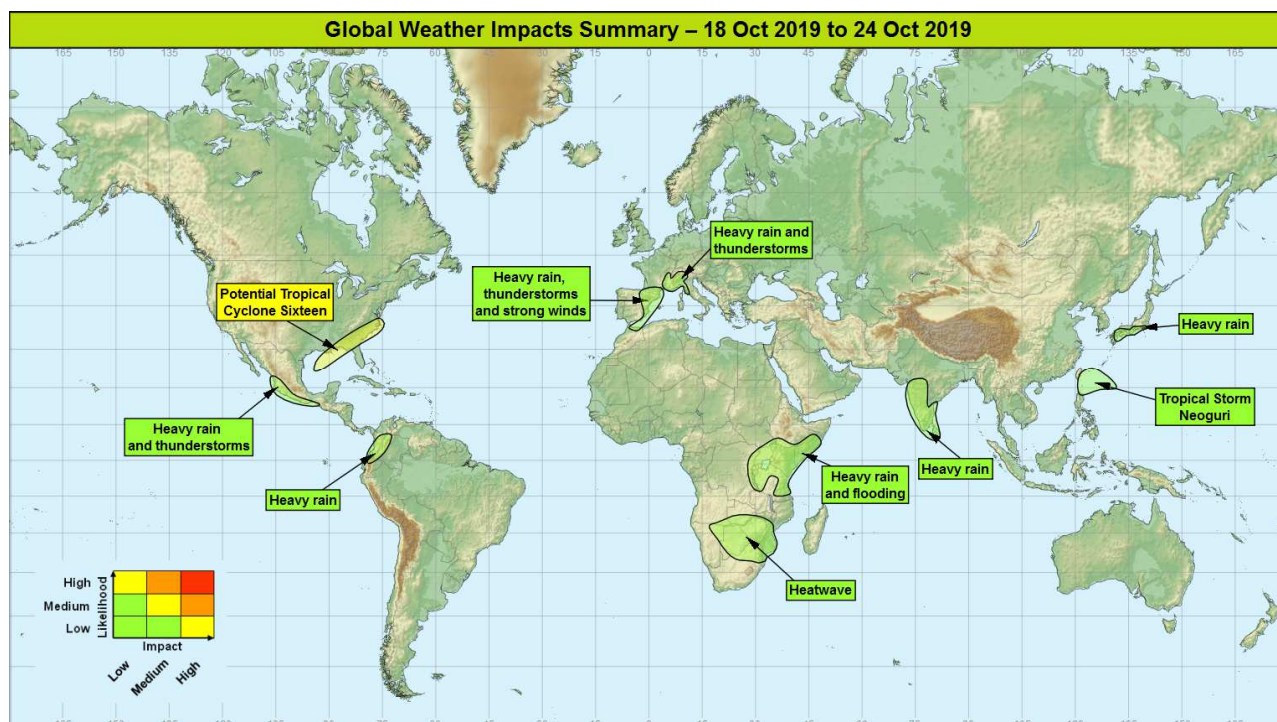


## **Global Weather Impacts – Friday 18<sup>th</sup> to Thursday 24<sup>th</sup> October 2019**

Issued on Friday 18<sup>th</sup> October 2019

### HEADLINES

- Potential Tropical Cyclone Sixteen to bring heavy rain and gales to parts of SE USA.
- Heavy rain and severe thunderstorms for parts of SW Europe this weekend and early next week.



### DISCUSSION

#### Tropical Cyclones

##### **Tropical Storm Neoguri - Northwest Pacific Weather**

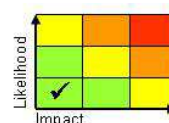
A tropical depression east of the around 300 miles east of the Philippines strengthened into a tropical storm (sustained winds of around 40mph) in the early hours of Friday morning. A very slow west to west-northwestward motion is expected over the next couple of days with minimal strengthening. It looks unlikely to make landfall before decaying, but this cannot be ruled out with the Japanese Ryukyu islands most at risk. Regardless, heavy rain may extend well away from the centre, with the far north of Luzon and Ryukyu Islands most at risk of seeing 100-200mm in a 24 hour period from this system.

##### **Discussion**

A passing ERW helped an area of deep convection become more organised and it has now been upgraded to a tropical storm. Environmental conditions are only marginal favourable for intensification with the depression expected to continue to slowly drifting westwards before curving north towards southern Japan.

##### **Expected Impacts**

Slightly increased likelihood of flash flooding causing damage to property and infrastructure, as well as travel disruption.



