected curve northeastwards to emerge across the western Caribbean and may reform into a tropical storm once again. Confidence is improving that this then may affect the Cayman islands and western Cuba as a tropical storm, but there is significant uncertainty in the timing and magnitude of possible impacts.

This forecast may be amended at any time

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Discussion

Hurricane Eta made landfall across the coast of Nicaragua as a major, category 4 hurricane yesterday evening, steered west following a period of trochoidal wobbling by a strong subtropical ridge. Most models and ensemble output take Eta across Nicaragua today, where it will rapidly weaken through interaction with the mountainous Nicaraguan terrain. As well as strong winds, Eta will bring very heavy rain close to its centre, but also windward coasts both north and south of the cyclone as it becomes slow moving inland. Eta is likely to have similar impacts to Hurricane Felix (2007), which made landfall in a very similar location. Beyond the next few days there are significant differences between the models for the evolution and track of Eta. The NHC favours the EC/GFS output and re-emerges Eta across the Caribbean sea by the weekend. Here it strengthens Eta to become a tropical storm and tracks this towards the Cayman islands and Western Cuba. However the GM is a bit of an outlier and takes this system towards the Pacific coast of southern Mexico before it returns east as a less significant feature. This will need to be monitored in the coming days, to better assess where the main focus for impacts from this system will be.

**Honduras,
Belize,
Guatemala, El
Salvador,
southern
Mexico and
Costa Rica**

Expected Impacts

Destructive winds in the vicinity of Puerto Cabezas, and significant storm surge (5-7m) have now passed, but impacts are likely to become known today. Torrential, flooding rains, with widespread flash and localised river flooding probable in the regions along Eta's track. This also bring a significant threat of landslides.

Tropical Storm Goni (South China Sea)

Weather

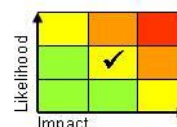
Tropical Storm Goni is currently tracking slow westwards across the South China Sea having impacted the Philippines over the weekend. The main hazard from Goni in the coming days will be from heavy rain, affecting Central Vietnam in particular. 150-250mm is expected widely, most likely through Thursday/Friday, with a few places possibly seeing over 400mm. The remnants of Goni are expected to cross the Indochinese Peninsula through Friday/Saturday, bringing heavy rain deeper inland, mainly to the north of the circulation with this likely to be less impactful than recent rains.

Discussion

Goni made landfall in the Philippines over Bato, Catanduanes late on Saturday night, with maximum sustained winds of 140 mph and gusts to 175 mph. This was the strongest tropical cyclone of the year and the strongest to hit the Philippines since Super Typhoon "Haiyan" killed more than 6300 people in 2013. There is high confidence for the forecast track of Goni, such that it is expected to make landfall on the coast of Central Vietnam later on Thursday night. Despite warm seas, wind shear and dry air will restrict any development/organisation. Any further strengthening looks unlikely and should decay to become a tropical depression prior to landfall, Goni will still pose a heavy rain threat, with totals particularly large on the northern side of the cyclone, affecting parts of Vietnam already significantly affected by recent extreme rainfall and tropical cyclone events.

Expected Impacts

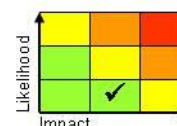
A much enhanced risk of landslides, flash and riverine flooding given very wet recent weather in the region, with central Vietnam possibly seeing further severe flood impacts coming after exceptional rainfall through the past month that has seen large amounts of people displaced from their homes and more vulnerable to further weather impacts.



Tropical Storm Atsani (Philippine Sea and Philippines)

Weather

Atsani is likely to remain slow moving over the next couple of days, ENE of Luzon and ESE of Taiwan, whilst slowly gathering strength. Beyond this a general track west-northwestwards is expected, although the precise track and intensity is uncertain. Atsani is expected to remain across the open water, but may just graze the northern tip of Luzon on Thursday, bringing some heavy rain and stronger winds to the area. Thereafter becoming a decaying system as it tracks westwards.



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**Discussion**

Atsani has remained rather slow moving and this has led to some uncertainty as to its subsequent track and intensity in the coming days. The majority of the output takes Atsani just to the north of Luzon, Philippines in the next few days, then across the south China Sea as a decaying system. However there are still a few solutions that curve this storm towards Taiwan. This evolution has become less likely in the last 24 hours, with the westerly track favoured by JMA. Some heavy rain and stronger winds are expected to affect the northern tip of Luzon on Thursday.

