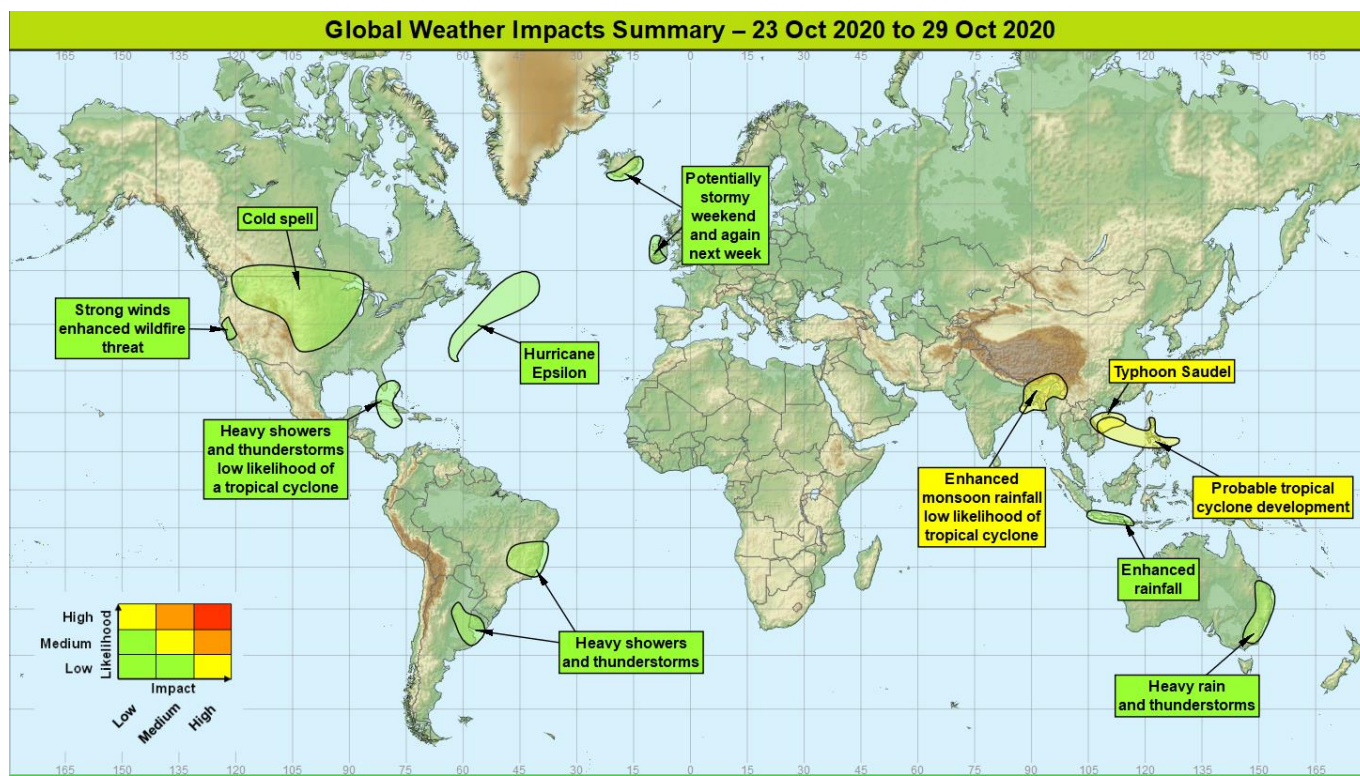


## Global Weather Impacts – Friday 23<sup>rd</sup> to Thursday 29<sup>th</sup> October 2020

Issued on Friday 23<sup>rd</sup> October 2020

### HEADLINES

- Enhanced late season monsoon rain over Bangladesh and parts of the surrounding countries.
- Typhoon Saudel in the South China Sea, weakening on approach to Vietnam this weekend.
- Hurricane Epsilon remaining well to the east of Bermuda, although still likely to bring tropical storm force winds and some showers through today.
- Another potential tropical cyclone development affecting the Philippines and South China Sea from Sunday.



