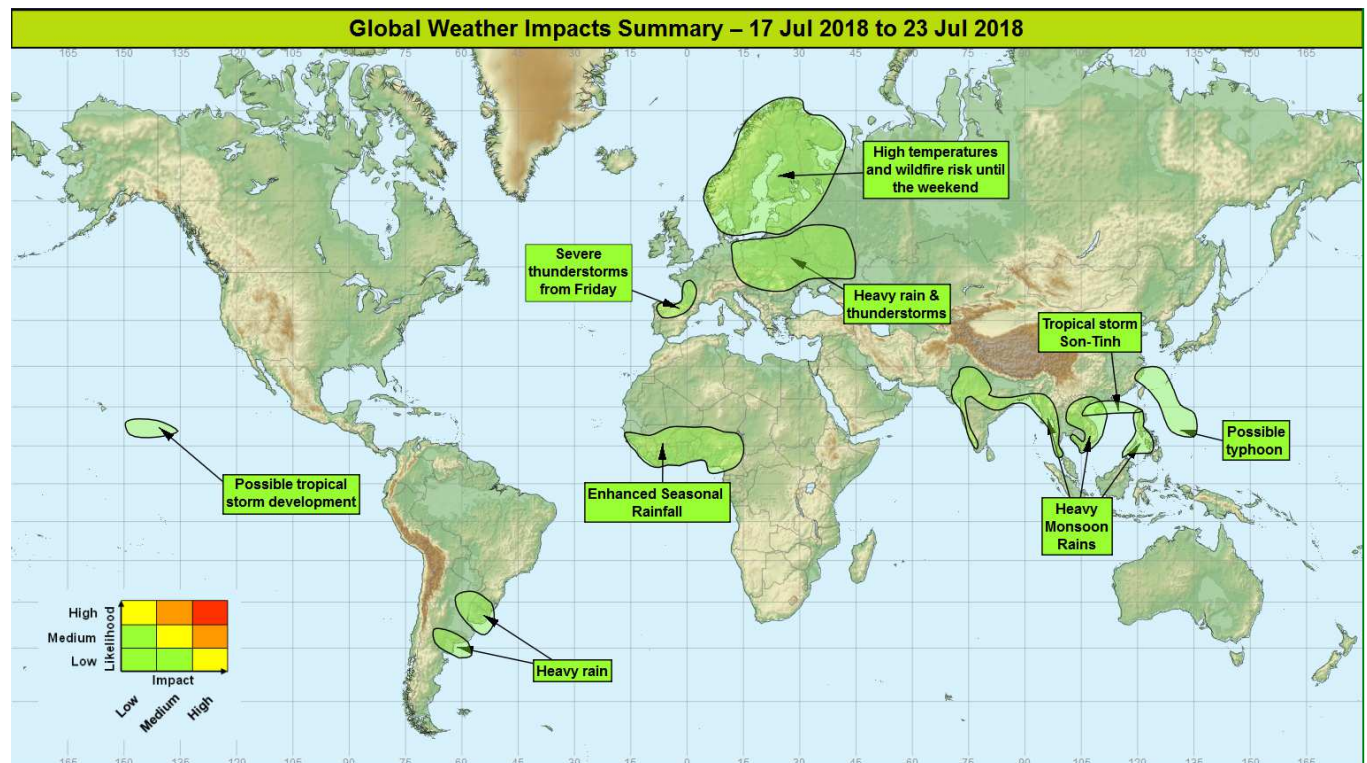


## **Global Weather Impacts – Tuesday 17<sup>th</sup> July 2018 to Monday 23<sup>rd</sup> July 2018**

Issued on Tuesday 17<sup>th</sup> July 2018

### **HEADLINES**

- Heavy monsoon rains continue to affect parts of south and southeast Asia.
- Heat wave continuing over parts of northern Europe until the weekend.
- Tropical storm Son-Tinh has developed to the north-west of Luzon, Philippines, and is tracking west-northwest.



### **DISCUSSION**

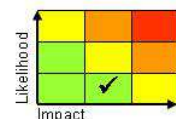
#### **Tropical Cyclones**

##### **Tropical storm Son-Tinh (South China Sea)**

Tropical storm Son-Tinh (named Henry in the Philippines) has developed to the north-west of Luzon, and is expected to track west-northwest towards Hainan Island and eventually the north-east coast of Vietnam, strengthening modestly as it does so.