Expected Impacts

Impacts from heavy rain are possible across the far north of the Philippines, with a very low risk for Taiwan, depending on the track. Risk of flash flooding and an enhanced landslide risk.

The following tropical cyclones are not expected to affect land:

Tropical Storm Odalys (North-east Pacific Ocean) – Tropical Storm Odalys formed overnight, over open water well to the south-west of Mexico. Odalys will head steadily north-westwards over open water, and is unlikely to strengthen much.

The following areas are being monitored for potential tropical developments not affecting land:

South China Sea and to the east of the Philippines – There are weak model signals for the development of tropical storms across the South China Sea and to the east of the Philippines from early next week. At this time any such developments are expected to remain across the open water, with no significant impacts. However this region will need to be monitored, given recent weather impacts.

Europe

Nil.

North America

Nil.

Central America and Caribbean

Caribbean Sea, Nicaragua, Honduras, Costa Rica, Belize, Guatemala – See *Tropical Cyclones* section.

Pacific coast; Southern Mexico to Costa Rica**Weather**

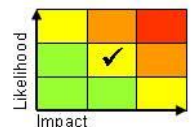
Enhanced onshore winds, associated with Ex Hurricane Eta are expected to bring heavy showers and thunderstorms to the region in the coming few days. However there remains some uncertainty as to the track and evolution of Eta (see tropical cyclone section) above, and therefore the distribution and longevity of the enhanced showers. Locally 50-100mm is possible with up to 300mm over the higher terrain.

Discussion

The decaying Hurricane Eta will lead to stronger onshore winds along the Pacific coast and enhanced showers and thunderstorms. There remains uncertainty as to the evolution and track of the remnants of Eta, and this will affect the distribution and longevity of the showers in the coming week.

Expected Impacts

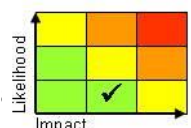
Flash and riverine flooding are possible with an enhanced risk of landslides where steeper terrain

**Western Caribbean**

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**Weather**

Enhanced shower and thunderstorm activity quite broadly across the western Caribbean is expected in the coming week. 30-50 mm could fall in a few spots, in just a few hours, and in total 200-300mm could build up, potentially quite widely, especially those exposed to the north and east. Some of this rainfall is associated with hurricane Eta, as it decays and then possibly regains tropical storm strength across the region in the coming week. (See *Tropical Cyclone section Eta also*.)

Discussion

Enhanced flow and moisture associated with Hurricane Eta, plus the presence of an upper trough over the weekend will maintain the above normal heavy shower and thunderstorms in the coming week.

Expected Impacts

Increased risk of flash flooding, and a potential for isolated landslides in areas of higher terrain.

South America**Brazil****Weather**

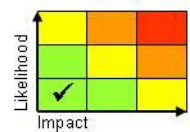
Shower and thunderstorms activity will be more frequent than usual across this region through the next few days, with the most notable activity along the Atlantic coast. These showers will be capable of producing as much as 50mm of rainfall in an hour or two, and a few locations could see in excess of 200mm by this coming weekend.

Discussion

Showers will generally be more frequent than normal across the northern quarter of South America. An upper trough close to the southeast coast of Brazil is likely to be the focus for the heaviest showers and thunderstorms.

Expected Impacts

Enhanced risk of flash flooding and landslides.

**Africa****South Africa and Lesotho****Weather**

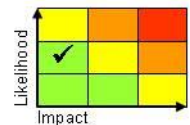
Heavy showers and rain, with thunderstorms, locally severe will affect the region in the next day or so. Storms could generate 50-75mm of rain in just 2-3 hours, along hail and strong gusts of wind.

Discussion

A potent upper low will approach from the west to engage subtropical air being drawn south across central and eastern parts of South Africa, providing an environment supportive of thunderstorms. Locally heavy rain is possible but the high cloud bases will support strong convective gusts and the risk of dry lightning triggered veld fires.

Expected Impacts

Localised flash flooding is possible if the heavy showers cross over densely populated areas such as Johannesburg, as well as property/infrastructure damage from large hail, strong winds and lightning (especially in areas with substandard infrastructure already). Increased likelihood of rapidly developing wildfires presenting a risk to property and livestock.



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**Mozambique, Zimbabwe and parts of neighbouring countries****Weather**

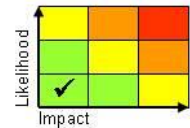
A heatwave is expected to gradually develop across this region over the coming week. November is the hottest month across much of this region, with maximum temperatures in places such as Harare likely to reach the mid-high 30s°C, and temperatures in parts of Mozambique exceed 40°C. These values are still around 5-10°C above average.