### Tropical Cyclones

#### Typhoon Saudel (South China Sea including Vietnam and China)

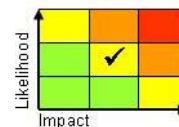
##### Weather

Saudel strengthened to become a typhoon through Wednesday and has continued to move slowly westwards across the South China Sea, likely to move just south of Hainan Island on Saturday, and then reach the Vietnam coastline as a rapidly weakening system on Sunday. Widespread rainfall totals of 50-150mm of rainfall is expected along the track, with potentially up to 200-250mm in a few places, with the heaviest rainfall likely falling to the north of the region most severely impacted by flooding over the past few weeks.

##### Discussion

Saudel has looked fairly impressive on satellite imagery overnight, as it moves gradually westwards across the South China Sea, with high ambient humidity and high underlying SSTs allowing the system to strengthen to typhoon strength. Saudel is likely to maintain current intensity until it approaches Hainan Island, with a weakening trend then ensuing due to interaction with orography, and dry air beginning to be drawn into the circulation and disrupting deep convection.

##### Expected Impacts



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Strong winds will produce very rough seas, and perhaps bring some minor disruption to Hainan Island. Flash flooding along with an enhanced risk of landslides in mountainous areas will accompany rainfall. In the area of Vietnam which has experienced recent flooding, impacts from this event are felt likely to be modest, due to river levels having likely recovered to near normal before the rainfall associated with this system arrives.

## **Hurricane Epsilon (North Atlantic including Bermuda)**

### **Weather**

Epsilon rapidly strengthened into a major hurricane on Wednesday, although has since weakened back to just hurricane strength. The system is currently moving northwards well to the east of Bermuda today, before accelerating northeast and transitioning to become a strong mid-latitude low pressure system across the open North Atlantic over the weekend. It will still likely bring tropical storm force winds (mean speed 40 mph) to Bermuda for a time this morning.

### **Discussion**

Epsilon will continue to be steered around the sub-tropical ridge today, although SSTs will become less warm, allowing a weakening phase to commence. After moving slowly northwest, it will begin to turn to the northeast on Friday before accelerating across the open North Atlantic and completing its extra tropical transition over the weekend and becoming a powerful mid-latitude low.

### **Expected Impacts**

Large swells and waves likely to affect the coast of Bermuda through today, with tropical storm force winds which may cause minor localised damage and disruption.

*The following areas are being monitored for potential tropical cyclone development impacting land:*

## **Northern Philippines and South China Sea**

### **Weather**

It looks likely that a tropical cyclone will develop east of the Philippines this weekend, before tracking westwards across the Philippines between Sunday and Tuesday. This system looks likely to bring strong winds and heavy rainfall (100-300mm) across a heavily populated part of Luzon in the northern Philippines. This system is then expected to continue west across the South China Sea, perhaps threatening Hainan or Vietnam during the middle of next week.

### **Discussion**

All models produce a signal for another tropical cyclone development and westward track across the Philippines, South China Sea and possibly Vietnam from the weekend. There are model differences in the intensity, track and timing, hence only medium likelihood of medium impacts, but there is the potential for an impactful system to affect this region next week.

### **Expected Impacts**

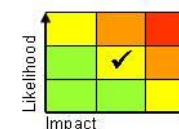
Flash flooding and landslides look likely. A lower likelihood of wind and coastal flood damage, although this is judged to increase to a medium likelihood as the system moves towards Hainan and Vietnam next week.

## **Bay of Bengal (including northeast India and Bangladesh)**

See *Asia* section.

## **Western Caribbean and western Atlantic (Cayman Islands, Jamaica, Cuba, Florida and Bahamas)**

See *Central America and Caribbean* section.



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**Europe****Ireland and southern Iceland****Weather**

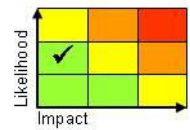
A deep mid-latitude low pressure which moves between Ireland and Iceland this weekend will bring strong winds to the region with gusts of 60-70mph likely around coastlines and exposed hills. Next week the remnants of Hurricane Epsilon (by this point a potent mid-latitude low) will also move through the region bringing the risk of similar if not slightly stronger wind speeds to the region once more. In addition to the wind, between 100-150mm of rain could fall across the mountains of the regions.

