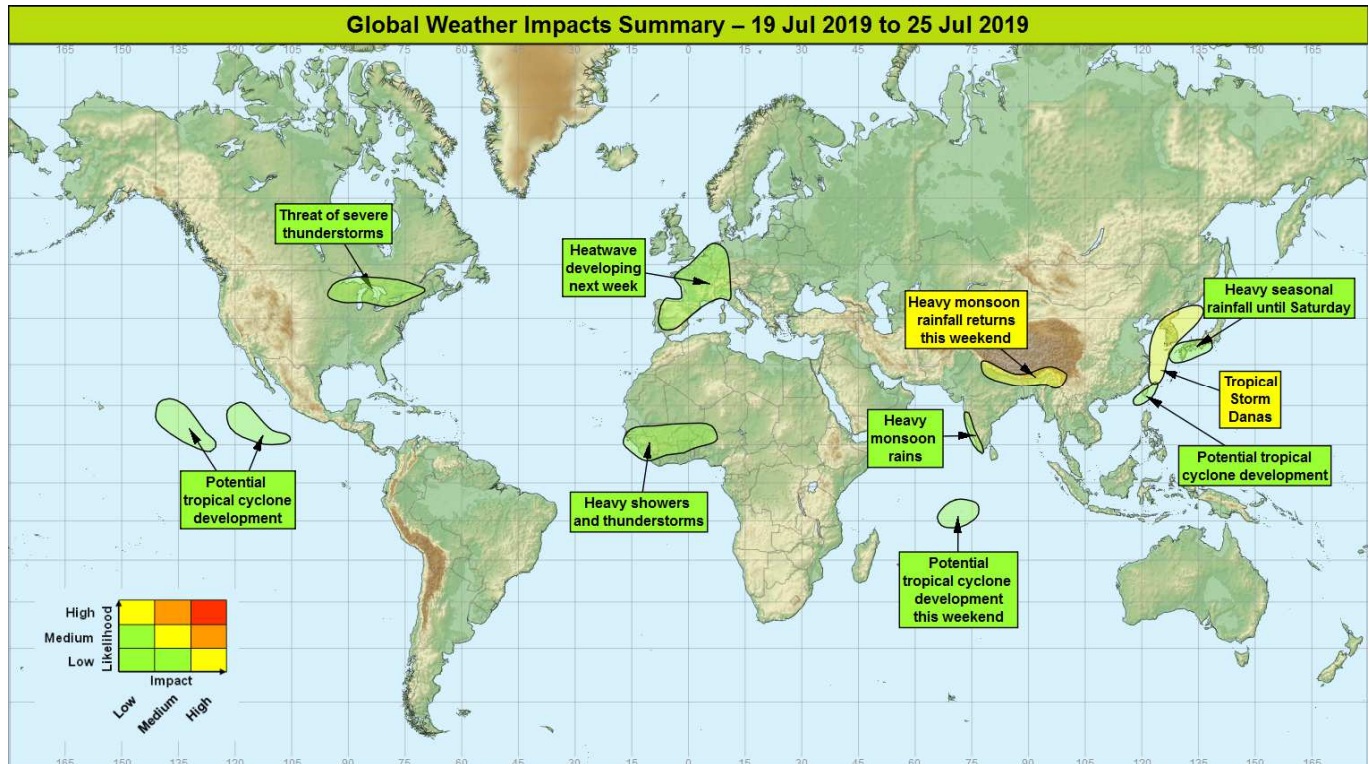


Global Weather Impacts – Friday 19th to Thursday 25th July 2019

Issued on Friday 19th July 2019

HEADLINES

- Tropical Storm Danas is expected to make landfall over the Korean Peninsula this weekend.
- Heavy rainfall returns to the foothills of the Himalayas this weekend.
- A heatwave will develop across central and western Europe early next week.

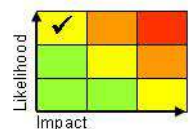


DISCUSSION

Tropical Cyclones

Tropical Storm Danas (eastern China, western Japan and the Korean Peninsula) Weather

Danas is currently located around 160 miles to the east-southeast of Shanghai with maximum sustained winds of 50 mph, and gusts to 75 mph. It is forecast to continue northward then north-northeastward to cross the Korean Peninsula and move into the Sea of Japan where it is expected to dissipate over the weekend. Any further development of this system is expected to be limited, with the probability of typhoon classification considered very low. Irrespective of development, enhanced shower and thunderstorm activity around Danas will contribute to some locally heavy rainfall, locally 300-500 mm of rain could fall in a few days in this region, which is approximately double the average July rainfall.



