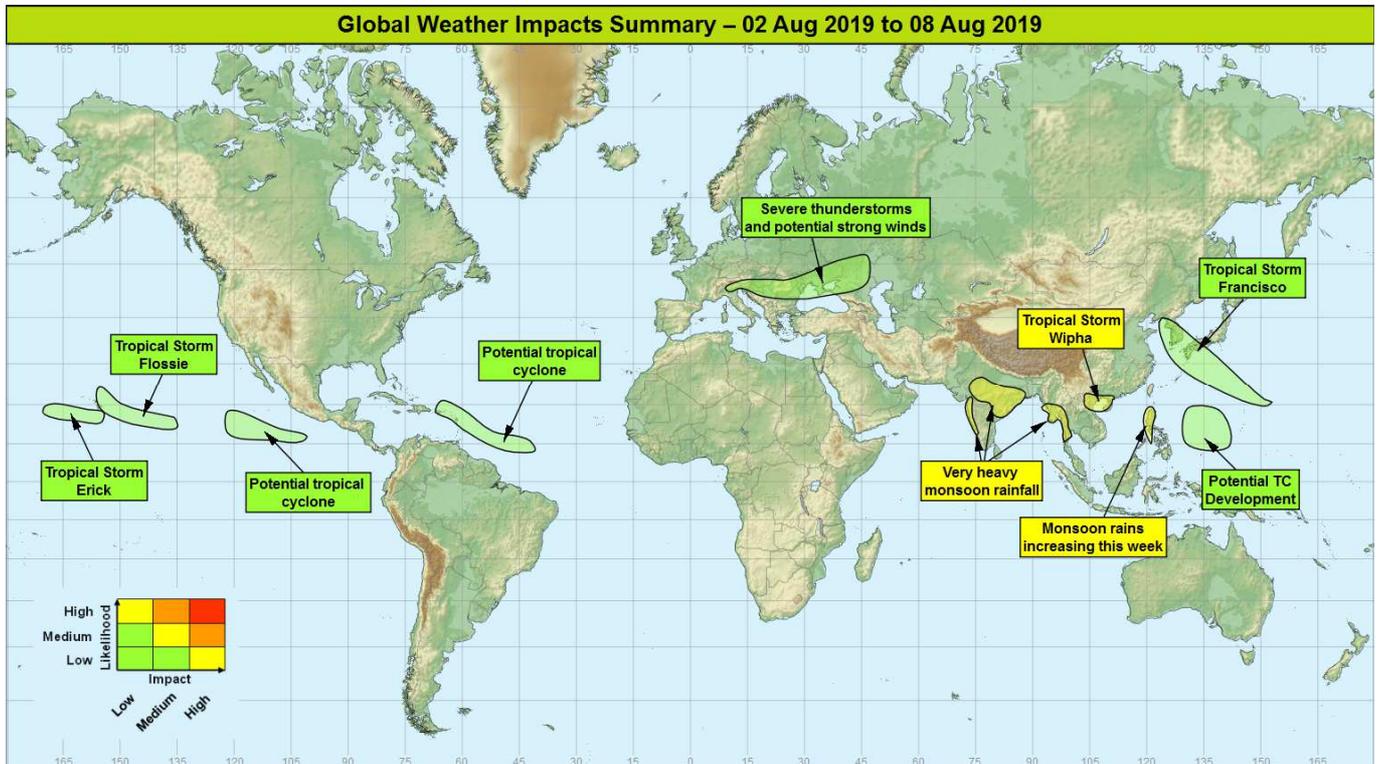


## Global Weather Impacts – Friday 2<sup>nd</sup> to Thursday 8<sup>th</sup> August 2019

Issued on Friday 2<sup>nd</sup> August 2019

### HEADLINES

- Further intense rainfall for parts of southern and south-eastern Asia through the next week.
- Tropical Storm Wipha moves slowly west bringing heavy rain to parts of China and Vietnam.



### DISCUSSION

#### Tropical Cyclones

#### Tropical Storm Wipha (South China Sea, far south of China and northern Vietnam)

##### Weather

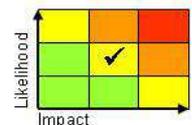
Wipha is slowly moving close to the Gulf of Tonkin coastline, and is expected to make a final landfall over north-east Vietnam this coming weekend. A further 200-300 is likely along its path, perhaps as much as 500 mm in some mountainous areas. Damaging winds are a much lower threat; the official forecast calls for Wipha to be a weak tropical storm at landfall.

##### Discussion

Wipha developed on Tuesday night from storms coalescing around a centre associated with an Equatorial Rossby Wave. Having crossed the Leizhou Peninsula it is interacting with land, limiting its development, most models continue this process until a final landfall over northern Vietnam, although there remains some model spread as to where this will occur. The slow movement of this system will pose a significant threat of flooding rains.

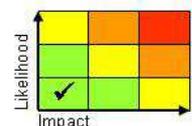
##### Expected Impacts

Impacts are currently expected to mainly be from rainfall, with flash flooding the primary hazard and landslides possible in steeper terrain. A prolonged event will increase the likelihood of river flooding, with wind damage considered a much lower probability.