Son-Tinh is likely to bring 150-200mm of rain across parts of Hainan Island and eventually the north-east coast of Vietnam in the coming days. It is currently assessed to have mean windspeeds of 40mph, with gusts to 57mph. Further modest strengthening is forecast, with mean windspeeds peaking overnight tonight and into tomorrow at around 46mph, with gusts to 69mph. These

There is potential for impacts from strong winds, large waves and torrential rainfall in Hainan and parts of north-eastern Vietnam



This forecast may be amended at any time

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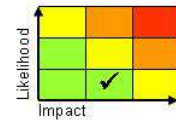
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## **Open water to the north-east of Luzon (western Pacific)**

Convection associated with the development area which spawned Son-Tinh is also signalled by deterministic models to develop into a tropical storm in the next 24-36 hours, this likely enhanced by a Rossby Wave. This system has the potential to strengthen into a typhoon in situ, before tracking north or north-east later in the week towards Okinawa, then curving back west towards Taiwan. Should NWP output be correct, there is a chance that this system could develop into a major weather event by the weekend, though confidence in exact track is low.

The storm system threatens heavy rain (100-250mm) for parts of Okinawa and later, Taiwan. Furthermore, should signals from global models be correct, damaging winds are likely to develop, with these possibly affecting Okinawa and Taiwan.

Heavy rain brings the threat of flash-flooding and landslides, whilst the potential wind strength could lead to damage or destruction of buildings as well as large waves and coastal flooding.



## **Open water well to the east-southeast of Hawaii**

An area of thunderstorms located about 950 miles east-southeast of Hilo, Hawaii has been assessed as having a 50% chance of developing into a tropical storm. Should this system develop as expected, it should stay well away from land.

Heavy rain and very strong winds can be expected from the system as it tracks west and strengthens.

Nil, as the system is in open water.



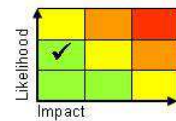
## **Europe**

### **Scandinavia, Estonia, Latvia, Lithuania and north-western Russia**

An upper and surface high will remain slow moving across the region until the weekend, at which point the high should subside allowing frontal systems to bring rain and cooler temperatures. Before then, a combination of sensible heating and modest warm advection will allow temperatures to gradually rise with 1000-850hPa thickness in excess of 140dm as far north as the Arctic Circle by midweek.

Conditions are expected to remain very warm and become even hotter through the week across large parts of Scandinavia and northwest Russia. Widely, temperatures will reach into the upper 20s Celsius and into the low 30s Celsius in some places, possibly close to record values. Rain or showers are likely to develop into the weekend, with temperatures decreasing and the risk of wildfires diminishing.

The prolonged nature of the heat wave is likely to begin to impact health of vulnerable populations. Wildfires are an additional hazard, and where these develop, significant reductions in air quality can be expected.

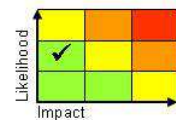


### **Eastern Europe/south-eastern Europe**

An upper vortex and associated surface low over eastern parts of the continent will slowly rotate south-west, then south in the coming days. With the cold pool aloft, and high WBPT air at low-levels, steep lapse rates are present. Intense thunderstorms are expected to break out quite widely.

Heavy rain and thunderstorms are expected to affect parts of eastern Europe, mainly the Ukraine, Belarus, Poland and eastern parts of Germany. Around 50-75mm of rain could fall quite widely each day, usually within a relatively short time and by the end of the week some locations could have received over 200mm.

Initially flash flooding will be the main threat, but successive days of heavy rainfall may eventually lead to a risk of more widespread river flooding, with damage to property and infrastructure. Large hail could damage crops in the area, whilst impacts on aviation may also be marked.



### **Northern Iberia/western France from Friday**

As a major upper high crests northeast across northwest Europe, it will drive a shortwave upper trough south into Biscay and Iberia. The trough is likely to eventually undergo disruption through the weekend leading to an increase in instability across the area.



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From Friday, the coverage of heavy showers and thunderstorms across the area is expected to increase. These thunderstorms could last well into the evening and generate 25-50mm in a short period of time, with some higher ground (Pyrenees, Massif Central) seeing double this.