This forecast may be amended at any time

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Discussion

This is an intriguing system, previously the low level centre (LLC) was exposed with convection flaring to both the east and west of this, through Wednesday the LLC become obscured/wrapped by convection to the east, leaving a discrete area of organised convection to the west which observation showed to be developing its own discrete centre (now called Invest 91W). The eastern centre – Danas – is forecast to track north then north-northeast around a sub-tropical ridge towards the Korean Peninsula, remaining in a region where conditions are favourable for maintaining its current strength prior to landfall in South Korea on Saturday. Thereafter, land interaction, diminishing outflow and reducing SSTs as it moves out over the Sea of Japan should see Danas weaken slightly before it undergoes extra tropical transition.

Expected Impacts

Primary impacts would likely be from heavy rain (flooding, threat of landslides) over the mountainous areas and islands of the region. Strong winds close to the systems centre will create rough seas, potentially affecting shipping in the region.

The following areas are also being monitored for potential Tropical Cyclone development:

South China Sea Weather

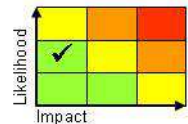
An area of thunderstorms on the western periphery of Tropical Storm Danas has developed its own low-level circulation. There is a moderate probability that as Danas moves away to the north this circulation may intensify and be classified as a tropical storm for a brief moment, before weakening as it trails north or north-northeastward behind Danas.

Discussion

As mentioned in the section describing Tropical Storm Danas, this circulation has formed in an elongated area of deep convection on the western periphery of the parent storm (Invest 91W). As the parent system moves away a brief window exists where the current limiting vertical wind shear may permit some development, before the system will likely weaken and become absorbed in the enhanced monsoon flow to the south of Danas.

Expected Impacts

This system may sustain heavy rainfall across Taiwan on Friday in the wake of Tropical Storm Danas, which may lead to some flooding and continue to enhance the risk of landslides.



Eastern North Pacific Weather

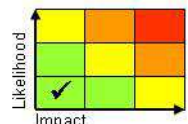
Several areas of thunderstorms are currently moving west across the Eastern North Pacific with potential for gradual development into tropical cyclones, although are expected to remain away from land.

Discussion

Several African Easterly Waves (AEW) have crossed Central America emerged into the Pacific. Here over the coming days they experience favourable environmental conditions to allow the waves to slowly develop into tropical cyclones (low vertical wind shear, and high SSTs etc).

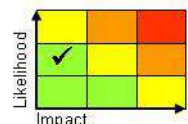
Expected Impacts

None.



Central southern Indian Ocean (close to the British Indian Ocean Territories) Weather

There is a small likelihood of a weak tropical cyclone forming in this region this weekend and tracking southwest close to several of the islands that comprise the British Indian Ocean Territories. Any system that does form is most likely to be weak, with the primary hazard being heavy rainfall with 75-150 mm possibly falling each day over a four or five day period, resulting in an event total of up to 500 mm. This area typically sees 130 mm of rainfall through July.



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Discussion

A Kelvin wave currently running east across the Indian ocean will likely generate a pair equatorial Rossby waves in its wake. Although the northern wave will become absorbed into the South Asian monsoon flow, the southern wave will move into a region where gradual development of a tropical cyclone is possible this weekend.

Expected Impacts

Potential for some minor flash flooding, although the small size of the islands (and quick discharge of rainwater to the sea) will mean the rainfall likely to be unproblematic. Winds likely to generate some rough seas in the region, but impacts over land expected to be minimal.

Europe

Western and eventually central Europe

Weather

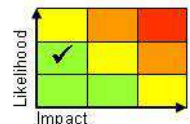
Over the weekend temperatures will begin to rise above average across parts Iberia, with this heat then progressing northeast towards central Europe in the early part of next week. Across inland parts of Iberia temperatures will locally exceed 40 degrees Celsius, with temperatures expected to reach the mid to high 30s across France and other parts of continental Europe.

Discussion

An upper ridge will amplify across western and central Europe over the coming week. This will allow a gradual rise in temperatures through the result of strong day-on-day sensible heating, and warming through large scale subsidence.

Expected Impacts

The main impact is likely to be health implications with an increased risk of heat and sunstroke (and other heat related conditions), with particular concern for vulnerable groups such as the elderly, very young, tourists not acclimatised (without access to air conditioning). Through the wide area there is likely to be an enhanced risk of wildfires.