Discussion

A combination warm advection, and then from the middle of next week subsidence and adiabatic compression will lead to well above average temperatures developing across this wide region in what is usually the hottest month of the year, prior to the arrival of the seasonal rains over the following weeks

Expected Impacts

Heat health impacts likely for vulnerable humans and livestock.

**Middle East****Turkey, Syria, Lebanon, Israel and Palestine****Weather**

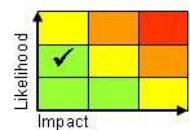
Frequent showers and thunderstorms driven onshore by a strengthening west to south-westerly wind will affect this region today, and to a lesser extent on Thursday. Some places could see over 150mm of rain, much in a short space of time, along with lightning and strong gusty winds. Another period of heavy showers and thunderstorms is expected to affect the Mediterranean coast from Sunday.

Discussion

A sharpening upper trough continues to extend across the eastern Mediterranean region through today. This engaging a native warm plume, leading to frequent convection, particularly over the sea. As an area low pressure develops in the base of the trough, the strengthening gradient will drive these frequent showers onshore, where they will additionally be focussed by the steep topography of the region. A further upper trough will extend across the region over the weekend, again generating heavy showers and thunderstorms, especially along the Levant coastline.

Expected Impacts

Potential for localised flash flooding.

**Asia****Northern Philippines and central Vietnam**

See *Tropical Cyclones* section (*Goni and Atsani*).

Philippines**Weather**

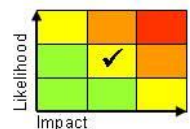
Heavy showers and thunderstorms are expected to become across eastern and central areas of the Philippines on Friday and Saturday. 100-150mm of rain per day is expected with some significant totals potentially falling in a few hours. This rainfall is not exceptional in itself or particularly long lived, but is falling across similar areas recently impacted by Typhoon Goni over the weekend. This leading to an increased risk for significant impacts from this additional heavy rain.

Discussion

A tropical depression is signalled to develop across the south of the Philippines. This will enhance the very moist east or northeast winds across the east of the Philippines bringing heavy showers and thunderstorms to the region. Profile show the potential for some severe convection with CAPE values >2000J/kg, with associated with hail and strong winds.

Expected Impacts

Enhanced flooding and landslide risk in an area recently significantly impacted by Typhoon Goni over the weekend.



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Northern India, Pakistan and Afghanistan

Weather

Very poor air quality is being reported and is expected to continue over the next few days, as light winds and increased particulate emissions combine to bring hazardous conditions, particularly by night.

Discussion

Particulate emissions are increasing now due to an increase in fires/heating/lighting, 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. There is still enough mixing during the daytimes to reduce pollution levels temporarily, but with winter coming this will be less and less likely with more prolonged periods of hazardous air quality expected.

Expected Impacts

Effects such as breathing difficulties will be largest among (though not limited to) vulnerable sections of the population with existing health issues.



Bangladesh, north-east India, and Myanmar

Weather

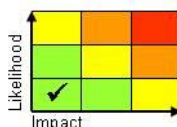
Frequent showers and thunderstorms, locally severe, will continue today, with the potential for a further 50-100mm of rain in a few places. This follows previous heavy showers and thunderstorms that have impacted the region in the last few days. A significant reduction in showers from Thursday, with many places becoming dry.

Discussion

The previously strong and moist SW'ly winds have now moderated significantly. However there remains the signal for further heavy showers and thunderstorms today. Localised severe storms (CAPE <1200J/kg) may lead to some torrential downpours with hail. By Thursday the winds becoming more northerly, with most places becoming dry.

Expected Impacts

Very localised flash flooding is possible, given recent heavy rainfall across the region.



Australasia

Nil.

Additional Information

Cox's Bazar, southeast Bangladesh

Further heavy showers and thunderstorms are expected today (see Asia section), but conditions becoming largely dry after midweek.

Yemen

Predominantly dry conditions are expected with isolated 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 with showers concentrated to the extreme south and the Red Sea coast. Fairly normal showers and thunderstorms are expected across South Sudan through the next week, the most heavy and frequent expected during the next couple of days – but still a good deal of dry weather between times.

Issued at: 040900 UTC

Meteorologists: Tony Wardle / Ele Hands

Global Guidance Unit

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