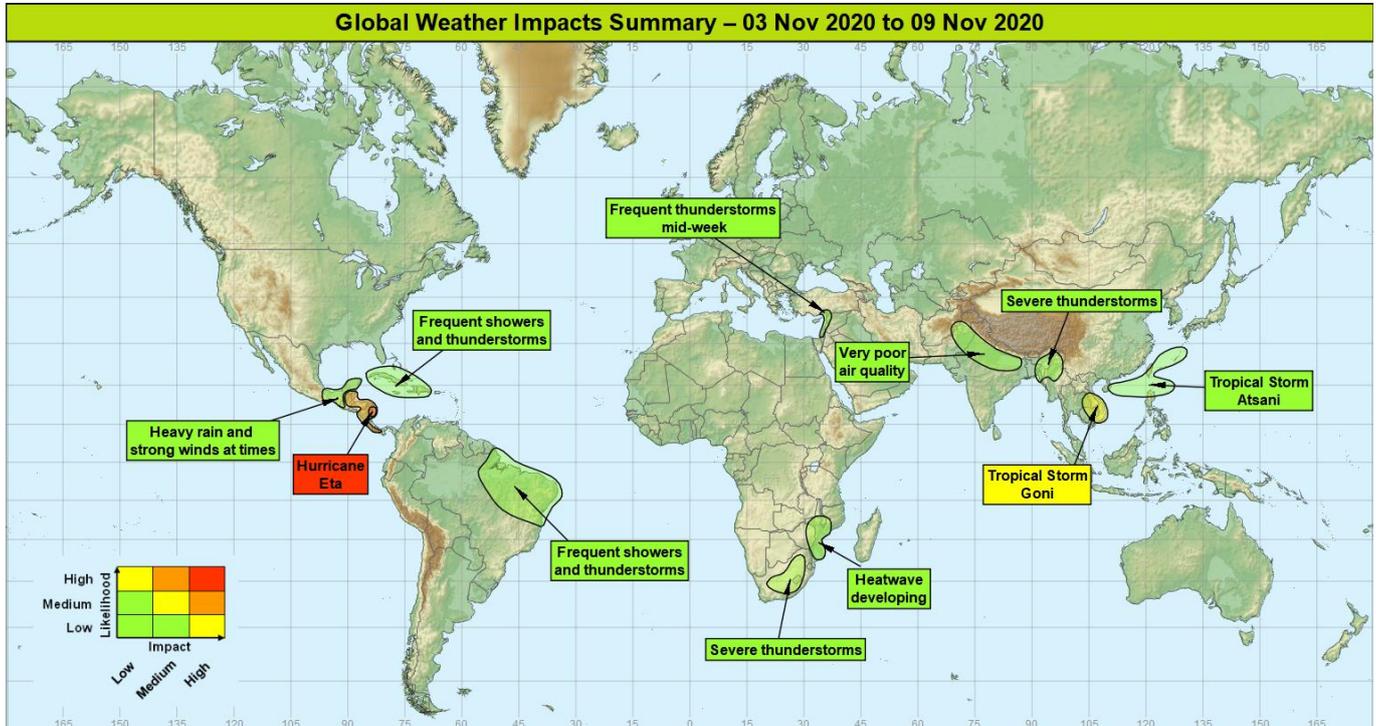


Global Weather Impacts – Tuesday 3rd November to Monday 9th November 2020

Issued on Tuesday 3rd November 2020

HEADLINES

- Major Hurricane Eta bringing severe and possibly widespread flooding to parts of Central America, with catastrophic winds and storm surge affecting eastern Nicaragua today.



Tropical Cyclones

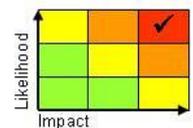
Hurricane Eta (Caribbean Sea)

Weather

Eta is expected to make landfall today as a major Category 5 hurricane, with sustained winds of 160mph and gusts to 195mph, close to the small city of Puerto Cabezas. Eta is expected to subsequently rapidly weaken this afternoon or evening as the centre slowly moves inland. A more widespread hazard will be torrential rainfall, with 200-300mm of rainfall widely across north Nicaragua, north Honduras, and western Costa Rica over the next 48 hours or so. Some more localised spots, particularly in coastal and windward facing mountainous regions of these areas, could see over 1000mm of rainfall. These conditions extending into Guatemala, Belize and possibly eastern Mexico through the middle of this week.

