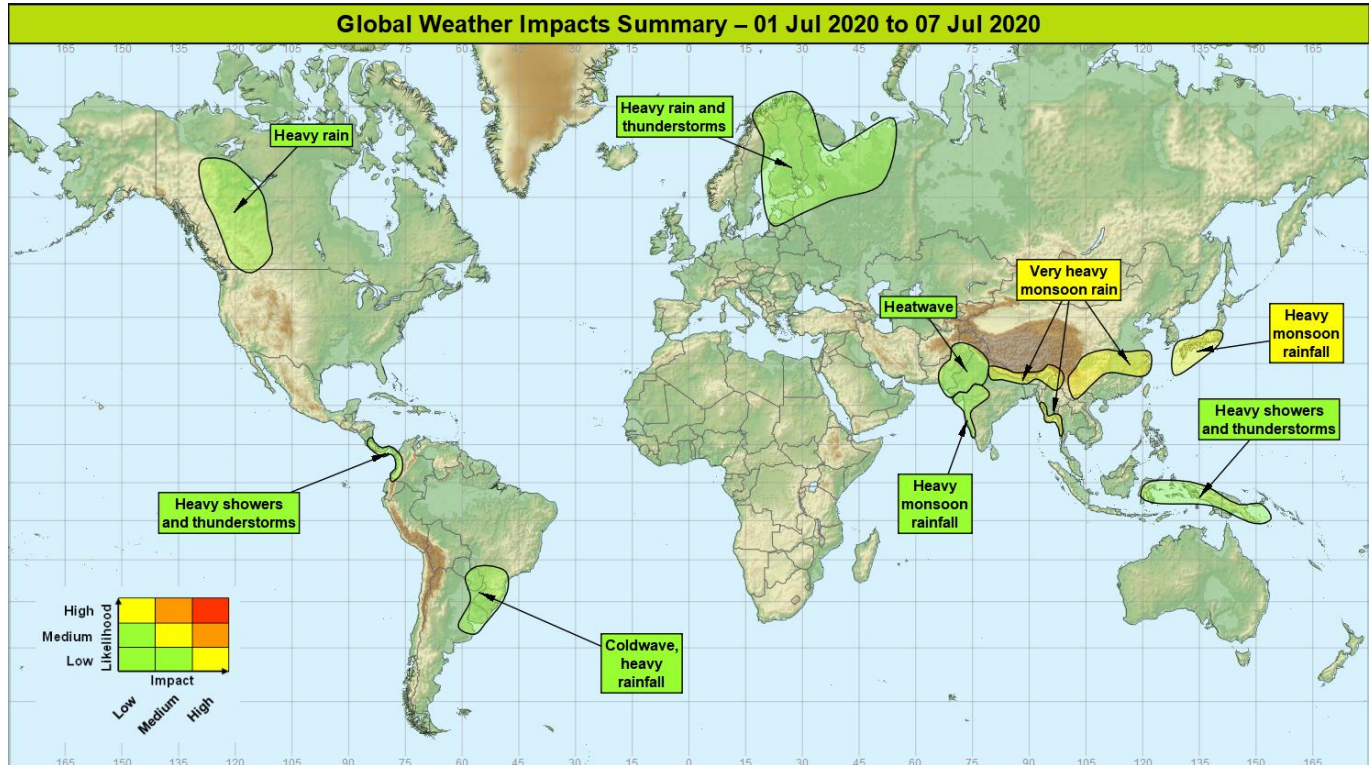


Global Weather Impacts – Wednesday 1st July to Tuesday 7th July 2020

Issued on Wednesday 1st July 2020

HEADLINE

- Very heavy monsoon rainfall continues for parts of South and East Asia



DISCUSSION

Tropical Cyclones

There are currently no named tropical cyclones.

Northeastern Pacific

Weather

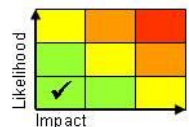
Areas of enhanced showers and thunderstorm lie off the Mexican Pacific coastline, with the NHC briefly naming one of them a tropical depression: "4E". It is already showing signs of dissipating and is not expected to become a tropical storm.

Discussion

African Easterly Waves (AEW) will continue to run across the area leading to a region of enhanced and organised convection, but large-scale organisation is not expected at present.

Expected Impacts

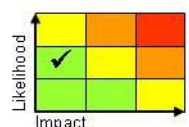
Nil.



Europe

Parts of north and northeast Europe

Weather



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Further spells of heavy rain and some thunderstorms, locally severe and long-lived, will affect the region at times over the seven days. As well as torrential rain (locally 50 mm in a couple of hours), frequent lightning, strong winds and some large hail will be additional hazards. The heaviest rainfall and most frequent storms are expected to be across parts of Finland and the Baltic States; here in excess of 100 mm of rain could build up in places, around double the average for July.