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

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*The following areas are currently being monitored for possible development that may affect land:*

## **Gulf of Mexico and southeast USA – Potential Tropical Cyclone Sixteen**

### **Weather**

A tropical depression has now formed over south-western parts of the Gulf of Mexico. This system is expected to become a tropical storm as it moves northeast and is likely to reach the south coast of the USA (most likely northwest Florida) during Saturday. The system should then continue northeast across Georgia and the Carolinas over the weekend. Heavy rainfall is expected across a large area with widely 50-100mm, and in excess of 150mm locally. Strong winds are likely in coastal regions but the primary hazard will be heavy rain.

### **Discussion**

An area of convection associated with a tropical wave is now designated Potential Tropical Cyclone Sixteen, and will likely become a named storm today. Development is likely to occur from a mix of convective and favourable dynamics, with a non-classical system forming. Regardless, tropical storm force winds along the GoM and E. Seaboard coasts are likely, with high confidence in a swathe of heavy rainfall stretching across parts of SE USA as the system runs across over the next few days.

### **Expected Impacts**

Localised flooding will be the primary impact, with rough seas and localised wind damage/disruption.



## **Europe**

### **Southeast France, Switzerland and northern Italy**

#### **Weather**

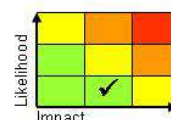
Heavy rain and thunderstorms are expected to develop across this region during the weekend, and could last into the start of next week. 100-150mm mm of rainfall per day (possibly in the space of a few hours) is possible with some locations seeing in excess of 200-300 mm over a period of a few days. Frequent lightning and hail will be additional hazards.

#### **Discussion**

A frontal plume associated with a moist southerly flow over the western Med will destabilise over the weekend in response to a large scale trough extension over Iberia. Orographic enhancement will mean southern parts of the Alps are likely to see the highest totals.

#### **Expected Impacts**

Increased likelihood of flash flooding causing damage to property and infrastructure, as well as travel disruption. Landslides are also possible in areas of more steeply sided terrain.



## **Western Mediterranean – Eastern Spain, southwest France and northern Morocco**

### **Weather**

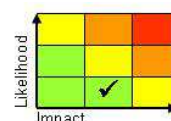
Heavy rain and severe thunderstorms with the potential for frequent lightning and large hail are likely to develop in these areas early next week. Associated strong winds will develop rough seas and may bring some minor coastal flooding. The most persistent heavy rain and thunderstorms look most likely across northeast Spain and southwest France midweek with the potential for 150-200mm to build up in the worst affected areas (50-100mm in a few hours). Given the range there is still some uncertainty in detail but parts of Spain which saw severe flooding in September could again be impacted.

### **Discussion**

A major disrupting upper trough is expected to engage a baroclinic zone across the region on later on Monday and into Tuesday. Models suggest the development of a surface low over northern Morocco which then emerges northwards into the western Mediterranean, with some solutions allowing this to deepen into a major feature by the middle of next week. Profiles would suggest the potential for some severe thunderstorms within the 18C WBPT plume.

### **Expected Impacts**

Risk of flash flooding, with frequent lightning, hail and very strong winds causing damage to property and infrastructure, as well as travel disruption for aviation, and marine transport due to rough seas. Landslides are also possible in areas of more steeply sided terrain.



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## North America

**Southeast USA** – See *Tropical Cyclones* section.

## Central America and Caribbean

### **Southwest coast of Mexico**

#### **Weather**

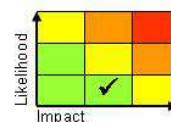
Frequent heavy showers and thunderstorms will continue to affect the Pacific coast over the coming days. Event totals are likely to exceed 100 mm along much of the coast, with some locations receiving as much as 200-300 mm of rain, equivalent to around double the October average rainfall for this region.

#### **Discussion**

Moisture from an area which was being monitored for potential tropical cyclone development will bring very heavy rainfall to parts of the western coast of Mexico through until the weekend. The topography of the region will constrain most of this to coastal regions.

#### **Expected Impacts**

Increased likelihood of flash flooding causing damage to property and infrastructure, as well as travel disruption. Landslides are also possible in areas of more steeply sided terrain immediately inland from the coast.



## South America

### **Western Colombia and northern Ecuador**

#### **Weather**

Further frequent heavy showers and thunderstorms are expected over northwestern parts of South America over the coming days. This follows a period of above average rainfall over the past month with some locations recording double their October rainfall. Over the next week, much of the area is likely to receive a further 75-125 mm of rain, locally 250-300 mm.