#### Tropical Storm Erick (eastern North Pacific, south of Hawaii)

##### Weather



**This forecast may be amended at any time**

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Erick will pass well south of Big Island, Hawaii, and continues to weaken. Wind and rain directly associated with this system will also pass to the south, but a burst of enhanced south-easterly winds may allow a greater than normal number of showers to pile up into the south and east of Big Island, with 50-75mm possible over the south-east facing slopes. Large seas are expected to the S of the islands.

**Discussion**

Erick continues to move into ever more unfavourable conditions for tropical cyclone development, with confidence high in the weakening trend. It now looks unlikely that Big Island will experience tropical storm force winds, but there is the potential for heavy rain associated with the enhanced south-easterly flow as it passes by.

**Expected Impacts**

Large swells and a minor threat of localised flash flooding on Big Island.

**Tropical Storm Flossie (Eastern North Pacific and perhaps Hawaii)**

**Weather**

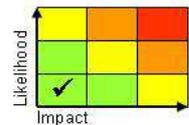
Flossie is heading in the general direction of Hawaii. Some fluctuations in strength are likely over the next 24 hours, and Flossie may briefly regain hurricane status before a steady weakening begins. The most likely outcome currently is that Flossie passes just to the north of Hawaii early next week, but confidence in the track beyond Sunday is very low. Flossie could bring some heavy rainfall, large swells and strong winds to parts of Hawaii next week.

**Discussion**

There is better agreement now in the intensity forecast with higher confidence that Flossie will maintain its strength over the next day or two before gradually weakening as it encounters higher shear and cooler SST's on its general track towards Hawaii. There is much larger spread in the track beyond Sunday, but the vast majority of output signals a strong NW'ward turn just before it reaches the islands.

**Expected Impacts**

Large swells, low risk of localised damaging winds and a minor threat of localised flash flooding to the Hawaiian chain.



**Tropical Storm Francisco (North-West Pacific)**

**Weather**

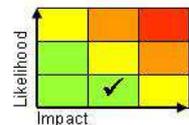
Francisco developed early Friday and presently lies around 1000 miles south-east of Tokyo. Francisco is heading north-west at around 10 mph, and presently has sustained winds of around 40 mph. Francisco is likely to maintain this course over the coming days while gaining strength. The official forecasts shows Francisco becoming a Typhoon early next week, then pass close to or across south-western Japan. Francisco will pose a threat of destructive winds, torrential rainfall and coastal impacts to this part of Japan, then perhaps the Korean Peninsula and parts of eastern China.

**Discussion**

Francisco formed in a region which has been favoured for TC development over recent days as various tropical waves organised areas of deep convection. Development of Francisco is presently being inhibited by moderate vertical wind shear. However beyond the next 24 hours this is expected to ease, with Francisco then expected to steadily gain strength to likely attain Typhoon status. Models are in good agreement for the storm to maintain a north-westerly course, reaching south-western Japan early next week.

**Expected Impacts**

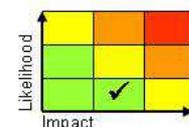
Potential impacts are from destructive winds, torrential rainfall bringing flash flooding, along with coastal surge and large waves.



*The following areas are also being monitored for development:*

**Tropical North Atlantic and north-eastern Caribbean**

**Weather**



**This forecast may be amended at any time**

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An area of showers and thunderstorms over the central Tropical North Atlantic may develop into a (most likely) weak tropical storm as it approaches the Lesser Antilles early next week. Even if a tropical storm does not develop, intense showers and thunderstorms will bring the threat of up to 125 mm of rain in a few hours to parts of the north-eastern Caribbean early next week.

**Discussion**

An area of thunderstorms associated with an African Easterly Wave is expected to remain non-developmental over the next few days with wind shear remaining strong – and current forecasts suggest this is more likely to remain so as the system approaches the Lesser Antilles early next week. Nevertheless the National Hurricane Centre has given this system a 50% chance of tropical storm development.

**Expected Impacts**

Most likely at this stage would be threat of flash flooding for the northern islands of the Lesser Antilles early next week.

**Northwest Pacific (affecting the Northern Mariana Islands and perhaps Japan)**

**Weather**

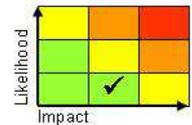
Across a broad region of the northwest Pacific there are several clusters of thunderstorms that have the potential to develop into tropical cyclones later this week, and track generally north or northwest. One such area has now formed Tropical Storm Francisco (see *Tropical Storms* section above). However it's possible that a further system may form east of The Philippines this weekend, this then being steered northwards.

**Discussion**

A series of tropical waves, that may be sourced from AEW, ERW or breakdown of the ITCZ into eddies from shear instability are currently organising various areas of deep convection in the northwest Pacific. In addition to the now formed Francisco, models are beginning to agree on a further development to the east of The Philippines. Confidence in the evolution remains low.