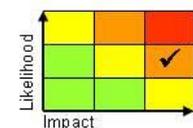
Discussion

Hurricane Eta continues to track westwards to the south of a strong subtropical ridge, and over the past 24 hours has rapidly intensified into a Category 4 hurricane – with it now expected to be a Cat 5 by landfall later today. The forecast track is along a plume of slightly cooler SSTs, but still 28-29C, with low vertical shear, such that strengthening up to landfall is anticipated. The only contending factor is the potential for an eyewall replacement cycle to put a brake on this – should Eta be slower to arrive this could be increasingly important. Most models and ensemble output takes Eta into Nicaragua, where it will rapidly weaken through interaction with the mountainous Nicaraguan terrain. As well as strong wind, 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.



Nicaragua

&



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

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Expected Impacts

Destructive winds in the vicinity of Puerto Cabezas, and significant storm surge. It is in this region where confidence in high impacts is highest. Torrential, flooding rains, with widespread flash and localised river flooding probable in the regions mentioned. This will bring a significant threat of landslides and some mobilisation of volcanic debris in the mountainous terrain too.

Tropical Storm Goni (South China Sea)

Weather

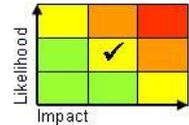
Tropical Storm Goni is now tracking slowly westwards across the South China Sea, having much degraded since its earlier typhoon status over the Philippines. With a much reduced wind threat, the main hazard from Goni will be from heavy rain, affecting Central Vietnam in particular. 150-250mm is expected widely, most likely through Thursday/Friday, with a few places possibly seeing over 500mm. 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. Confidence in the forecast track is higher now, with a landfall on the coast of Central Vietnam expected on Thursday. Despite warm seas, wind shear and dry air will restrict any development/organisation. Any further strengthening looks unlikely with the convection now pushed to the north of the low level centre, with Goni expected to decay into 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

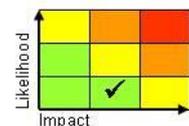
Atsani is likely to remain slow moving over the next couple of days, ENE of Luzon and ESE of Taiwan, whilst slowly gathering strength. Beyond this a general track west-northwestwards is expected, although the precise track remains very uncertain. As well as this, the intensity remains very uncertain too, and may attain typhoon strength if it tracks further south towards Luzon. Heavy rain (at least 100-200mm) is likely along its path. Confidence should markedly increase in the forecast by the middle of this week.

Discussion

Atsani will be slow moving over the next couple of days, likely fluctuating in strength due to increasing shear at times. The initially slow, erratic motion, means that the starting point for a more definite westwards translation is very unclear, and this uncertainty then continues right through the forecast period. Currently, the solutions are roughly split between those further north, which recurve and perhaps give a glancing blow to Taiwan, bringing heavy rain if not strong winds, and those which are further south and thus track more definitely westwards towards north Luzon and eventually Hainan as a stronger feature. The evolution should become clearer in the next 48 hours once the storm starts accelerating west.

Expected Impacts

Impacts from heavy rain are possible across parts of the Philippines, and Taiwan, depending on the track. Should Atsani move closer to the Philippines, some medium impacts from wind could occur (widespread disruption, and some damage to homes/businesses).



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

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Northwest Pacific Ocean – There is a high chance of a tropical storm development to the west of Mexico during the week, but with any development remaining offshore with no significant impact.

Europe

Nil.

North America

Nil.

Central America and Caribbean

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

Southern Mexico and Guatemala

Weather

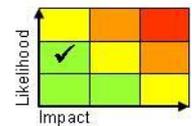
Periods of strong to gale force northerly winds will affect this area over the next few days. After today, a brief respite in the winds is expected, with showers easing, before winds and shower frequency increases once again from Thursday. A further 50-100mm is probably today on top of that which has already fallen, with another 200-400mm possible over the higher terrain of south Mexico from Thursday as the decaying remnants of Hurricane Eta come through.

Discussion

One more day of enhanced shower activity is likely across this region today in association with strong northerly flow and attendant Gulf of Mexico moisture around the periphery of a large scale anticyclone over the southern US. By tomorrow (Wednesday), the larger scale flow around Hurricane Eta will be disrupting this, but as the decaying cyclone comes west and north-west a resumption in the stronger winds and enhanced shower activity is expected. Funnelling of the winds by the high terrain surrounding the Chivela Pass will result in gales or even severe gales through this region extending out over the Gulf of Tehuantepec at times.

