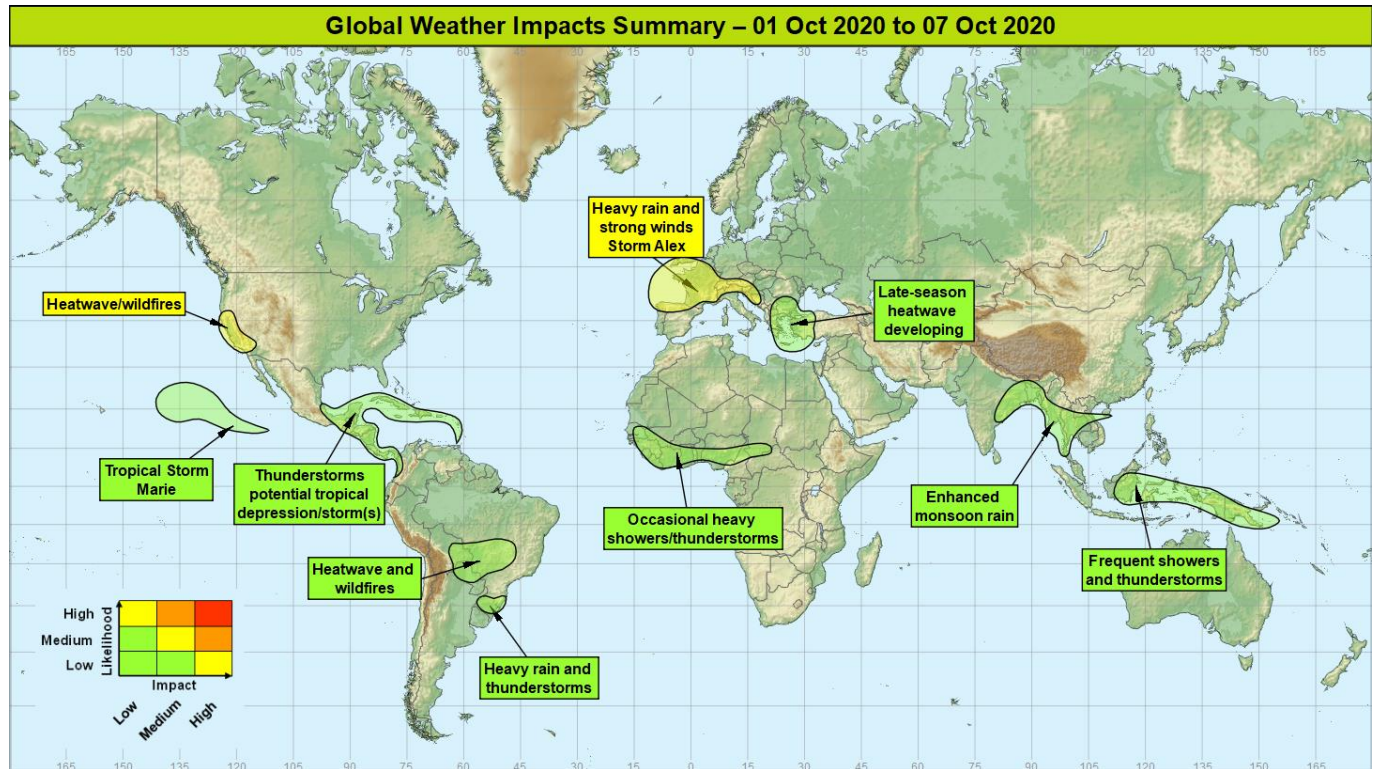


## Global Weather Impacts – Thursday 1<sup>st</sup> to Wednesday 7<sup>th</sup> October 2020

Issued on Thursday 1<sup>st</sup> October 2020

### HEADLINES

- Storm Alex bringing damaging winds and heavy rain to parts of western and central Europe
- Heatwave and wildfire conditions continuing across California and parts of Brazil, with associated poor air-quality.



### Tropical Cyclones

#### Eastern Pacific Ocean

Hurricane Marie will continue to track westwards in the coming days, with the environment favourable for this storm to strengthen into a major hurricane for a time, before beginning to weaken again through the weekend. This system will not affect land.

#### The following area is being monitored for development:

A broad circulation (Central American Gyre) in the southern Gulf of Mexico will be monitored for potential TC development over the next five days. A second area, east of the Lesser Antilles is being monitored, but has only a low likelihood of development. (See *Central America* section)

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

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## Europe

### Parts of western and central Europe

#### **Weather**

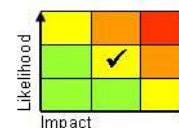
Very wet and windy conditions are expected to develop widely across some western and then parts of central Europe tomorrow and into the weekend associated with Storm Alex, which was named by Meteo France on Wednesday. Repeated heavy rainfall events will allow some large accumulations to build up, with 75 -150 mm of rain falling widely, especially over parts of France, the higher ground of northern Spain and Portugal, and perhaps later the Dinaric Alps. Across the Alps potentially in excess of 300mm is possible by the end of the weekend (so locally very significant snowfall likely on mountain tops). Gales or even severe gales could develop in places, with the strongest winds probably across northern and western France, the English Channel and Bay of Biscay coasts where there could be gusts of over 70 mph.