**Discussion**

A strong North Atlantic jet stream is signalled to develop and drive two extremely deep mid-latitude lows across the northeast Atlantic over the coming seven days, with the potential for several small scale features surrounding them to further enhance wind speeds in some areas. The strongest winds associated with the systems look likely to remain out over the open ocean.

**Expected Impacts**

Most likely minor impacts to travel and utilities, along with dangerous conditions at sea and along the coasts with large waves. Some localised minor flooding is possible in association with the heavy rainfall.

**North America****Northern Plains and North Rockies, USA and parts of southern Canada****Weather**

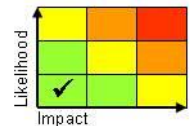
An early season cold spell will intensify across some northern parts of the USA and southern Canada later this week and over the weekend with temperatures falling to 15-20 °C below average in places. This spell will bring a range of hazards including snowfalls, ice and overnight frost.

**Discussion**

Cyclogenesis across the Great Lakes and eastern Canada has drawn an area of arctic air south to areas east of the Great Continental Divide, this will be re-enforced by further lee cyclogenesis across the central USA early next week, allowing the cold air to reach as far south as Colorado or Oklahoma for a short time early next week.

**Expected Impacts**

This could lead to some minor transport disruption and lead to health impacts for vulnerable and exposed populations.

**California and southern Oregon, USA****Weather**

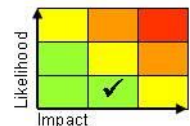
A few strong pulses in the dry Santa Ana winds are likely across this region over the next week. With several wildfires already burning in the region (as seen in satellite imagery), these winds could cause existing and any new fires to quickly grow and spread, and be challenging for emergency responders to control.

**Discussion**

The cyclogenesis and cold air outbreak across the central USA (as referred to in the previous section) will lead to the development of strong pressure gradients across the Sierra Nevada Mountains and produce various surges in these warm and extremely dry (due to lee subsidence over the Sierra Nevada) and gusty northeasterly winds.

**Expected Impacts**

Growth and spread of new and ongoing wildfires, bringing a risk to both property and life in some localised regions. Smoke could disrupt some transport, and reduce air quality.

**Southern Florida** – See *Central America and the Caribbean* section.

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## Central America and the Caribbean

### Cayman Islands, Jamaica, Cuba, Bahamas, and southern Florida

#### **Weather**

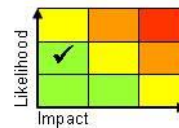
A broad area of showers and thunderstorms currently in the western Caribbean, is expected to bring heavy rainfall through the next 4 days as it is drawn northeastwards across the Cayman Islands, Jamaica, Cuba, southern Florida and eventually the Bahamas early next week. There is a very low likelihood that a weak tropical (given a 40% chance of developing in 5 days by the National Hurricane Center) or sub-tropical storm could develop close to the Bahamas early next week. Regardless of development along the path of these showers 50-150mm of rainfall is expected to fall fairly widely, with around 150mm the average rainfall for the whole of October.

#### **Discussion**

Broad trough of low pressure lies across the western Caribbean Sea, with a broad area of disorganised shower and thunderstorm activity in association with this feature. This feature will be drawn northeastwards ahead of an upper trough which moves into the Gulf of Mexico over the weekend, with this trough potentially promoting the development of a minor tropical or sub-tropical storm in the vicinity of the Bahamas early next week.

#### **Expected Impacts**

Increased threat of flash flooding and for Cuba some landslides.



## South America

### Parts of Paraguay, Uruguay, Bolivia, southern Brazil and northern Argentina

#### **Weather**

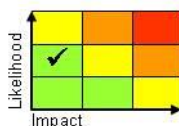
Intense showers and severe thunderstorms will develop at times across these areas over the course of the next week. These have the potential to produce 50-75mm of rain in just a few hours along with a threat of strong winds, large hail and frequent lightning.

