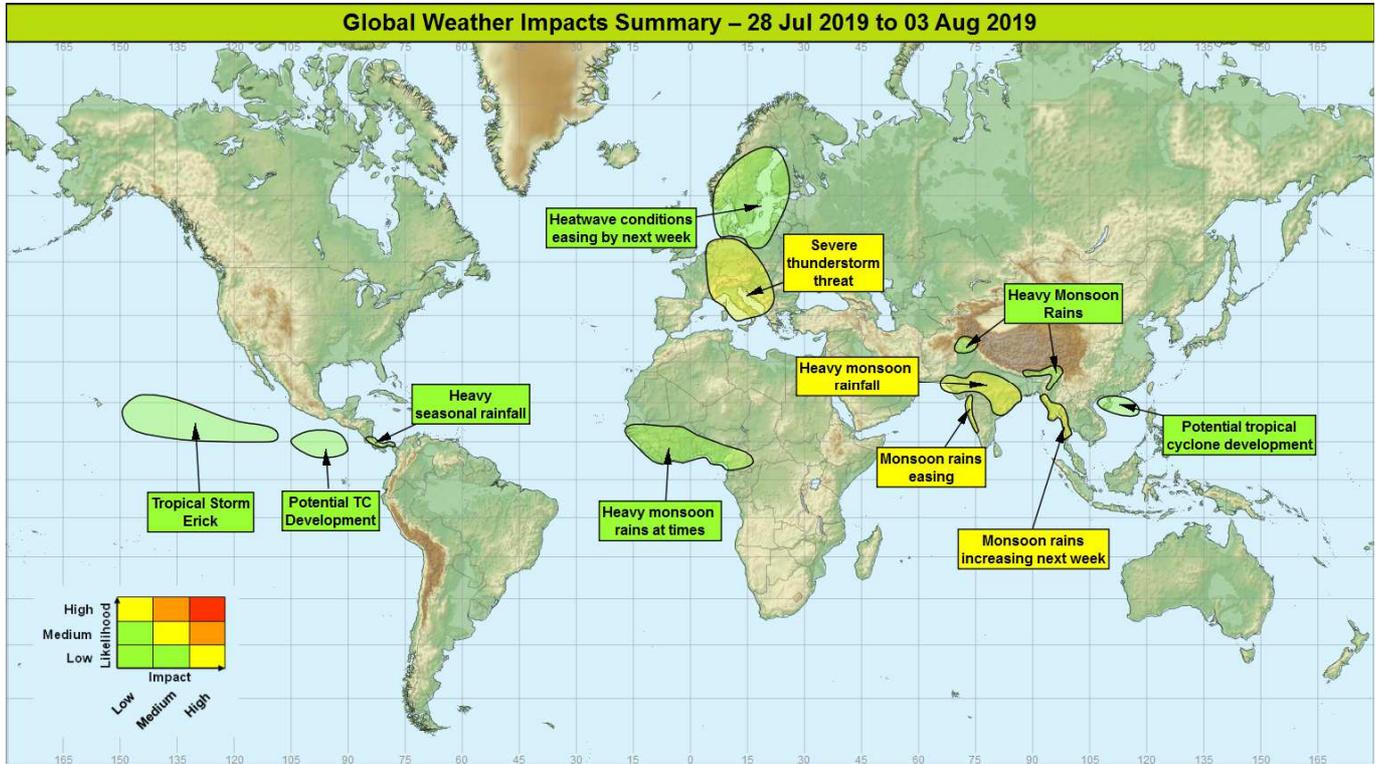


Global Weather Impacts – Sunday 28th July to Saturday 3rd August 2019

Issued on Sunday 28th July 2019

HEADLINES

- Historic heatwave across parts of Europe ending in a thundery breakdown.
- Further intense monsoon rainfall for parts of the Indian sub-continent this week.



DISCUSSION

Tropical Cyclones

Tropical Storm Erick (eastern North Pacific)

Weather

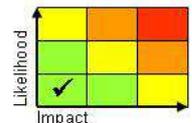
An area of enhanced convection across the eastern Pacific has become better organised through the past 24 hours and has now been named Tropical Storm Erick by the National Hurricane Centre. Erick is expected to track steadily WNW through the coming week, and may attain hurricane status by midweek. Erick may pass just south of Hawaii toward the end of the forecast period.

Discussion

Erick was spawned by the interaction of an African Easterly Wave with the ITCZ. Erick is in an area favourable for development, although models only show modest strengthening as the system tracks WNW. The official guidance from NHC shows more strengthening than the model consensus, allowing Erick to become a hurricane by midweek. There is good agreement of the track of the storm, likely passing just to the south of Hawaii toward the end of the week.