Expected Impacts

Flash and riverine flooding are possible with an enhanced risk of landslides where steeper terrain. Strong winds and dangerous sea conditions over the Gulf of Tehuantepec.



Western Caribbean

Weather

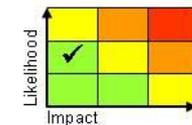
Enhanced shower and thunderstorm activity quite broadly across the western Caribbean is expected to take place over the next few days. 30-50 mm could fall in a few spots, in just a few hours, and in total 200-300mm could build up, potentially quite widely, in areas exposed to the north and east. Depending on the behaviour of ex-hurricane Eta, or portions of its remnants, this enhanced rainfall could continue for many days to come.

Discussion

Enhanced flow and moisture associated with Hurricane Eta to the south, and a cold front to the north, will converge in this area over the next few days, generating frequent showers and thunderstorms blowing in from the east. The precise direction of flow will dictate the most prone areas on each day, details of which are beyond the scope of this assessment but will likely only be clear on the day itself.

Expected Impacts

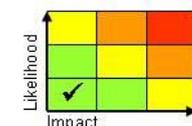
Increased risk of flash flooding, and a potential for isolated landslides in areas of higher terrain.



South America

Brazil

Weather



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Shower and thunderstorms activity will be more frequent than usual across this region through the next few days. 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, but much more so compared to normal in the highlighted region. Here, the stalled South Atlantic Convergence Zone, coupled with a higher latitude upper trough (although quite remote), is likely to focus the heaviest, slowest moving showers, allowing locally large totals to accumulate.

Expected Impacts

Enhanced risk of flash flooding and landslides.

Africa

South Africa and Lesotho

Weather

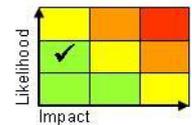
A second round of severe thunderstorms, with heavy rain and potentially large hail, is expected to move east across this region on Wednesday and Thursday. Storms could generate 40-70mm of rain in just 2-3 hours, along with strong gusts of wind.

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.



Mozambique, Zimbabwe and parts of neighbouring countries

Weather

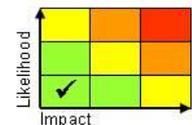
A heatwave is expected to gradually develop across this region over the coming week. November is the hottest month across much of this region, with maximum temperatures in places such as Harare likely to reach the mid-high 30s°C, and temperatures in parts of Mozambique exceed 40°C. These values are still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

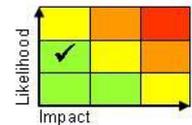


Middle East

Turkey, Syria, Lebanon, Israel and Palestine

Weather

Increasingly frequent showers and thunderstorms driven onshore by a strengthening west to south-westerly wind will affect this region through the next 2-3 days, probably peaking on Wednesday. Some places could see over 150mm of rain, much in a short space of time, along with lightning and strong gusty winds.



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Discussion

A sharpening upper trough is expected to extend down into the eastern Mediterranean region through today and tomorrow, engaging a native warm plume and developing 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.

Expected Impacts

Potential for localised flash flooding.

Asia

Northern Philippines and central Vietnam

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

Northern India, Pakistan and Afghanistan

Weather

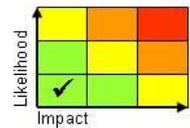
Very poor air quality is being reported and is expected to continue over the next few days, as light winds and increased particulate emissions combine to bring hazardous conditions, particularly by night.

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

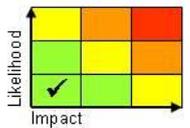
Frequent showers and thunderstorms, locally severe, are expected over the next couple of days in this region, with potential for 100-150mm of rain in a few places. Strong SW'ly winds from the Bay of Bengal will develop the most reliable showers across SE Bangladesh.

Discussion

An area of moisture and convection associated with the remnants of Typhoon Molave will bring some localised severe storms, with profiles exhibiting significant shear and locally high CAPE (>1500J/kg), leading to the generation of some torrential downpours.

Expected Impacts

Very localised flash flooding is possible, with a low risk of a tornado too. Most reliable heavy rainfall likely to be around SE Bangladesh/Cox's Bazar



Australasia

Nil.

Additional Information

Cox's Bazar, southeast Bangladesh

Further heavy showers and thunderstorms are expected at first this week (see Asia section), but there will be a downward trend through the week, with 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.

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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: 030840 UTC**Meteorologists:** D J Harris / Nick Silkstone**Global Guidance Unit**

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