#### **Discussion**

A southward extension of the very warm, moist monsoon plume into northern Argentina will be engaged by several upper troughs through the next 7 days to produce high CAPE, marked wind shear deep convection. The showers and thunderstorms across Brazil will generally be less severe in nature, but still able to produce similar high rainfall totals in a short duration.

#### **Expected Impacts**

Local flash flooding probable with a lower likelihood of damage from hail, wind and lightning in the areas across southern Brazil, Uruguay, Paraguay and Argentina.



## Africa

Nil.

## Middle East

Nil.

## Asia

Vietnam, southern China and the northern Philippines – See *Tropical Cyclones* section.

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**Northeast India, Bangladesh, Bhutan and Myanmar****Weather**

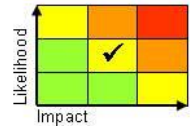
There is a strong signal for enhanced rainfall across these areas until Saturday, aided by monsoon depression moving slowly northeast from the Bay of Bengal. Many areas likely seeing 100-200 mm of rainfall by the end of Saturday. The Bangladesh coast and inland mountains are likely to see the highest totals though with 200-300 mm likely in places. This will be largely associated with a monsoon depression moving north from the Bay of Bengal into Bangladesh this morning.

**Discussion**

A passing Equatorial Rossby Wave (ERW) helped develop an active monsoon depression in the Bay of Bengal, which has acted to focus heavy rainfall and thunderstorms, with enhanced rainfall also in areas exposed to the strengthening southerly flow well ahead of this feature. The depression will continue northeast to push across the Bangladesh coastline later this morning.

**Expected Impacts**

Flash flooding and landslides look likely in places. Increased threat of impacts for vulnerable populations in the area including at Cox's Bazaar until Saturday.

**Indonesia, mainly Java Island****Weather**

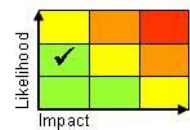
Slightly enhanced showers and thunderstorms are expected across this region in the coming week, some places could receive 25-75mm in 3-6 hours, and overall widely 50-100mm will fall across the region. This following recent anomalous rainfall in the last few weeks.

**Discussion**

La Nina makes showers and thunderstorms more likely to be frequent across the Maritime Continent. This potentially aided too by a slowly progressive MJO. Monthly anomalies across this region are generally positive too making impacts more likely than usual. Java Islands is highlighted as seeing the most enhanced rainfall over the coming week, with totals locally similar to some of those during the wetter events in this area which are often seen December and January.

**Expected Impacts**

Localised flash flooding in places, and increased risk of landslides in higher terrain.

**Australasia****Eastern Australia****Weather**

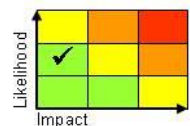
Heavy rain and thunderstorms likely to develop across this area through to Sunday. Most areas will avoid the heaviest rain but there is the potential for 100-150 mm to fall in places. This is well in excess of typical October rainfall amounts.

**Discussion**

A slow-moving high WBPT plume eastern Australia will continue to be engaged by a trough extending northeast over Australia. This will lead to a developmental environment with frontal waves likely to form and with thunderstorms breaking out in the higher WBPT environment before the front clears eastwards.

**Expected Impacts**

Increased threat of flash flooding in places. Lower risk of impacts from strong winds.



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

See *Asia* section above. Increased threat of flash flooding until Saturday.

**Yemen**

The development of a very isolated heavy showers is possible over the Western Highlands, but with this risk lowering by the weekend. As is typical for this time of year, most places will be dry throughout.

**Sudan/South Sudan**

Apart from the far south, Sudan will stay dry, which is usual for this time of year. Daily showers and thunderstorms will continue across the far south of Sudan and more especially South Sudan, although to a lesser extent than recent weeks – weekly totals could approach 25-50mm in a few places.

**Issued at:** 230715 UTC      **Meteorologists:** Nick Silkstone / Ele Hands

**Global Guidance Unit**

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