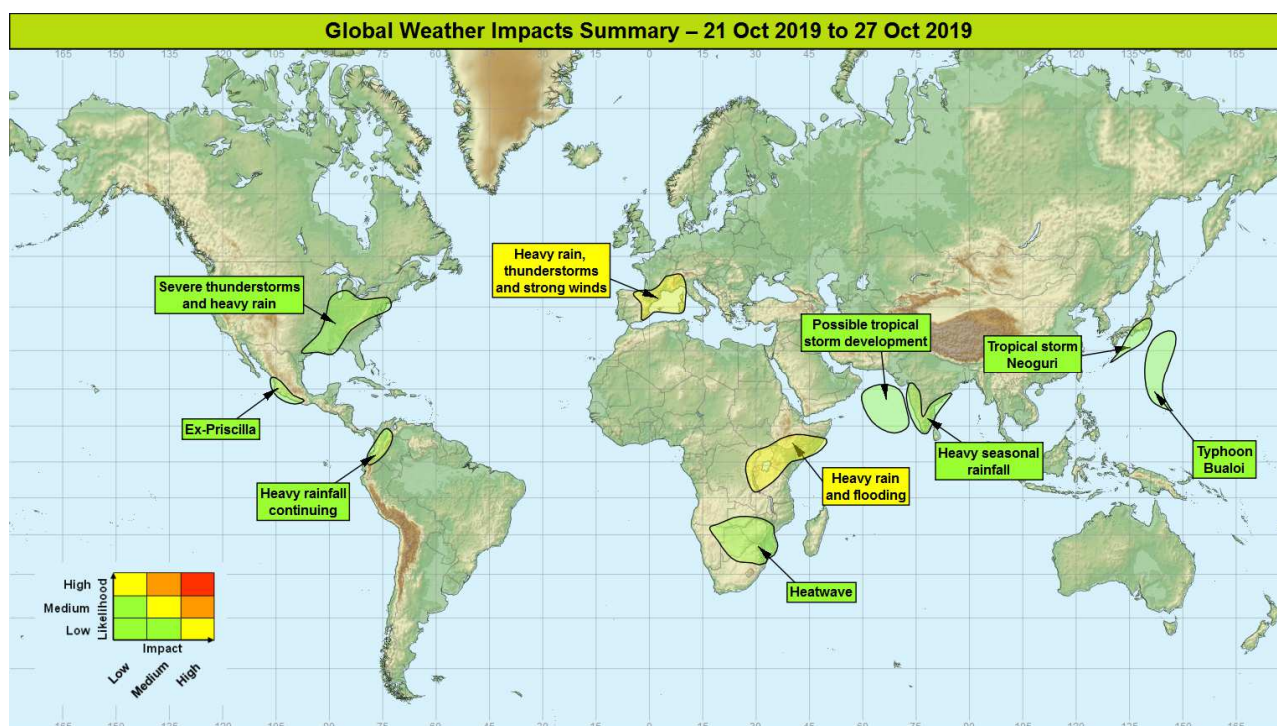


Global Weather Impacts – Monday 21st to Sunday 27th October 2019

Issued on Monday 21st October 2019

HEADLINES

- Heavy rain and severe thunderstorms for parts of SW Europe.
- Heavy seasonal rainfall bringing a flood and landslide threat to parts of East Africa.
- A couple of tropical systems are active in the north-west Pacific, whilst a tropical storm may develop in the Arabian Sea into the weekend.



DISCUSSION

Tropical Cyclones

Tropical storm Neoguri (Northwest Pacific)

Weather

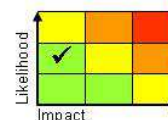
Neoguri strengthened into a typhoon on Saturday, though it is expected to quickly weaken again in 18-24 hours time as it continues north-northeast over the Ryuku Islands. Sustained winds of 65mph are expected for much of Monday, before the system begins to weaken later. Some heavy rain is likely across the Ryuku Islands, with 100-150 mm possible by the end of Tuesday. Some heavy rain is also likely over parts of Kyushu, Honshu and Shikoku early in the week as tropical moisture from the decaying system comes north-east across Japan. Some 150-250mm of rain is possible in areas recently affected by typhoon Hagibis.

Discussion

Neoguri encountered an environment conducive to strengthening on Saturday, before maintaining typhoon strength for much of Sunday. However, shear increased late Sunday ahead of an approaching mid-latitude trough, causing the storm to weaken. Further weakening is expected in the next few days, though the tropical moisture associated with it is likely to lead to heavy rain over parts of Japan into next week.