#### **Discussion**

A broad baroclinic zone over the NE Atlantic, will be engaged by a disrupting upper trough diving southwards towards the Bay of Biscay, with a small, but very intense low pressure centre forming somewhere near the northwest of France on Friday. The deep low will then linger over or near the English Channel over the weekend as it slowly fills. As well as very strong winds around the low centre, it will throw a series of active fronts eastwards across many parts of western and central Europe, with a risk of thunder in places. Although it is Autumn, it is still early in the season and while these conditions aren't unprecedented, they certainly have the potential to cause some disruption given the amount of rain in a short period of time, and the strength of the winds near the low, combined with trees which are presently in full-leaf and some very densely populated towns and cities in the area.

#### **Expected Impacts**

Increased risk of flash flooding, with riverine flooding likely by the weekend. Disruption to travel and interruptions to power supplies are possible due to strong winds – with trees in full-leaf, it makes them more prone to wind-damage. Large waves are expected near some coasts, particularly in the Bay of Biscay and English Channel, so some disruption to marine traffic is likely too as well as some damage to sea defences.



### South-east Europe, including Crete and western Turkey

#### **Weather**

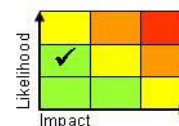
A developing heatwave is likely across these areas through the end of the week, then lasting through the weekend and into next week. Temperatures some 10-15°C above normal are likely, with some places coming close to seeing values 20°C above normal. This would bring maximum temps well into the 30s °C, with the potential for record high temperatures to be threatened through the period.

#### **Discussion**

A developing S'ly flow on the forward side of the synoptic-scale low, responsible for bringing widespread unsettled conditions to much of western Europe, will tap into very warm air over Libya and Egypt, drawing this N across the region. Whilst high temperatures at this time of year in this region are not unheard of, the longevity, and potential record-setting nature of the event are unusual.

#### **Expected Impacts**

Impacts on vulnerable populations in the area, with possible stress on infrastructure.



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## North America

### Western USA (especially California)

#### **Weather**

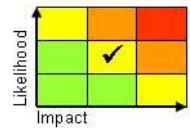
Heatwave conditions are expected to continue, with daily maxima exceeding 40°C, this in conjunction with strong, gusty winds and dry air. Numerous wildfires continue across the west of the US, the most significant of these across California – with conditions remaining conducive to spread and further generation of fire in the coming week.

#### **Discussion**

Little change to the weather pattern with a strong upper ridge and strongly subsided, warm and very dry air mass across the region. This brings the potential for further episodes of Santa Ana winds, especially by Friday. Temperatures are likely to continue around 8-10°C above the seasonal norm, and encouraging the redevelopment and/or spread of fires in the region.

#### **Expected Impacts**

Continued poor air quality is likely, especially for California, and continuing critical fire weather conditions. Heat health impacts likely in conjunction with the prolonged period of heat in the Central California Valley.



### Central America and Caribbean

#### Caribbean Islands, southeast Mexico, Belize, Guatemala, Honduras and Nicaragua, Costa Rica, Panama and western Colombia

#### **Weather**

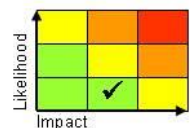
Becoming increasingly wet across large parts of the Caribbean and areas of Central America in the coming week, especially around the Yucatan peninsula and along the Pacific coast down to western Colombia. Heavy showers and thunderstorms more frequent and intense with 75 to 150 mm of rain falling quite widely by the end of the week, perhaps up to 400 mm across parts of southeast Mexico. There is risk for a tropical depression to develop close to the Yucatan peninsula this week, but a significant tropical storm is not anticipated.

#### **Discussion**

High SSTs, low-level convergence and abundant deep layer moisture will lead to deep convection this coming week across the region. A pronounced northerly flow will bring an orographic element to rainfall totals, especially across the hills of south-east Mexico. Several easterly waves are also likely to move across the Caribbean, particularly impacting the Lesser Antilles.

#### **Expected Impacts**

Flash flooding increasingly probable along with landslides in mountainous regions.



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## **South America**

### **Western Colombia**

See *Central America and Caribbean section*.

### **Bolivia, central & southern Brazil and Paraguay**

#### **Weather**

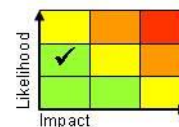
Heatwave conditions, coupled with strong winds continue this week. Temperatures widely mid to high 30's Celsius, locally into the low 40s Celsius, which is 10°C or more above average. Some national all-time records have already been broken in Paraguay recently, and further records could be challenged, particularly towards the south of this region in the next day or so. Conditions will become increasingly conducive to the spread of wildfires, of which there are numerous within this region.

#### **Discussion**

Sustained warm advection combined with ridging aloft continues to lead to further warming of the air across the region. The strengthening gradient will provide stronger winds, leading to conditions more conducive to wildfires. A cold front arriving from the S will start to displace the heat northwards towards the weekend, to where these values are more common, particularly for October.