North America

Great Lakes and surrounding areas

Weather

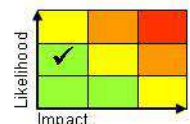
Severe thunderstorms will be a threat across this region of North America until Sunday. These storms could produce up to 100 mm of rain in a few hours, as well as producing large hail, damaging winds and possibly even tornadoes.

Discussion

A succession of upper troughs in the mid-latitude upper level flow will engage the northern edge of a very warm plume to produce deep convection on the frontal zone or in the plume.

Expected Impacts

Flash flooding looks like the most likely impact, but with additional hazards of gusty winds, frequent lightning, large hail and the odd tornado is possible here.



Central America and Caribbean

Nil significant.

South America

Nil significant.

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Africa

West Africa inland from the Gulf of Guinea to Sahel region

Weather

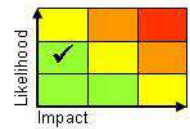
Further areas of active thunderstorms will progress westward across this zone through the coming week. These storms may bring in excess of 50 mm of rainfall in a short period of time, with over 100 mm possible if a location experiences several storms. In addition to heavy rainfall, strong damaging winds may be associated with this area, especially towards the Sahel.

Discussion

Several active AEW are forecast to transfer across the area stretching from the Sahel to down close to the Gulf of Guinea coastline. These features are expected to remain fairly coherent through to its exit into the Atlantic.

Expected Impacts

Flash flooding from short duration heavy rainfall is possible, especially if the rainfall affects any urban centres. The rainfall will also enhance the risk of landslides where terrain is steep. In the north of the region strong winds may also accompany storms, these able to damage poorly built structures and lift areas of dense sand and dust.



Middle East

Nil significant.

Asia

Taiwan, eastern China, western Japan and the Korean Peninsula – see *Tropical Cyclones* section.

Northern India, Nepal, Bhutan and northern Myanmar

Weather

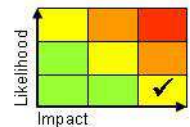
Following a very wet period in this region, a short period of respite is expected with a reduction in shower activity over the next day or so. However into the coming weekend a further uptick in heavy shower and thunderstorm is signalled, with an increased frequency of storms again capable of producing in excess of 100 mm per day in some locations (especially over the southern slopes of the Himalayas).

Discussion

There is good model agreement for an increase in rainfall from the weekend due to a strengthening southerly flow will again draw heat and moisture northwards from the Bay of Bengal. As the reaches the foothills of the Himalayas, the forced ascent will release deep skinny CAPE, with high precipitable water (PWAT) allowing these fairly frequent cells to produce large precipitation accumulations.

Expected Impacts

After a very wet period, flooding and landslides have been reported across a wide area. Although rainfall has eased over the last few days, reports of impacts from river flooding are likely to continue. The return of heavy showers and thunderstorms over the weekend will once more enhance the threat of flash flooding and landslides, and will increase the likelihood of further river flooding.



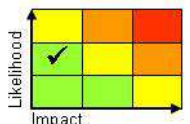
Southwest India

Weather

Heavy monsoon rains will continue in the coming three or four days, with rainfall accumulations by the start of next week reaching up to 500 mm in places, with widespread accumulations of 100-250 mm. Towards the middle of next week the rainfall should start to ease.

Discussion

There is a consistent signal from all models for a continued strong southwest monsoon flow, aided across India by a shallow monsoon low pressure system. There is also a strong signal for this rainfall event to ease through the course of next week.



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Expected Impacts

Some localised flash and fluvial flooding will be likely, with an enhanced risk of landslides in mountainous regions.

Southern Japan

Weather

Heavy rain and thunderstorms associated with the seasonal rains will continue to affect this region through Friday. Isolated totals in excess of 150 mm of rain may fall in some isolated spots. Into the weekend, rainfall associated with Tropical Storm Danas as it crosses the Korean Peninsula may lead to a further spell of heavy rainfall across western Kyushu (see *Tropical Cyclones* section for further details).

Discussion

Strong convergence along the seasonal front (called the 'Baiu' in Japan) will continue to provide a focus for intense rainfall on Friday. However, the northward transfer of Tropical Storm Danas will disrupt this process and bring much drier weather away from the far west of Japan.

Expected Impacts

Both fluvial and flash flooding is possible, with an additional risk of landslides in mountainous areas. Rainfall associated with Tropical Storm Danas over the weekend could further exacerbate the risk of flooding and landslides here.



Australasia

Nil.

Additional information

Nil.

Issued at: 190700 UTC

Meteorologists: Paul Hutcheon / Laura Ellam

Global Guidance Unit

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