Expected Impacts

Low likelihood of flash flooding in the Ryukyu Islands initially, and across other parts of Japan later.



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

Typhoon Bualoi (Northwest Pacific)

Weather

Typhoon Bualoi developed over the weekend, and is expected to track across the Marianas through Monday, where heavy rain and strong winds are likely to bring some impacts to Rota and Guam. Thereafter, the system is expected to remain over open waters.

Discussion

The northern portion of a convectively coupled ERW has developed into a tropical storm over the weekend, with conditions favourable for Bualoi to continue strengthening over the next few days as it pushes WNW across the NW Pacific. It is likely to stay over open waters, though the Marianas are at risk from typhoon force winds and heavy rain (some 200-250mm across parts of the Marianas) Monday. Bualoi is likely to strengthen into a potent typhoon, but eventually the trough described above which influencing Neoguri, should steer the system away from Japan through mid-to-late this week.

Expected Impacts

Flash-flooding and typhoon strength winds are likely for parts of the Marianas on Monday, otherwise the system is expected to remain over open waters.

The following area is being monitored for tropical storm development



Arabian Sea

Weather

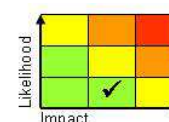
A slack area of low pressure is expected to develop during the week across the Arabian Sea, and there are some signals that this could develop into a tropical storm towards the weekend. However there is a lot of uncertainty over track of any subsequent development.

Discussion

A Rossby Wave is expected to engage the southern portion of the SAM, with the MJO also nearby, leading to the development of a tropical low. Should a system develop, it will be in an environment conducive to further strengthening. Indeed, a significant minority of EPS members, as well as deterministic models develop a major tropical storm, though there is huge spread with respect to track and timing of any development.

Expected Impacts

Uncertain, due to large spread in possible storm tracks, though heavy rain, strong winds and rough seas could be expected from any development.



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Europe

Western Mediterranean, Balearic Isles, northern Spain, southern France and northwest Italy, and later Sardinia and Corsica

Weather

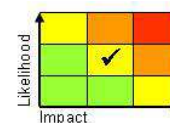
Spells of heavy rain and thunderstorms are expected to affect this region through the next week. Thunderstorms could produce up to 200 mm in 24 hours in places, with large hail and frequent lightning also likely. The most significant period for more widespread heavy rain and thunderstorms could be from Tuesday when up to 400 mm of rain could fall in parts of southeast France and northeast Spain. There is also the threat of strong winds or gales, especially affecting the islands and coasts, with very rough seas likely at times. By the middle of next week, the focus for heavy rain and severe storms will likely have moved away from Spain and mainland France, affecting Corsica and Sardinia instead. Here severe thunderstorms with a risk of waterspouts or tornadoes are expected.

Discussion

A major disrupting upper trough will only slowly track east across Iberia through the next week, with areas of forcing engaging various warm plumes that extend up from northwest Africa. There is the potential for the development of a surface low over northern Morocco which may then emerge northwards into the western Mediterranean, with some solutions allowing this to deepen into a major feature by the middle of next week. Profiles would suggest the potential for some severe thunderstorms within the 16°C WBPT 850hPa plume.

Expected Impacts

Flash flooding, with frequent lightning, hail and very strong winds causing damage to property and infrastructure, as well as travel disruption for aviation, and marine transport due to rough seas. Landslides are also possible in areas of more steeply sided terrain.



North America

Central/eastern USA

Weather

Severe thunderstorms are expected to develop from Texas north to the Great Lakes, then approach the Eastern Seaboard early next week. These storms will pose a threat of frequent lightning, intense rainfall (up to 150 mm in 6-12 hours), large hail and possible some tornadoes.

Discussion

A cold front will be engaged by a long wave upper trough early next week to produce a threat of severe storm development. There is also the potential for the development of a deep depression to the northwest of Chicago that could produce gale force winds, although this is a lower confidence part of the event.

Expected Impacts

Flash flooding, hail and tornado damage and power outages.



Central America and Caribbean

Ex-Priscilla (Southwest coast of Mexico)

Weather

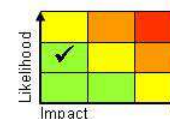
A burst of active convection and associated surface low pressure system briefly achieved tropical storm status on Sunday. However, rapid weakening occurred as it came inland across Mexico Sunday evening. Despite the system weakening, its remnants could deposit a further 50-125mm of rain through Monday.