Flash-flooding, landslides and disruption to land and air travel are possible.

## **North America**

Nil significant.

## **Central America and Caribbean**

Nil significant.

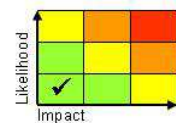
## **South America**

### **Argentina, S Brazil and much of Uruguay**

A cold outbreak across southern Chile and Argentina is expected to continue north, tightening the baroclinic gradient across the area, and helping to develop an active area of low pressure. This will bring the threat of thunderstorms and heavy rain to southern Brazil and much of Uruguay, whilst further south across parts of Argentina, the wraparound occlusion associated with the system will also bring a spell of heavy rain.

Heavy rain is expected to affect the area from tomorrow (Wednesday) through to Friday. Around 75 to 150mm of rain is likely to fall in this time and there will be some significant snow over high ground further inland. In addition strong onshore winds are likely to develop.

This part of South America is relatively dry so this amount of rain is likely to lead to significant flooding. Snow over high ground inland could lead to severe disruption to travel. Coastal flooding is also possible due to large waves overtopping sea defences.



## **Middle East**

Nil significant.

## **Australasia**

Nil significant.

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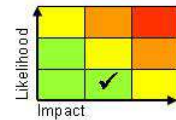
## Africa

### Equatorial West Africa and southern Sahel

The African Easterly Jet is expected to remain strong during the next few days and will continue to help generate and maintain further active African Easterly Waves, these then propagating westwards across the region bringing periods of heavy rainfall, with dust storms on the northern flanks. Into the middle of the week the jet is expected to weaken for a time, and this may then reduce the number and intensity of waves.

Areas of intense thunderstorms will continue to affect central Africa, producing spells of torrential rainfall. Many locations in this region will see 25-50mm of rainfall over the next 5-7 days, with as much as 150mm likely at some locations (and this falling in a short duration over just one or two events). These storms will also produce strong winds and dense dust storms on their northern fringe (over the southern Sahel). There has already been some very heavy rainfall in the region (Kete Krachi, Ghana, received 128.3mm on Monday), and further heavy rain can be expected.

Flash flooding is likely, along with an increased likelihood of landslides. Flash flooding will pose a threat to life, as well as damaging infrastructure and transport networks (e.g. roads and bridges).



## Asia

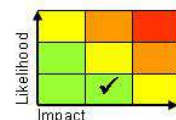
### Parts of India and western Myanmar

An enhanced southwest monsoon flow will persist across the region through the next week, bringing very high rainfall accumulations over upslopes and hills that face into the prevailing wind. In addition to the strong monsoon flow precipitation will be enhanced may by a series of monsoon depressions that form across Eastern India and the Bay of Bengal and then track northwest.

Persistent heavy rain and thunderstorms are expected to continue through this week. Around 100-200mm of rainfall may occur each day within this region, with some locations recording totals in excess of up to 500mm over the period. Indeed, Mahabaleshwar on the western coast of India received 299mm on Monday, showing the continued potential for very heavy rain.

Cox's Bazar humanitarian camp in southeast Bangladesh should remain just to the north of the heaviest rains, but is still expected to experience occasional showers and thunderstorms over the coming week (65.4mm on Monday, for example).

This amount of rainfall is not overly unusual for this region at this time of year. However, these regions are now moving into a further week where rains remain above normal. This will help maintain a high likelihood of flooding and landslides, posing a danger to life, as well as damage to property and infrastructure.

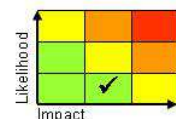


### Philippines, Laos, Vietnam, Cambodia, and the far south of China.

The influence of the Madden-Julian Oscillation has now waned. Despite this, strong south-westerly Monsoon flow has developed, and is likely to be reinforced by the development of one or more tropical storms to the north of the area.

Enhanced monsoon rains are signalled in this region through this week. Most locations highlighted within the map should have daily precipitation accumulations of 25-50mm, with peaks in excess of 100mm each day. Vinh, in north-east Vietnam, received 254mm of rain on Monday.

Impacts include the usual enhanced likelihood of flash flooding and landslides in mountainous areas.



## Additional Information

Nil

**Issued at:** 170500 UTC **Meteorologist:** Jason Kelly

**Global Guidance Unit**

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

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