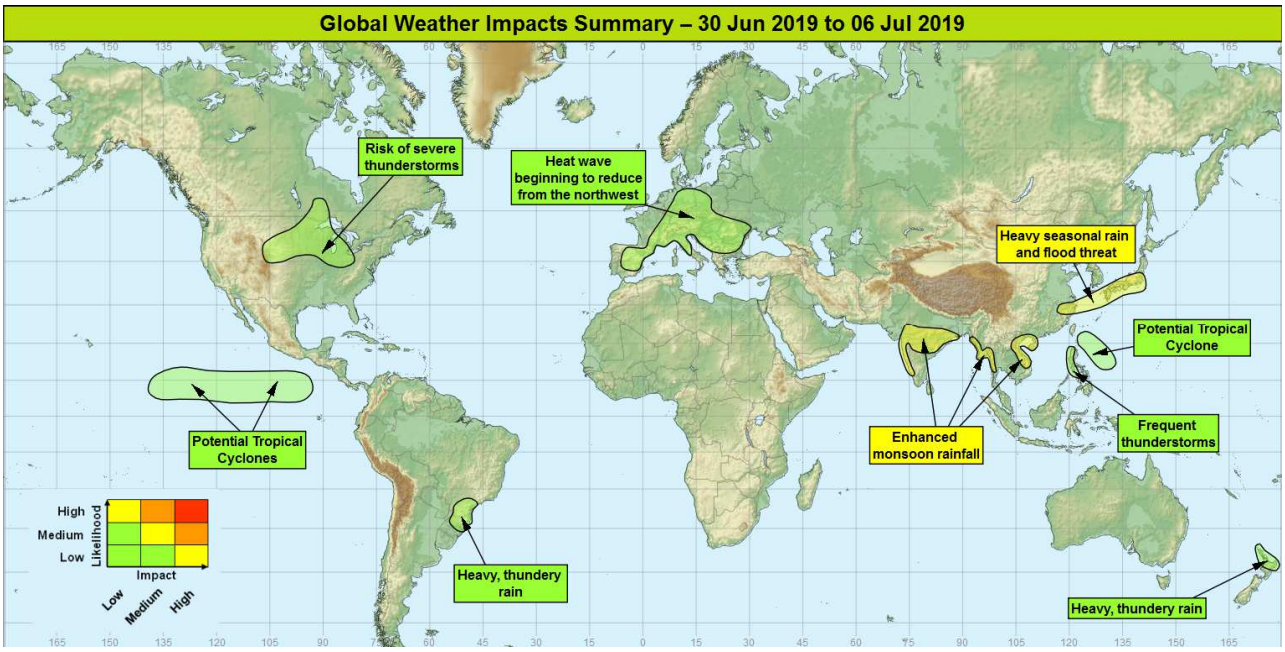
Daily Global Weather Impacts Assessment

Global Weather Impacts – Sunday 30th June to Saturday 06th July 2019

Issued on Sunday 30h June 2019

HEADLINES

- Heavy monsoon rains continue across parts of southern and eastern Asia.
- European heat wave now slowly declining, further potential for isolated severe thunderstorms.

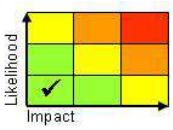


DISCUSSION

Tropical Cyclones

No current TC's. The following areas are being monitored for tropical cyclone development:

Eastern North Pacific Ocean



Weather

The ITCZ is expected to remain active over the next 7 days, with potential for a number of tropical disturbances to organise themselves into tropical cyclones. Any systems that do form look very unlikely, at this stage, to affect land – tending to drift harmlessly north-westwards over cooler sea temperatures before decaying.

Discussion

Tropical waves interacting with the ITCZ, possibly under the influence of the MJO too (although this is very weak), are signalled to spawn further circulations which may become organised and strong enough to be designated tropical storms. Models continue to vary significantly in their treatment of individual features, particularly at longer lead times, however the NHC have pinpointed a broad circulation which around 1700km S of Baja California which has a high likelihood of developing into a tropical storm today (Sunday).

Expected Impacts

NIL with any cyclones expected to remain over open water.

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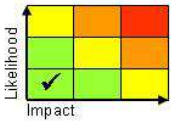
Philippine Sea



Weather

An area of thunderstorms and associated low level circulation are moving slowly northwest across the Philippine Sea. It may strengthen into a tropical storm over the next 24 hours, but looks unlikely to pose a threat to land.

