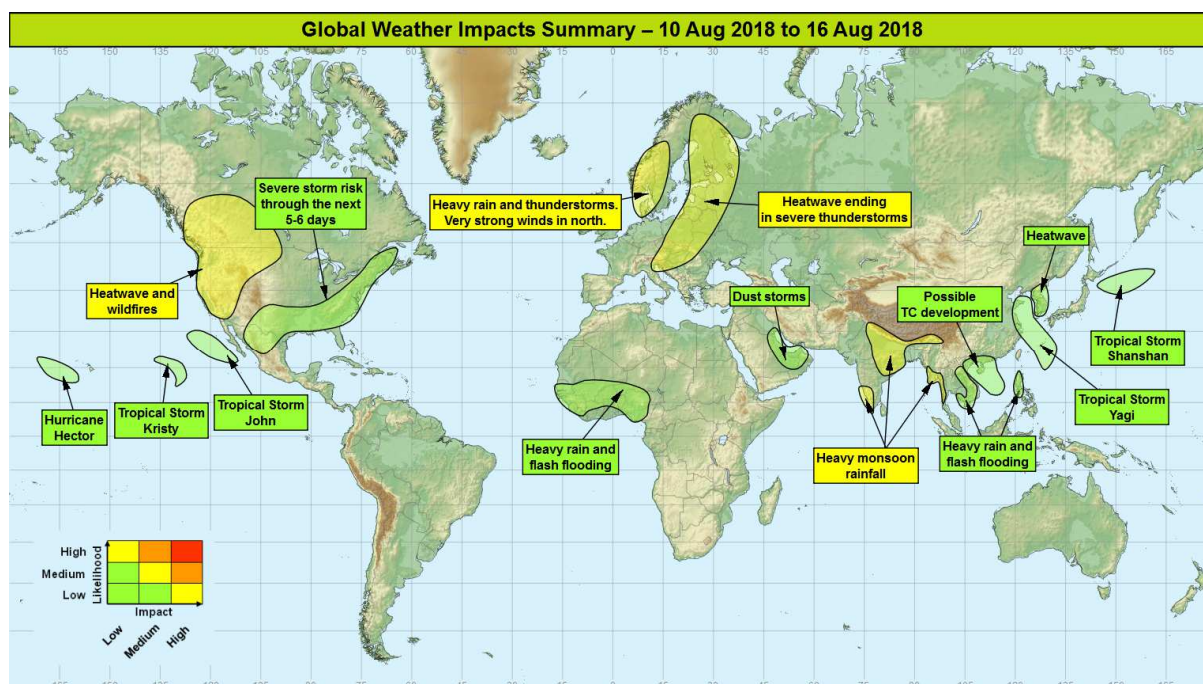


Global Weather Impacts – Friday 10th to Thursday 16th August 2018

Issued on Friday 10th August 2018

HEADLINES

- High temperatures declining across Europe with a thundery breakdown. Strong winds and heavy rain across Denmark and southern Scandinavia today.
- Heatwave conditions continue across western North America with high wildfire risk.
- Heavy monsoon rainfall continues across parts of Southern Asia, especially Myanmar.



DISCUSSION

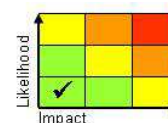
Tropical Cyclones

Tropical Storm Shanshan (Western North Pacific)

Shanshan is moving NE over the cooler waters of the NW Pacific, and into an area of increased wind shear. Latest satellite imagery suggests it has become asymmetric with deepest convection on the eastern flank, and advection of colder air into the western flank. As this continues over the next 6-12hrs, Shanshan will under-go extra tropical transition into a typical mid-latitude depression.

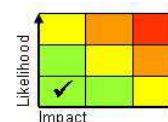
Shanshan moved northeast, passing just to the east of Honshu on Wednesday, and then weakened into a tropical storm as it moves over cooler waters to the NE of Japan. Shanshan was located around 250 miles NE of the northern tip of Honshu at 0000UTC, moving northeast at 12mph over open water.

Impacts were probably less severe than expected. Radar imagery showed a very tight circulation as it passed close to eastern Honshu, with the heaviest rain staying offshore away from land. As Shanshan moves away from landfall no further impacts are expected.