#### **Discussion**

Whilst AEW activity is reducing there is a consistent signal for an enhanced westerly flow near the Pacific coast of Colombia and Ecuador. This combined with slightly above average SSTs will help focus frequent heavy showers and thunderstorms over coastal areas and nearby mountains.

#### **Expected Impacts**

Continuation of flooding impacts is likely across the region with more mountainous areas at heightened risk of landslides due to saturated ground.



## Africa

### **Parts of east Africa**

#### **Weather**

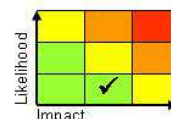
Above average rainfall is expected to continue through this week and beyond across the region with frequent heavy showers and thunderstorms. Whilst rainfall amounts will inevitably vary from place to place, some locations may receive their entire average October rainfall in a few hours.

#### **Discussion**

A strong positive Indian Ocean Dipole event is now underway. This is probably responsible for the above average rainfall signal in these areas over the coming week. Based on the strength of the positive IOD event (largest since at least 2001) this could lead to above average rainfall in these areas for the next 2 to 3 months which may gradually make impacts more likely.

#### **Expected Impacts**

Continued increased likelihood of flash flooding along with land/mudslides in areas of more steeply-sided terrain.



**Morocco** - See Europe section

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## Countries in southern Africa

### **Weather**

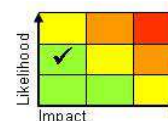
Temperatures are widely some 5-10, locally 15°C above average across this part of the world currently, the area highlighted is expected to see temperatures exceeding 35°C, and in some places 40°C (especially north-east South Africa, south Mozambique, south Zimbabwe and parts of Botswana), over the next few days. Whilst these temperatures are normal for mid-summer, falling this early in the season makes it near record breaking, particularly over parts of South Africa.

### **Discussion**

The Indian Ocean Dipole (IOD) is causing excessive rain to fall in E Africa close to the equator, and keeping the weather dry, hot and sunny in much of SE Africa, especially the NE of South Africa. With light winds this will make the heat feel quite oppressive.

### **Expected Impacts**

Utilities will be under strain due to high air conditioning requirements, and water demands will be high in a region still waiting for the first rains of the spring/summer season. Severe wildfire conditions will be present across large tracts of this area too.



## Middle East

Nil.

## Asia

### Southern India and Sri Lanka

#### **Weather**

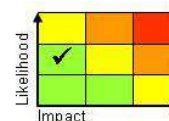
Whilst the monsoon is now retreating across India, above average shower and thunderstorm activity is expected to continue, more especially across the south of the country and Sri Lanka through the coming week. Many locations are likely to receive a further 100-200 mm of rain over the next week.

#### **Discussion**

Whilst the South Asian Monsoon commenced its withdrawal some 49 days later than normal across northwest India the retreat has accelerated over the past week. That said, above average rainfall compared to a usual withdrawal is expected over the coming 7 days.

#### **Expected Impacts**

Increased likelihood of surface water and river flooding along with land/mudslides in areas of more steeply-sided terrain. Coming at the end of the monsoon season this event will contribute to increased sensitivity.



### Southern Japan

#### **Weather**

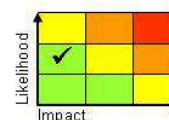
A spell of heavy rain is expected over the next couple days over areas including those impacted by Typhoon Hagibis. A further 100-200 mm of rainfall is likely to fall across southern portions of Honshu over 24-36 hours, with in excess of 300 mm in places.

#### **Discussion**

Amplification of both the upper and surface pattern across eastern Asia will allow pressure to build across north-eastern Japan which will draw a plume of high WBPT (>21°C) air northwards across western Japan. This is then engaged by an approaching upper trough producing very heavy rainfall across the region. Some model uncertainties exist in the timing and location of the heaviest rainfall, but there is reasonable confidence that the area affected by Typhoon Hagibis will receive further heavy rain, although the highest rainfall totals may well be to the west of the areas worst affected last weekend.

#### **Expected Impacts**

Increased sensitivity following the passage of Typhoon Hagibis is likely to lead to greater impacts than otherwise expected. Flash flooding and renewed river flooding are possible, in addition to landslides in areas of more steeply-sided terrain.



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**Philippines and Japan** – See *Tropical Cyclones* section.

**Australasia**

Nil.

**Additional Information**

Nil.

**Issued at:** 180745 UTC    **Meteorologists:** Chris Bulmer / D J Harris

**Global Guidance Unit**

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