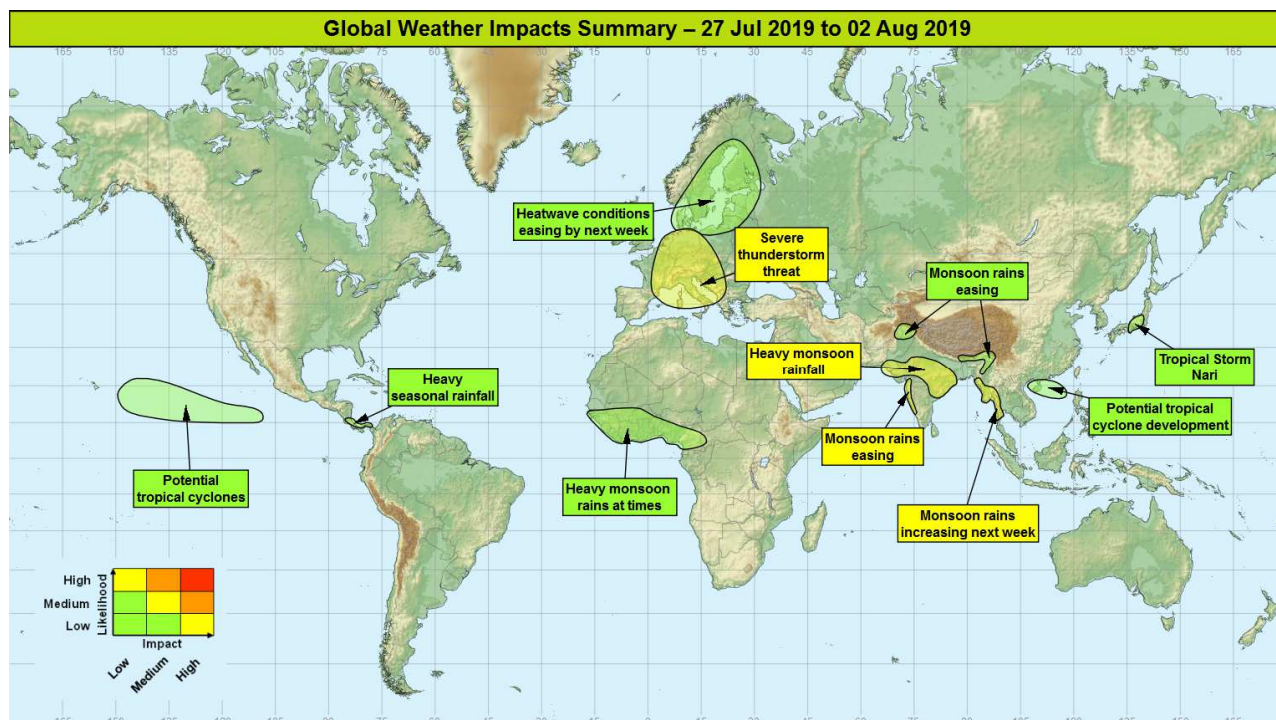


**Global Weather Impacts – Saturday 27<sup>th</sup> July to Friday 2<sup>nd</sup> August 2019**

Issued on Saturday 27<sup>th</sup> July 2019

**HEADLINES**

- Historic heatwave across parts of Europe gradually coming to an end in a thundery breakdown.
- Further intense monsoon rainfall for parts of the Indian sub-continent this week.



**DISCUSSION**

**Tropical Cyclones**

**Northwest Pacific (perhaps affecting central Japan)**

**Weather**

Tropical Storm Nari is currently making landfall over Honshu with sustained winds of 40 mph and gusts of 55-60 mph. Heavy rain is likely to be the cause of the majority of impacts, with 100-150, very locally 200mm of rain in 24-36 hours. The average July rainfall in this part of Japan is around 150-200 mm.

**Discussion**

Nari is now likely to weaken rapidly over land, though heavy rain will likely continue through Saturday before easing on Sunday.

**Expected Impacts**

Risk of localised flash flooding and low risk of landslides.

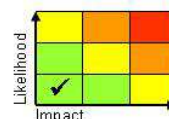
*The following areas are being monitored for development:*

**Eastern North Pacific**

**Weather**

A number of areas of showers and thunderstorms, associated with tropical waves, have the potential to become organised into tropical cyclones early next week. Any systems that do develop would not be expected to impact land over the next seven days.