Hurricane Hector (Eastern North Pacific)

Hector is currently being steered westwards around the sub-tropical ridge. The ridge is expected to weaken over the next 24hrs, allowing Hector to turn towards the northwest over cooler waters and then weaken.



This forecast may be amended at any time

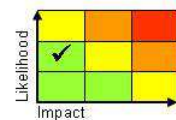
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Hector was around 430 southwest of Honolulu at 0300UTC, moving west at around 16mph. Hector is expected to turn towards the northwest during Friday and then start to weaken over the weekend while remaining over open water. Minor impacts are expected across Johnston Island, which is a small atoll to the southwest of Hawaii.

Tropical Storm John (Eastern North Pacific)

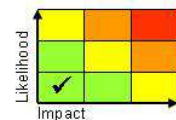
John is expected to weaken as it continues northwestwards over the cooler waters. As convection weakens John is expected to decay into a remnant low over the weekend. John weakened into a tropical storm on Thursday evening and was around 635 miles west of Baja California at 0300UTC. John is moving WNW at 14mph and is expected to gradually weaken over the next 24-48hrs while remaining over open water. Impacts from this system are likely to be limited to large swell and strong rip currents affecting the coasts of southwestern Mexico through the next few days.



Tropical Storm Kristy (Eastern North Pacific)

Kristy is moving northwards over warm water and into an area of weak shear which may be favourable for slight intensification. As Kristy continues north she will move over progressively cooler waters and increased wind shear, which should lead to weakening over the weekend.

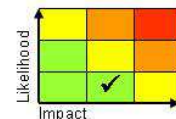
Kristy was located over the East Pacific at 0300UTC, around 1350 miles west of the tip of Baja California. Kristy is expected to move broadly northwards over the next few days. Some slight intensification is likely today and Kristy may reach hurricane strength for a time before weakening over the next few days while remaining over open water. As this system is expected to remain over the open ocean, no impacts to land are expected.



Tropical Storm Yagi (Western North Pacific)

Tropical Storm Yagi is currently being steered NW around the sub-tropical upper ridge. As Yagi crosses the warm waters of East China Sea and Yellow Sea over the weekend there is the potential for slight intensification. NWP models are in reasonably agreement up until then, but spread increases over its subsequent track. GM has a more southerly track than EC, GFS or official guidance from JMA and is currently considered an outlier. Tropical Storm Yagi was located around 350 miles southeast of Okinawa at 0000UTC and was moving NW at 12mph. Yagi is expected to continue on this track over the next few days and will cross the Ryukyu Islands on Friday night or Saturday morning, bringing a spell of heavy rain. Yagi may intensify slightly over the weekend with Yagi expected to turn towards the northeast to potentially affect the Korean Peninsula early next week.

At this stage impacts are expected to be mainly from heavy rainfall resulting in localised flash flooding and an increased likelihood of landslides across the Ryukyu Islands, Eastern China and then the Korean Peninsula. Many places will see 50-75mm of rain, with locally 150-200mm possible over parts of western Korea. This will bring an end to the recent heatwave, but may well lead to flash flooding over the hard ground.

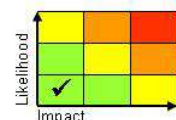


Post-tropical Debby (North Atlantic)

Debby has become ill defined, and is no longer producing enough organized deep convection to be classified as a tropical cyclone.

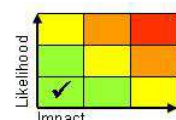
Debby under-went extra tropical transition on Thursday night and will become swept up in a mid-latitude low pressure system today (Friday).

As this system is expected to remain over open water, no impacts to land are foreseen.



South China Sea

There continues to be a signal for an area of enhanced convection, associated with an equatorial Rossby wave, over the South China Sea to develop into a tropical depression and potentially a tropical storm over the South China Sea or Gulf of Tonkin over the next few days. However, there is large uncertainty where this slow moving system may go and over when tropical storm genesis may occur.



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There is the potential for a tropical storm to develop in the South China Sea or Gulf of Tonkin over the next few days. This leads to a threat of heavy rainfall and large accumulations across a large part of southern China, Hainan and northern Vietnam with some places perhaps seeing 500-600mm of rain over several days.

There is an increased likelihood of heavy rainfall, causing flash flooding and an increase likelihood of landslides. However, confidence is low as to where this may occur with northern Vietnam most at risk at this stage.