Discussion

The combination of a passing African Easterly Wave and the ITCZ will bring heavy rainfall to parts of the western coast of Mexico through the early part of the week. The topography of the region will constrain most of this to coastal regions.

Expected Impacts

Some flash-flooding and landslides are possible.



South America

Western Colombia and northern Ecuador

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



Weather

Further frequent heavy showers and thunderstorms are expected over north-western parts of South America over the coming week. This follows a period of above average rainfall over the past month with some locations recording double their October rainfall. Over the next week, much of the area is likely to receive a further 75-125 mm of rain, locally 250-300 mm.

Discussion

Whilst AEW activity is reducing there is a consistent signal for an enhanced westerly flow near the Pacific coast of Columbia and Ecuador. This combined with slightly above average SSTs will help focus frequent heavy showers and thunderstorms over coastal areas and nearby mountains. There is also the possibility of a South Atlantic Convergence Zone enhanced area of rainfall that could push north from Peru by the middle of next week

Expected Impacts

Continuation of flooding impacts is likely across the region with more mountainous areas at heightened risk of landslides due to saturated ground.

Africa

Parts of east Africa

Weather

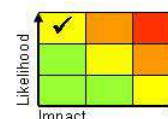
Above average rainfall is expected to continue through the next 7 days across the region with frequent heavy showers and thunderstorms. Whilst rainfall amounts will inevitably vary from place to place, some locations may receive their entire average October rainfall in a few hours.

Discussion

A strong positive Indian Ocean Dipole (IOD) event continues. This is probably responsible for the above average rainfall signal in these areas over the coming week. Based on the strength of the positive IOD event (largest since at least 2001) this could lead to above average rainfall in these areas for the next 2 to 3 months which may gradually make impacts more likely.

Expected Impacts

Continued increased likelihood of flash flooding along with land/mudslides in areas of more steeply-sided terrain.



Parts of southern Africa

Weather

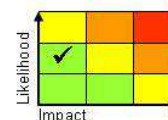
Temperatures are widely some 5-10, locally 15°C above average across this part of the world currently, with the area highlighted expected to see temperatures exceeding 35°C, and in some places 40°C (especially north-east South Africa, south Mozambique, south Zimbabwe and parts of Botswana), over the next few days. Whilst these temperatures are normal for mid-summer, falling this early in the season makes it near record breaking, particularly over parts of South Africa.

Discussion

The IOD is causing excessive rain to fall in E Africa close to the equator, and keeping the weather dry, hot and sunny in much of SE Africa, especially the NE of South Africa. With light winds this will make the heat feel quite oppressive.

Expected Impacts

Utilities will be under strain due to high air conditioning requirements, and water demands will be high in a region still waiting for the first rains of the spring/summer season. Severe wildfire conditions will be present across large tracts of this area too.



Middle East

Nil.

Asia

Southern India

Weather



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Whilst the monsoon is now retreating across India, above average shower and thunderstorm activity is expected to continue across the south of the country through the coming week. Many locations are likely to receive a further 100-200 mm of rain over the next week.

Discussion

Whilst the South Asian Monsoon commenced its withdrawal some 49 days later than normal across northwest India the retreat has accelerated over the past week. That said, above average rainfall compared to a usual withdrawal is expected over the coming 7 days, this perhaps a function of the MJO being in the Bay of Bengal.

Expected Impacts

Increased likelihood of surface water and river flooding along with land/mudslides in areas of more steeply-sided terrain. Coming at the end of the monsoon season this event will contribute to increased sensitivity.

Southern Japan **Weather**

One or two spells of heavy rain are likely through the next week, perhaps over areas impacted by Typhoon Hagibis. A further 100-200 mm of rainfall could fall across southern portions of Honshu in a 24-36 hour period.

Discussion

The combination of a series of upper troughs and northward pulses of warm 850hPa WBPT air will bring the threat of spells of heavy rainfall across central parts of Japan through the next. Some model uncertainties exist in the timing and location of the heaviest rainfall, including uncertainties in whether typhoon Neoguri tracks northeast into Japan. However, there is reasonable confidence that the area affected by typhoon Hagibis will receive further heavy rain, although there remains uncertainty in how much rainfall will accumulate here.

Expected Impacts

Increased sensitivity following the passage of Typhoon Hagibis is likely to lead to greater impacts than otherwise expected. Flash flooding and renewed river flooding are possible, in addition to landslides in areas of more steeply-sided terrain.



Australasia Nil.

Additional Information Nil.

Issued at: 210700 UTC **Meteorologists:** Jason Kelly/Tony Wardle

Global Guidance Unit

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

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