Expected Impacts

Erick is likely to remain over open water. However it may produce large swells in Hawaii later this week should it follow the anticipated track just south of the islands.



The following areas are being monitored for development:

This forecast may be amended at any time

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Eastern North Pacific

Weather

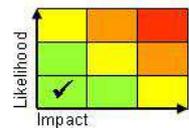
There is the potential for further tropical systems to form over the eastern Pacific in the coming days. Any developments are expected to track WNW, remaining over open ocean through the period.

Discussion

A number of African Easterly Waves interacting with the ITCZ are producing showers and thunderstorms, which could form further tropical systems as environmental conditions become favourable. There is some spread in the model output in terms of any developments, but common to all output is that any system that does develop will stay over open water until at least the end of the forecast period.

Expected Impacts

Nil.



South China Sea

Weather

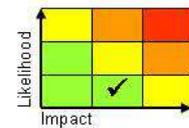
An area of showers and thunderstorms has the potential to become organised into a tropical cyclone later this week. Models suggest such a development will pass close to or directly into Hainan later this week, with a low, but non zero risk of impacts to Hong Kong. Even if a significant cyclone does not develop, there is likely to be heavier than average rainfall in the region later next week, with 200-300mm locally 400-500mm possible by the end of Friday.

Discussion

Model output continues to signal the formation of a tropical low in the South China Sea between Hainan and the Philippines around the middle of next week. With above average SSTs and favourable shear conditions look supportive of the development of a tropical cyclone as it moves towards Hainan, however the extent of development remains uncertain.

Expected Impacts

Impacts are currently expected to mainly be from rainfall, with flash flooding the primary hazard and landslides possible in steeper terrain. Wind damage and coastal flooding would occur if a stronger system were to develop.



Europe

Southern and western Scandinavia and the southern Baltic region

Weather

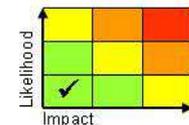
The last vestiges of the airmass which brought the record-breaking heat to north-western Europe in recent days is now largely confined to parts of southern Scandinavia and the southern Baltic. The exceptional values seen over recent days are not expected here, however temperatures will still be well above average and maximum temperatures in some places will reach into the low 30's C. Models then signal the development of a deep and slow moving depression over western Russia which will allow a plunge of unseasonably cold air into much of Scandinavia and other parts of northern Europe.

Discussion

The extremely warm low level air mass, aided by large scale subsidence, is expected to gradually cool over the next few days as subsidence declines. Despite this, further temperatures in the low 30s of Celsius are expected on Sunday, before a cold front moves down from the north early next week.

Expected Impacts

Heat health impacts including heat and sunstroke, particularly given high overnight temperatures. Main risk for vulnerable demographics, e.g. young, elderly, sick. Disruption to transport possible on a local scale, especially rail. Elevated risk of wildfires.



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Central Europe

Weather

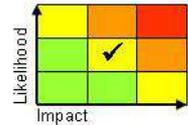
The remnants of the very warm airmass across central Europe is likely to be the focus for the development of thunderstorms over the next few days. The most intense activity is likely to be through Sunday close to an intense area of low pressure expected to lie over Italy. Storms could be severe, with 50-75mm in a few hours, large hail, and very strong, locally damaging gusts of wind. Alignment of storms could allow some places to see in excess of 100 mm of rainfall through Sunday. Additionally, strong to gale force Mistral winds are likely to last through Sunday, easing on Monday. The extent and severity of the storms is likely to gradually ease from Monday onwards.

Discussion

Cyclogenesis is underway across Italy as a marked upper trough interacts with the high WBPT plume. Forecast profiles within the circulation of the surface low support some locally severe convection, with alignment of storms likely leading to some very high rainfall totals. Large hail is likely and on the southern and western flank of the low some very strong winds. An upper ridge is expected to quickly build in behind the trough, and so the worst of the conditions should ease by Monday.

Expected Impacts

Severe storms will produce a threat of flash flooding, damaging hail, power outages, transport disruption (especially aviation) and wind damage. The Mistral winds could additionally disrupt marine transport.



North America

Nil.

Central America and Caribbean

Costa Rica and Panama, South-Eastern Nicaragua

Weather

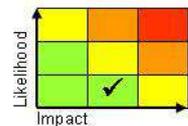
Heavier than average rainfall is expected through the next week in this region, in the form of intense showers and thunderstorms. Up to 300 mm of rain could fall in places (which is around the average July rainfall) through the next week.