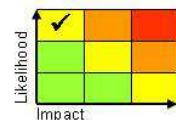
Europe

Denmark and southern Scandinavia

A sharp upper trough will continue to engage the high θ_w plume across the near-continent during Friday which will act to maintain the deep depression over the region and steer it steadily northwards during Friday.

Heavy rain and thunderstorms are expected across Denmark and southern Scandinavia today (Friday) as an unseasonably deep low pressure system moves northwards. Strong to gale force winds are expected with some coastal areas likely to see gusts to 60mph. A number of Yellow and Orange warnings on MeteoAlarm.

Heavy rain may lead to localised accumulations of 50-75mm which may lead to localised flash flooding. However, this will also be welcome rainfall in many areas of southern Scandinavia that have experienced heatwaves and wildfires over the last few weeks. At the same time, strong winds could cause some disruption to outdoor activities and lead to damage to some trees and structures.

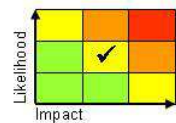


Central Europe and eastern Scandinavia

A plume of high 1000-850hPa partial thickness with values around 140-144dam will continue to transfer northeast across central Continental Europe during Friday with further high temperatures. However, as the sharp upper trough (discussed above) continues to interact with this hot air it will produce severe thunderstorms and gradually lead to the plume "occluding out" over the weekend.

High temperatures are expected through the next two days across parts of central Europe. Temperatures are expected to be 5 to 10°C above the average for early August, with temperatures reaching the mid-high 30s°C. As less hot conditions arrive from the west, there is potential for severe thunderstorms to break out in places. Torrential downpours (up to 75mm in 3 hours), along with large hail, strong winds and a risk of tornadoes.

The heatwave will likely have impacts on vulnerable populations, as well as tourists who may not be acclimatised to such high temperatures and there may be some impacts on travel, particularly to railways. Severe thunderstorms could bring significant flash flooding, along with potential damage to property and crops from large hail and strong winds, as well as impacts to aviation.

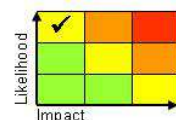


North America

Western USA & SW Canada

The upper ridge will gradually topple eastwards over the next few days, with mainly clear skies across large parts of western North America. A combination of strong insolation and warm advection will allow very high temperatures to persist and extend gradually eastwards across the northern Great Plains.

Temperatures are expected to be widely 7-10°C above normal. This will result in temperatures peaking into the mid-40s°C in the southwestern USA and high-30s°C in the northwest USA and southwest Canada. There is the possibility of record high temperatures being set in some parts over the next few days. For example, Calgary has a record high temperature of 36.1°C (set in 1919 and 1933), and this could be broken over the weekend.



This forecast may be amended at any time

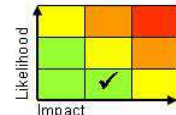
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Wildfires still burn from Alaska to California, with the most significant fires in California (the Mendocino Fire Complex is now the largest in the state's history at 117,638 hectares). With high temperatures continuing the current situation across western parts of North America may deteriorate. Furthermore, no significant rain is expected this week and wildfires seem likely to become more of an issue. Smoke from existing and recent wildfires is resulting in poor air quality in places, adversely impacting on human and animal health.

Central, eastern and southern USA/NW Mexico and SE Canada

A cold front will slowly and erratically transfer southeast, being engaged by several short wave upper troughs to produce some severe thunderstorms through the period. Severe thunderstorms are expected at times over the next 5-6 days across the central plains and southern states of the USA, across the SE of Canada and far NE of the USA. These storms will produce a risk of torrential rain (up to 75 mm in 3 hours), along with large hail, strong winds and the threat of tornados. The risk transfers to the Eastern Seaboard, central southern USA and NW Mexico through the weekend. Flash flooding, along with wind and hail damage are likely impacts, with aviation likely to see impacts from large areas of thunderstorms across this part of North America.



Central America and Caribbean

See the *Tropical Cyclones* and *North America* sections for impacts on Central America.

South America

Nil significant.

Africa

Equatorial West Africa

Further active AEWs are expected to contribute to above average rainfall across the region over the next week.

Further areas of frequent thunderstorms are expected to affect parts of West Africa over the next week. These thunderstorms are likely to produce 75-100 mm of rain in just a few hours. Whilst thunderstorms are not uncommon at this time of the year, they are expected to be slightly more numerous than normal.