Discussion

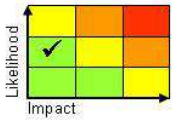
A low level circulation with flaring of organised, very deep convection associated with an Equatorial Rossby Wave, is expected to be steered NW'wards over favourable SSTs. Should the current wind shear environment reduce then conditions are favourable for strengthening into a tropical storm in the next 24 hours. Models indicate that the system may strengthen but only slowly as it continues NW'wards over the next couple of days, before weakening and merging with a broader monsoon depression over the South China Sea early next week.

Expected Impacts

Nil (Any system that does briefly develop would remain over open sea).

Europe

Western Europe



Weather

The ongoing heat wave is now past its peak, with maximum temperatures exceeding 45ºC in France on Friday, whilst some parts of France and Spain again reported temperatures over 40ºC yesterday (Saturday). Temperatures over 40ºC are expected to become much less likely from today but will remain widely in the mid to high 30's – cooler air now arriving from the Atlantic through the next couple of days will initially spread high temperatures back across Germany and Poland today (Sunday) before allowing a more general trend to more normal conditions through next week. The heat could trigger very isolated violent thunderstorms, most likely over the Alps or SE France today.

Discussion

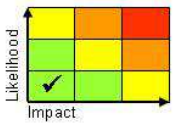
Warm air sourced from high levels over north Africa coupled with strong subsidence/adiabatic compression through strong ridging aloft, and strong insolation given the time of year resulted in hot conditions developing widely across western Europe. The extreme partial thicknesses (in excess of 147 dam) in the warm air will slowly reduce with peak maxima following suit, whilst cooler Atlantic air spreading in associated with a cold front arriving from the west and high pressure toppling in behind will see temperatures falling more sharply from the northwest through next week. That said, parts of southern Europe will still see temperatures into the mid to high 30s Celsius, with some areas around 5ºC above normal.

Expected Impacts

High temperatures will bring heat health impacts to vulnerable populations, particularly given the spell of very warm nights (minima >20°C), whilst placing strain on some utilities and transport networks (e.g. railways). Increased likelihood of wildfires. Large hail and damaging winds possible where violent thunderstorms form.

North America

Parts of USA and central south Canada



Weather

Areas of strong to locally severe thunderstorms are expected over the next few days, with the potential for torrential rain, large hail, damaging wind gusts and a very isolated threat of tornadoes. Where these occur 50-75mm of rain could fall in just a few hours.

Discussion

A high WBPT plume on the forward side of broad troughing over NW North America will provide a focus for isolated severe storms over central-north US and central-south Canada; this collapsing eastward over the next few days with the increasingly slow moving trailing cold front becoming the main focus for storms.

Expected Impacts

Primarily a threat to aviation, but very localised flash flooding and wind/hail damage is possible too.

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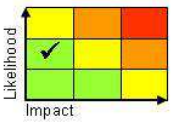
Central America and Caribbean
Nil.

South America
South Brazil


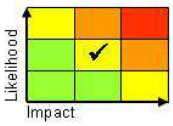
Weather
A band of heavy, thundery rain will move slowly north across this region in coming days. Daily rainfall totals in excess of 75mm are likely, with some locations perhaps seeing in excess of 100mm over the next few days. Frequent lightning and strong gusty winds will be additional hazards.

Discussion
The South Atlantic Convergence Zone will be active through this period, moving slowly and erratically northward. Strong low level wind convergence combined with strong mid-high level flow roughly parallel to the front will support training of thunderstorms along the slow moving boundary, and thus potential for large rainfall totals to accumulate in the high PWAT airmass north of the front. 90mm of rain fell at Melo, Uruguay in the 24 hours to 29/1200Z.

Expected Impacts
Localised flash flooding, potentially of urban areas, and localised wind/lightning damage.

Africa
Nil.

Middle East
Nil.

Asia
Northern Bay of Bengal, large parts of India and western Myanmar


Weather
Heavy monsoonal rain is expected in these locations, with many areas seeing in excess of 200 mm, whilst some parts of central India and western Myanmar could see in excess of 500mm, very locally up to 800 mm. This is close to a month's worth of rain for Myanmar, but around three month's worth for central India, which in addition could see this in only a matter of 2-3 days. This system will also bring strong winds across a large part of the northern Bay of Bengal, with gusts of around 50-60mph. Meanwhile, heavier than normal monsoon rainfall will continue across parts of western India, with 300-500mm of rain signalled over the next few days, which is getting close to a month's worth of rain for somewhere like Mumbai. This comes on top of the 300mm or so of rain in the past 2-3 days, Mumbai reported 235mm in the 24 hours to 03Z on Saturday.