Discussion

A slow-moving and complex upper vortex over Scandinavia will promote a general destabilisation of the airmass over the region, allowing thunderstorms to break out widely in response to diurnal heating. In addition frontal systems will arrive from the west, drawing high WBPT air north/northeastwards and giving the potential for spells of heavy rain and severe thunderstorms development at times.

Expected Impacts

Flash flooding is likely and is could affect some major urban areas, such as Helsinki. Hail and/or strong wind damage is possible in places, with potential local power disruption from lightning strikes.

North America

Western Canada

Weather

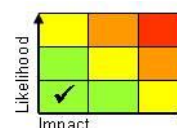
Heavy rain is expected to affect parts of British Colombia and Alberta over the next few days. Around 50 to 100 mm is likely to fall widely, with up to 150 mm in places. This is a drier part of Canada, with the region typically receiving 50-75 mm in an entire month at this time of year.

Discussion

Cyclogenesis will take place across SW Canada over the next few days as an upper trough extends SE towards the Rockies and disrupts. Heavy and persistent rain will develop along the northern and eastern flank of the resultant depression. This part of Canada, east of the Rockies, is drier than further west and also further east towards the Great Lakes. Whilst this is not a large amount of rain it could be more impactful in this drier region.

Expected Impacts

Flash flooding is possible, with main impacts probably to travel in the region.



Central America and Caribbean

Costa Rica, Panama, Nicaragua and western Colombia

Weather

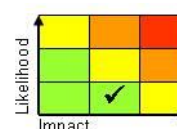
Above-average shower and thunderstorm activity will occur across this region through the coming week. Showers and thunderstorms could bring up to 50mm of rainfall over a short duration, especially this weekend, with up to 250 mm possible throughout the week across the mountains of Central America and as much as 300-400mm across the Colombian Andes.

Discussion

The ITCZ is expected to remain fairly active across this region, with the passage of several African Easterly Waves (AEW) bringing one to two day periods of enhanced activity to Central America, and days with less precipitation between these features. Further south enhanced low-level moisture convergence across the Colombian Andes will lead to enhanced activity on most days, hence the higher rainfall accumulations signalled here.

Expected Impacts

An enhanced risk of flash flooding and landslides.



South America

Southeast Brazil, northeast Argentina and eastern Paraguay

Weather



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Spell of heavy rain, along with some thunderstorms, will ease through Wednesday. As this precipitation clears unusually strong winds will develop with gales or severe gales along the coasts. Temperatures across this and the wider surrounding region will also fall much lower than average (an event known as a Friagem), with overnight frosts possible. As the warmer air returns this weekend the rain and storms will reinvigorate, and once again around 50-100 mm of rain will fall in a day, with some places seeing as much as 150mm by the middle of next week. For reference Porto Alegre in southeastern Brazil typically sees around 100mm of precipitation across a whole month at this time of year.

Discussion

As the recent deep (for the area) low pressure system clears on Wednesday, cold air will surge northwards across the region bringing well below average temperatures in what is the coldest time of the year. During the weekend the subtropical plume will move back southwards, allowing renewed rounds of showers and thunderstorms to develop going into next week.

Expected Impacts

A slight increase in the risk of flash flooding is associated with the rain. Unusually strong winds across the region at first could lead to some infrastructure damage and unusually rough seas. The cold wave that follows may well damage frost sensitive crops across a wide and productive agricultural region.

Western Colombia – See Central America and Caribbean section**Africa**

Nil.

Middle East

Nil.

Asia**Northeast India, Nepal, Myanmar, northern Bangladesh and Bhutan****Weather**

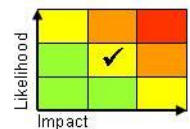
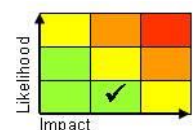
An active phase of the Indian Summer Monsoon is ongoing. Heavy rainfall, showers and thunderstorms will remain more frequent than normal across the region over the coming week, with low lying areas seeing an additional 100-200mm of rainfall, and in excess of 500mm of precipitation across the mountains. Given that many of the regions larger rivers are currently in flood, this additional above average rainfall may maintain or exacerbate the current situation.

Discussion

An anomalously strong southwesterly monsoon flow across the region continues to pump an exceptionally moist airmass (PWAT >75mm) inland from the Bay of Bengal. The release of instability over land will result in heavy precipitation, and even higher rainfall totals will occur where this flow impinges upon high mountains. Despite this event occurring early in the southwest monsoon season, reports suggest that large scale flooding is already being seen across the larger floodplains in this region. The true scale of the impact from the ongoing rainfall may take a week or more to materialise as this water filters down into the wide and heavily populated flood plains of northeast India and Bangladesh.

Expected Impacts

Increased likelihood of surface water flooding especially in urban areas and perhaps the odd landslide in areas in more mountainous regions. Ongoing impacts from significant riverine flooding across the regions larger rivers. Frequent lightning will be an additional hazard (as tragically seen in recent days).