Heavy rainfall, often falling in a very short period, will result in an increased likelihood of flash flooding and landslides. Strong winds from thunderstorms can also cause damage to crops and properties, and lift dense dust storms across the Sahel region.



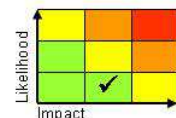
Middle East

Kuwait south across Bahrain, Qatar, UAE and Oman

A strong Shamal on Tuesday and Wednesday which led to areas of lifted dust. Winds eased during Thursday and dust will gradually disperse on Friday, but a further pulse in the Shamal is expected next week.

Over the last few days there were areas of lifted dust across the Persian Gulf and adjacent nations. These will continue to disperse today (Friday), however, another pulse in the Shamal is expected next week which will bring a renewed threat of dust storms.

The main impacts will be on aviation operations at the major hub airports in the region, but there will also be surface transport network and marine transport issues, along with human health issues due to the extensive, long lived dust storms this coming week.



Asia

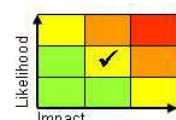
See *Tropical Cyclones* section.

Northern and Western India, Nepal & Myanmar

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An enhanced southwest monsoon flow will persist across the Bay of Bengal and SW India through the next few days, bringing high rainfall accumulations over hills that face into the prevailing wind. Meanwhile, the remnants of a monsoon depression will bring heavy rainfall to northern India as well as Nepal over the next few days. A second, potentially more intense, monsoon depression may develop by the end of the weekend, bringing further heavy rain at the beginning of next week.

Persistent heavy monsoon rain and thunderstorms are expected to continue through the next few days. Around 50-100 mm of rainfall may occur each day within this region, with some locations likely to record totals approaching 300 mm over the period. The heaviest rainfall is expected to be across western Myanmar and SW India, where 500-600mm may accumulate in places. There is the potential for the remnants of a monsoon depression to bring very heavy rainfall to northern India and perhaps Nepal over the weekend.

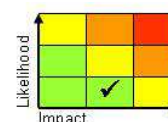
A high likelihood of further flooding and landslides, posing a danger to life, as well as damage to property and infrastructure. However, this is the wet season, and so these impacts are expected in the region at this time of year. The most significant flooding impacts are likely to be across Myanmar, where impacts from flooding have been particularly severe this monsoon season.

Northern Philippines, parts of Cambodia, Vietnam and Laos

A persistent south-westerly Monsoon flow will maintain moist, deep convection to parts of Cambodia, Laos and Vietnam, perhaps augmented by the development of a South China Sea tropical storm. Meanwhile, across the Philippines the southwesterly flow across the South China Sea will lead to very heavy rainfall, particularly across western Luzon, including Manila.

Enhanced monsoon rains will affect the region through much of the next week. Most locations should have daily precipitation accumulations of 25-50 mm, with peaks of the order 100-150 mm each day. The risk of very heavy rainfall is likely to return this coming week to the Manila area in the Philippines.

Flash and river flooding likely, along with an enhanced likelihood of landslides in mountainous areas.

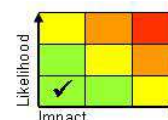


Korean Peninsula

The Changma front will remain displaced well to the north of its usual position for the time of year and be fairly inactive. This will allow high temperatures to persist over the Korean Peninsula beneath a strong upper ridge for the next few days, before a tropical storm approaches early next week – see tropical storm section.

High temperatures, albeit a few degrees cooler than the last few days, will continue for the next 2-3 days with maximum temperatures reaching the mid-high 30s°C. Last Wednesday (1st August) a new all-time record maximum temperature, 40.7°C was reached at Hongcheon. Meanwhile a new record was also set at the capital Seoul of 39.6°C.

The longevity of the excessive heat will likely have impacts on vulnerable populations and there may be increased demand on power supplies.



Australasia

Nil significant.

Additional Information

Australia – New South Wales has been declared 100% in a state of drought. Some towns are reported to only have 3-4 months of water supply remaining. Very little rainfall is forecast for the coming week to improve the situation which is hitting rural/agricultural communities hard, resulting in increasing food prices.

Issued at: 100700 UTC **Meteorologist:** Neil Armstrong

Global Guidance Unit

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