Discussion
The Indian Summer Monsoon is expected to continue in an active phase over the next few days, with a monsoon depression forming in the next 24-36 hours in the northern Bay of Bengal before drifting inland across north-eastern and then central India through the first half of next week. As this system forms, enhanced south-westerly winds will pile frequent heavy showers onto the western coast of Myanmar, and as it drifts inland across India it will provide a focus for widespread heavy showers/thunderstorms. Heavier and more frequent than normal showers/thunderstorms are also signalled over the next few days for the far west of India, again associated with enhanced monsoon flow as the monsoon slowly marches northwards.

Expected Impacts
Heavy and torrential rain will increase the threat of flash flooding and landslides. Strong winds in the Bay of Bengal posing a significant hazard for maritime operations/fishermen.

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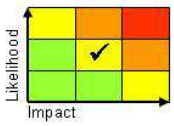
Far east of China, south Japan and outlying islands.



Weather

Torrential rain and severe thunderstorms associated with the seasonal rains in this part of the world will are expected to become temporarily confined to the south of Japan over the next 2-3 days, with 100-200, locally over 500 mm falling over the next 3 days. This is around a month to two month's worth of rain for locations in southern Japan. Frequent thunderstorms look likely to resume across NE China early next week following a break in these rains from today (Sunday) – bringing 100-150mm of rain per day in some locations.

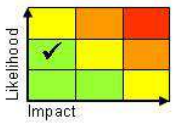
Discussion

Strong convergence along the Mei-yu / Baiu / Changma front will continue to provide a focus for severe storms, however troughing running across the northeast of China over the weekend will tend to force the focus of activity across the region described, whilst formation of a monsoon depression in the South China Sea will tend to suppress convection over China with conditions improving for a time here. Further flat troughing running to the N of the front early next week looks likely to lead to reactivation of the front over NE China early next week.

Expected Impacts

Both fluvial and flash flooding is possible, with an additional risk of landslides in mountainous areas. Disruption to transport and infrastructure is likely in what is a densely populated area.

Philippines (Western Luzon and Western Visayas)



Weather

Frequent heavy showers and thunderstorms are likely to continue in this area over the next couple of days, with potential for 80-100 mm, locally 150 mm of rain in some locations per 24 hours. Iba reported 83mm in the 24 hours to 1200 GMT on the 29th. The heavy rain could affect the capital Manila at times (50mm in 24 hours to 1200 GMT on the 29th), with up to 600 mm of rain possible during the next week in parts of the region which would be well in excess of a month's worth of rainfall at this time of year.

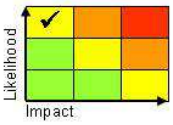
Discussion

A surge in the south-westerly monsoonal winds will continue to bring an increase in the frequency of heavy showers and thunderstorms. This may eventually culminate in a monsoon depression running northwest into China come the middle of next week, introducing maritime and coastal gales in the South China Sea, but backing the steering flow and taking showers away from the Philippines.

Expected Impacts

Flash flooding, which will be particularly impactful should it affect significant urban areas such as Manila. There will also be an increased likelihood of landslides and fluvial flooding.

Vietnam, Cambodia, Laos, Hainan



Weather

More frequent than normal heavy showers and thunderstorms are expected to develop in this area early next week; 75-100mm of rain falling per 24 hours and more widely 100-250 mm of rain per 24 hours from early to mid-week onwards. 300-600 mm of rain is likely by the end of this forecast period.

Discussion

Enhanced showers and thunderstorms associated with an active period of the monsoon are expected to develop in this region, with a monsoon depression forming in the South China Sea and moving north-westwards inland early next week providing the focus for frequent and very heavy storms.

Expected Impacts

Flash flooding, landslides, and localised wind/hail damage all likely. North Vietnam is especially prone, with conditions exacerbating current impacts being reported.

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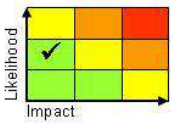

New Zealand, North Island

Weather

An area of heavy rain with embedded thunderstorms may cross the North Island of New Zealand, bringing a risk of 75 to very locally 150 mm of rain in a 24-36 hour period during the middle part of next week. This would represent around 60-130% of the monthly rainfall for a place such as Auckland. The duration and intensity of the rainband is rather uncertain at this stage however.

Discussion

A plume of tropical air is expected to be drawn SE towards New Zealand whilst becoming engaged by a mid-latitude upper trough extending NE. The high PWAT air is likely to bring an area of heavy rain, with potential for embedded CB/thunderstorms which could realise some locally heavy rainfall in a short space of time. However there is currently a moderate amount of spread in terms of the timing/S'ward extent of the plume and the degree of engagement by the approaching trough.

Expected Impacts

Potential for both flash and river flooding, should the larger rainfall amounts be realised.

Australasia

Nil.

Additional information

Nil.

Issued at: 300340 UTC **Meteorologists** D J Harris / Nick Silkstone **Global Guidance Unit**

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