**Western India****Weather**

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Heavy monsoon rainfall across this region through the coming week, around 400-700mm could fall across the high terrain inland with 200-400mm even possible along the lower lying coastal region. This region typically sees between 200-250mm per week at this very wet time of year, so the rainfall this coming week is only modestly above average.

Discussion

A surge in the Somali low level jet will see it reach speeds of up to 60-70 knots this coming week. This will lead to the enhanced advection of a high precipitable water airmass to the western part of India. As this airmass reaches the land and is forced to rise over the terrain instability will be released leading to frequent heavy showers and thunderstorms.

Expected Impacts

An increased threat of flash flooding and landslides.

Central and southeastern China**Weather**

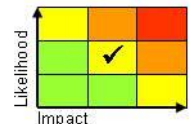
Continued very heavy monsoon rainfall is expected across the region over the next seven days. 100-200mm is expected to fall quite widely, with localised peaks of 300-500mm possible. These upper totals represent more than double the average June rainfall, and large parts of China have seen much wetter than average conditions over the past month or two.

Discussion

Ongoing monsoon southwesterly flow into this area will continue to enhance moisture and wind convergence associated with the seasonal Mei-yu/Baiu front, leading to episodes of heavy rain and thunderstorms. A number of shortwaves embedded within the upper flow will continue generate low amplitude frontal waves which will trigger heavy rainfall across a similar area along the quasi-stationary front, leading to very large rainfall accumulations. Media reports suggest that in this area of China the current flooding is the worst seen in over 70 years.

Expected Impacts

Significantly increased threat of flash and riverine flooding, although this heavily modulated by dams. An increased (but still very low) risk of the failure of some flood protection structures (including dams). An increased risk of landslides in areas where terrain is steep.

**Japan****Weather**

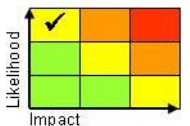
Very heavy rainfall is expected across the south of the country in particular this week with many areas seeing 50-100mm of rainfall, and as much as 300-400mm across the mountains in the region. This could represent 2-4 weeks' worth of precipitation falling in some of the wetter areas in just a few days.

Discussion

The monsoon southwesterly flow has now arrived across this region. Along the monsoon front (known as the seasonal Mei-yu/Baiu front) convergent low-level flow will lead to episodes of heavy rain and thunderstorms. Whilst the upper flow is not especially conducive to large-scale development, a number of shortwaves embedded within the flow will amplify heavy rainfall further along the quasi-stationary front, leading to large rainfall accumulations.

Expected Impacts

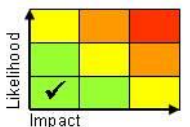
Increased risk of flash flooding and landslides.

**Parts of eastern Indonesia and Papua New Guinea****Weather**

Above average rainfall will continue across this region in the form of heavy showers and thunderstorms. These will be capable of locally bringing 50-75 mm of precipitation in a short duration, with some locations likely to see 100-200 mm through the coming days, although some mountainous parts of the island of New Guinea could see over twice this amount. Average precipitation accumulations in June across this region is around 250 mm.

Discussion

A Kelvin Wave (KW) is currently crossing this region bringing eastward moving zones of enhanced shower and thunderstorm activity. Profiles in the area show large amounts of PWAT, and large skinny CAPE so heavy rainfall likely to be the most disruptive element.

Expected Impacts

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An increased risk of flash flooding and landslides in regions where terrain is steep.

Pakistan and northwest India

Weather

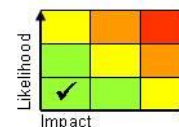
A break in the monsoon will allow a further heatwave to develop across this area during the coming week. Daytime temperatures are signalled to reach more than 10°C above average, this would represent maxima in the high 40s and low 50s°C.

Discussion

As the Arabian seasonal upper high intensifies across this region, descent will lead to largely cloud-free conditions developing and the warming of the airmass through adiabatic compression/heating. As a result, with strong insolation temperatures will quickly rise into the mid 40s°C each day, with the hotter locations likely getting into the low 50s°C.

Expected Impacts

Conditions will be detrimental to human and animal health due to high heat stress. Potential for disruption to utilities brought about by increased demand for electricity and water.



Australasia

Nil.

Additional Information

Cox's Bazar, southeast Bangladesh

Shower and thunderstorm activity is expected to remain near normal through the coming week – in what is usually a very wet time of year. Around 100-150mm of rainfall is likely to fall across the areas through the coming week, with the threat of flash flooding and landslides (again, this is expected impacts at this time of year).

Western Yemen

Isolated showers and thunderstorms are expected to be mainly confined to the Western Highlands through much of this week with flash flooding is considered a very low likelihood. By the middle of this week it is likely that an area of showers and thunderstorms will develop across southern Oman and gradually transfer westwards across Yemen late in the week and through the weekend to increase the flash flood threat, especially for southern fringes of Yemen.

Issued at: 010700 UTC **Meteorologist:** Laura Ellam/Mark Sidaway

Global Guidance Unit

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