**Discussion**



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

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

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A number of African Easterly Waves interacting with the ITCZ are producing showers and thunderstorms, which as environmental conditions become more conducive over the coming days could become organised into tropical cyclones. There is a large 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**

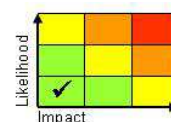
An area of showers and thunderstorms has the potential to become organised into a tropical cyclone later next week. If one does develop it could directly impact parts of southern China, including Hainan and potentially Hong Kong, as it tracks west-northwestward. Even if a significant cyclone does not 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 has good agreement for 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 models currently differ as to whether this will continue to develop into a stronger system.

### **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**

### **Parts of Scandinavia and the Baltic States**

#### **Weather**

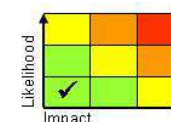
The airmass which brought the record-breaking heat to northwestern Europe in recent days will migrate north and northeastward into Scandinavia this weekend. The exceptional values seen over recent days are not expected here, however temperatures will still be well above average and maximum temperatures in some places will reach into the low 30s of Celsius. Temperatures will return closer to normal again early next week.

#### **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 particularly on Saturday and 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.

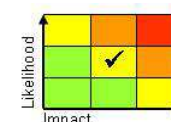


## **Central Europe**

### **Weather**

In the west of the region highlighted a thundery breakdown and general decline in temperatures is already under way, with further severe thunderstorms possible on Saturday across mainly France and the Low Countries, then an improvement here from Sunday onwards. Elsewhere in the highlighted area it will remain hotter (although the heat will not be as exceptional as has been seen over NW Europe in recent days) and this will aid development of thunderstorms each day. Any that develop could be severe, with 50-75mm in a few hours, large hail, and very strong, locally damaging gusts of wind. Additionally, strong to gale force Mistral winds could develop later Saturday, lasting through Sunday before easing on Monday.

### **Discussion**



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Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

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The breakdown of the heatwave over France and the Low Countries, characterised by widespread and at times severe thunderstorms, continues on Saturday ahead of the cold front moving eastward. As this stalls, the hot weather remains to its east, and whilst the temperatures are not expected to be as excessively hot, the passage of an upper trough will aid instability release, with large CAPE supporting the potential for high rainfall rates, large hail, strong wind gusts and frequent lighting. The development of a low in the Ligurian Sea into Sunday will additionally support Mistral winds with gusts to gale or severe gale force possible.

## **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**

#### **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**

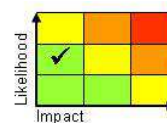
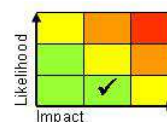
Further areas of organised thunderstorms will progress westward across this zone through the coming week. These storms may bring in excess of 50 mm of rainfall in a short period of time, with 150-250 mm possible if a location experiences several storms, and as much as 400 mm possible in a few areas towards the West African coast. In addition to heavy rainfall, strong damaging winds may be associated with these storms, especially towards the Sahel.

#### **Discussion**

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.



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Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

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**Middle East**

Nil.

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

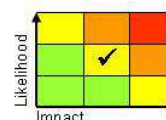
Periods of widespread, intense showers and thunderstorms will transfer from the east to west across this region through the next week, producing up to 350 mm of rain in a 24 hour period, with a threat of up to 600 mm through the next week in a few places. This means that some places could see several 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 hillier regions. Densely populated regions of India and Pakistan (including some large cities) could be impacted this coming week.

**Far west of India****Weather**

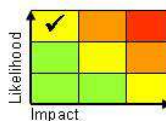
Persistent SW'ly monsoon flow into this area has seen a number of days of very heavy rain (daily totals in excess of 200mm), with further heavy rain expected over the next 2-3 days. Rains are expected to ease through the coming weekend

**Discussion**

The easing of the monsoon south-westerly flow into south-western India will result in weakening rains through the weekend. 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 from the weekend.

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

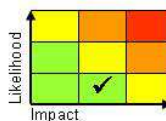
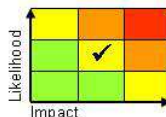
Further heavy showers and thunderstorms associated with the South Asian Monsoon in these areas are expected to ease this weekend, although could increase again for a time early next week along the eastern end of the Himalayas.

**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 through the coming weekend. A temporary resurgence of activity is possible early next week, with a further widely 50 to locally 100mm of rain possible on top of an already very wet spell of weather. This weakening associated with the development and westward transfer of a monsoon depression which weakens the strong, hot and moist upslope flow.

**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**

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Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

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Strengthening of the monsoonal flow this weekend 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 in excess of 500mm building up through the coming week, with a few places possibly seeing 600-700 mm during the period.

**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.

**Central Japan** – see *Tropical Cyclones* section.

**Australasia**

Nil.

**Additional information**

Nil.

**Issued at:** 270005 UTC      **Meteorologist:** Laura Ellam

**Global Guidance Unit**

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Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

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