**Expected Impacts**

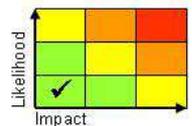
During this period the only risk to land would be for small remote islands such as the Northern Mariana Islands (including Guam). Should the system form east of The Philippines it's likely that this would then be steered northwards, and this too could potentially threaten the southern Japanese islands later next week. Heavy rainfall, damaging winds and rough seas are all possibilities at this stage.



**Eastern Pacific**

A large, but disorganised area of showers and thunderstorms lies a few hundred miles southwest of the Mexican coast. This area is expected to track westwards, remaining over the Pacific over the next 7 days, with a moderate probability of development into a weak tropical storm.

A tropical wave has enhanced convection across the eastern Pacific, and there is a low probability (assessed by the NHC as 20%) for development into a tropical storm in the next 5 days. There is good agreement this will track away from Mexico and remain over open water. Nil.

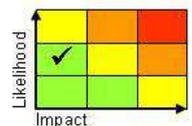


**Europe**

**Italian Alps to far southwest Russia**

**Weather**

An area of thunderstorms with potential for torrential downpours and locally large hail over northern Italy on Friday will move steadily eastwards over the weekend, potentially resulting in a broad area of organised heavy rainfall and strong, locally damaging winds as it crosses Romania, Moldova and Ukraine, heading into south-west Russia. Friday's thunderstorms could bring 50-75mm in a few hours, along with frequent lightning, with the potential for 75-125mm further east over the weekend (but in a longer time period, 12-24 hours) as the system becomes more organised. Gales and gusts of winds in excess of 50mph are possible in a few places.



**This forecast may be amended at any time**

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**Discussion**

A shortwave upper trough running quickly east will pick up on the high WBPT over N Italy to generate a zone of thunderstorms with large CAPE values highlighted in forecast profiles. This area will steadily advect eastwards over the weekend, potentially being picked up by a larger scale trough extending from the north-west which could initiate cyclogenesis, some models highlight a small scale but intense low pressure area forming in the vicinity of the Black Sea which could bring a swathe of disruptive winds.

**Expected Impacts**

Risk of flash flooding on Friday across areas bordering the northern Adriatic, and a much lower risk of flooding further east over the weekend should a more organised system develop as forecast. This could bring a swathe of disruptive winds, affecting transportation and power/utilities locally.

**North America**

**Hawaii** – see *Tropical Cyclones* section.

**Central America and Caribbean**

**North-eastern Caribbean islands** - see *Tropical Cyclones* section.

**South America**

Nil.

**Africa**

Nil.

**Middle East**

Nil.

**Asia**

**Far south of China and northern Vietnam, Northern Mariana Islands and south Japan** – see *Tropical Cyclones* section.

**Western and northern India, and western Myanmar****Weather**

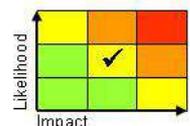
Periods of widespread, intense showers and thunderstorms will affect this region through the next week, producing locally 200 to 300 mm of rain in a 24-hour period, with a threat of up to 800 mm through the coming week in places. The higher values are equivalent to several times the average July rainfall falling in just a few days in places. 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 continue to be monsoon low pressure systems that will produce intense rainfall from deep, moist convection. These systems will also induce a strong south-westerly flow which will bring deep, moist convection into south-western India and western parts of Myanmar. Forecast profiles show deep skinny CAPE, with high precipitable water 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 hillier regions. Significant disruption to travel is likely, especially road and rail. Densely populated regions of India (including some large cities) are likely to be impacted this coming week. South-eastern Bangladesh where Cox's Bazar is located may just be north of the heaviest rainfall, but is likely to see isolated heavy rainfall events through the next 7 days.



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## **Parts of India (Odisha, Chattisgarah, east Madhya Pradesh, east Maharashtra, Telangana Weather**

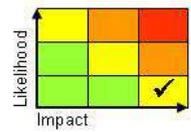
See western and northern India. There is greater potential for rainfall totals in excess of 500mm in this region, on top of what has already been a significantly wetter than average 7 days.

### **Discussion**

See western and northern India

### **Expected Impacts**

Low potential for more severe impacts in these locations, with significantly above average rainfall already observed in the past week and a greater likelihood of the higher totals mentioned falling in this region too.



## **Central and northern Philippines**

### **Weather**

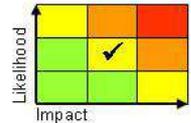
A steady stream of heavy showers/thunderstorms is expected to develop across this region over the next few days, becoming more intense from the weekend. Daily totals of up to 300 mm are possibly from the weekend, with event totals through the next 7 days of 500-800, perhaps 1000 mm possible. This would be the average August rainfall falling in just a week.

### **Discussion**

A strengthening SW'ly monsoon flow over the next few days, in part due to tropical cyclone activity to the north-west, will bring enhanced showers/thunderstorms to this region. Impacts could be felt in Manila should the wind direction line up correctly.

### **Expected Impacts**

Flash flooding and landslides are probable. Manila will probably miss the worst of the impacts but there is a moderate probability of flooding here too.



## **Australasia**

Nil.

## **Additional information**

Nil.

**Issued at:** 020730 UTC    **Meteorologist:** D J Harris / Mark Sidaway

**Global Guidance Unit**

**This forecast may be amended at any time**

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