#### **Expected Impacts**

Heat health impacts on vulnerable demographics, particularly in the south of the region, where all-time temperature records could be challenged. Increased likelihood of wildfire generation, bringing increasingly poor air quality and threat to communities.



### **Far south of Brazil**

#### **Weather**

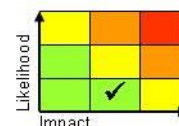
Heavy rain and thunderstorms, which could be locally severe with hail and frequent lightning, are likely across this region in the next 2 or 3 days. Widely 50-75 mm, and perhaps locally as much as 100 mm could fall in 24 hours, with 100-125 mm over the course of a couple of days in places. This would be towards a month's worth of rain for many areas.

#### **Discussion**

A warm plume will become engaged by an upper trough in the coming days leading to the development of thunderstorms within the warm air mass and more general heavy rain along a slow moving cold front on its southern boundary.

#### **Expected Impacts**

Flash flooding, particularly for urban areas, and risk of landslides. Isolated severe thunderstorm impacts (large hail, gusty winds, and frequent lightning).



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**Africa****Much of West Africa as well as parts of central Africa****Weather**

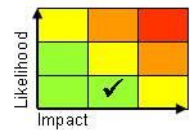
Further periods of heavy showers and thunderstorms will affect the region at times in the coming week. Whilst not all areas will see heavy rain, each day 50-75mm could fall in places within a few hours, and over this period the wettest areas may see 150mm build up. If anything activity looks to be rather less than we have seen in recent weeks.

**Discussion**

Many parts of this area have experienced floods and flooding impacts in what has been an active period for African Easterly Waves. Further AEWs are expected in the coming days, though there remains some model differences as to detail of the severe convection associated with these features. However, the main focus for the heaviest rain appears to be the northern parts of the DRC, Central Africa Republic, plus parts of the Gulf of Guinea coast, extending from western Cameroon/southern Nigeria, west as far as southern Senegal.

**Expected Impacts**

The potential for further flash and riverine flooding across much of the region, although not as widespread and severe as in the recent past.

**Middle East**

Nil.

**Asia****Eastern India, parts of Bangladesh, Myanmar, western and southern Thailand, Laos and Vietnam****Weather**

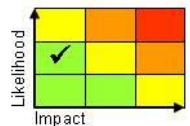
Enhanced shower and thunderstorms activity is likely in this area over the next week, with many parts seeing 100-150mm of rain. The wettest parts of the region are likely to be northeast India as well as western Thailand. Here, some 200-300mm is possible, this almost twice the October average for the area (though well short of record values for the region).

**Discussion**

A broad monsoon trough now exists across the Bay of Bengal, with strong SW'ly flow on its southern periphery. This is expected to drive frequent showers across the Andaman Islands and particularly for Myanmar and southern Thailand, where topography will help to concentrate the showers. A monsoon depression may form across the northern Bay of Bengal bringing enhanced rainfall across parts of coastal eastern India, as well as Bangladesh, in the next few days.

**Expected Impacts**

Flash flooding, and landslides will be the primary hazard, although impacts are likely to be lower than recent weeks.

**Parts of Indonesia, Malaysia, Brunei and Papua New Guinea****Weather**

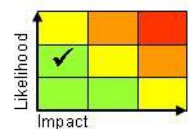
Heavy showers and thunderstorms will continue to be more frequent, intense and widespread than normal in the next 3 or 4 days. Within the broad area highlighted some spots in most of these countries will be at risk of seeing 150-250 mm of rainfall. Thereafter more normal rainfall patterns across the region for the rest of the week.

**Discussion**

Higher than normal SSTs in the region and enhanced easterly trade winds, in part due to the developing La Niña-like conditions, is fuelling deep convection with showers and thunderstorms in the next few days. A slight reduction in the trade winds towards the weekend is expected to lead to more normal rainfall patterns over the weekend.

**Expected Impacts**

Increase in the risk of flash flooding, and landslides in mountainous areas.



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**Australasia**

Nil.

**Additional Information****Cox's Bazar, southeast Bangladesh**

Although monsoon activity in the wider region is expected to be enhanced, Cox's Bazar should avoid the heaviest rain for most of the time. That said – some showers and thunderstorms are still likely to be driven onshore by southwesterly winds from the Bay of Bengal, interspersed with periods of dry weather. Some 15-25mm of rain are likely with these showers, with a lower risk of seeing double this in any more prolonged, or heavier showers. This is around normal for the time of year.

**Yemen**

The development of isolated, daily heavy showers is likely to remain focused over the Western Highlands. Activity is expected to be around average for this time of year with a good deal of dry weather elsewhere.

**Sudan/South Sudan**

The bulk of the shower activity will be seen in South Sudan through the next 7 days. 25-50mm of rain per day possible from daily showers and thunderstorms, and perhaps as much as 75-100mm at any one location over the course of the coming week. This is fairly typical for the season. Much of northern Sudan will be mainly dry, although the South Sudan border region will see heavy showers most days, but with rainfall totals less than further south.

**Issued at:** 010700 UTC

**Meteorologists:** Chris Almond / Mark Sidaway

**Global Guidance Unit**

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