Discussion

A succession of active African Easterly Waves will bring periods of more frequent thunderstorms than usual through the next week. There is also the potential for a Central American Gyre to form across the south of Central America, again providing an additional trigger for more widespread, intense convection. This comes off the back of a wetter than normal week for this region.

Expected Impacts

Flash flooding and an increased likelihood of landslides.



South America

Nil.

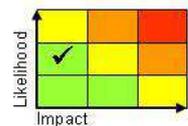
Africa

West Africa

Weather

Further areas of organised 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 150-250 mm possible if a location experiences several storms, and as much as 400 mm possible in a few areas towards the West African coast. In addition to heavy rainfall, strong damaging winds may be associated with these storms, especially towards the Sahel.

Discussion



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Further African Easterly Waves are forecast to transfer across the area stretching from the Sahel to down to the Gulf of Guinea coastline exiting into the Atlantic. These will force areas of organised and persistent convection, bringing torrential thunderstorms across the region – not particularly unusual for the time of year nevertheless still potentially impactful. As they exit into the Atlantic, the associated circulations could spin up in to weak tropical depressions, but the environment is not conducive for development beyond this.

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.

Asia

Parts of central and northern India along with far south-eastern Pakistan

Weather

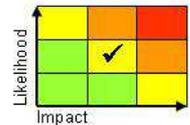
Periods of widespread, intense showers and thunderstorms will transfer from the east to west across this region through the next week, producing up to 300 mm of rain in a 24 hour period, with a threat of up to 600 mm through the next week in a few places. This means that some places could see several times their average July rainfall in a few days. There are some very large cities in this region that could see intense rainfall events during the next week.

Discussion

The main driver behind the severe monsoon conditions through the next week will be a succession of monsoon low pressure systems that will track from east to west across this region. This will result in most rainfall falling in the space of a couple of days, with longer drier periods in between. Forecast profiles show deep skinny CAPE, with high precipitable water (PWAT) allowing these fairly frequent cells to produce large precipitation accumulations.

Expected Impacts

High likelihood of flash flooding, and an increasing threat of river flooding. An increasing likelihood of landslides in hilly regions. Significant disruption to travel is likely, especially road and rail. Densely populated regions of India and Pakistan (including some large cities) could be impacted this coming week.



Far west of India

Weather

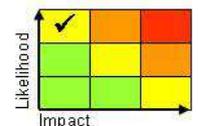
Persistent SW'ly monsoon flow into this area has seen a number of days of very heavy rain (daily totals in excess of 200mm), with further heavy rain expected over the next few days, although perhaps becoming less intense as we move into the new week.

Discussion

The easing of the monsoon south-westerly flow into south-western India will result in weakening rains as we move into the new week. This comes in association with a monsoon depression passing by to the N. A further 200-300mm is possible in the region before the rains finally ease.

Expected Impacts

Continued flash and river flood threat along with a high likelihood of landslides during the next few days. However, the likelihood of these impacts decreasing early this week.



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North Pakistan, Nepal, Bhutan, far northeast India and northwest Myanmar

Weather

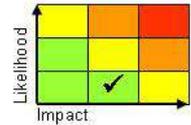
Further heavy showers and thunderstorms associated with the South Asian Monsoon in these areas are expected to ease for a day or two, although activity could increase again as we move toward midweek.

Discussion

Further heavy showers and thunderstorms on the edge of the monsoon plume across Pakistan and in the strong monsoonal flow abutting the high ground to the south of the Himalayas are expected to weaken for a time. A resurgence of activity is signalled next week, with the focus shifting to the far NW of India and N Pakistan. Here storms could produce 100-150 mm per day, and locally up to 300 mm over a period of 2 to 3 days.

Expected Impacts

Further flash flooding potential, and exacerbation of ongoing flash and river flooding. Risk of landslides in wettest areas.



Southern and western Myanmar, far west of Thailand

Weather

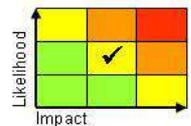
Strengthening of the monsoonal flow is expected to lead to an enhancement of rainfall in this area, particularly so into next week. 50-100, locally 150mm of rain could fall per day, with totals of up to 500 mm possible in places.

Discussion

As one monsoon depression moves across northern India over the weekend, another is signalled to form in the Bay of Bengal late in the weekend, which will strengthen the southwesterly gradient and increase rainfall across this part of the world.

Expected Impacts

Increased risk of flash flooding and landslides.



Australasia

Nil.

Additional information

Nil.

Issued at: 280600 UTC **Meteorologist:** Mark Sidaway

Global Guidance Unit

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