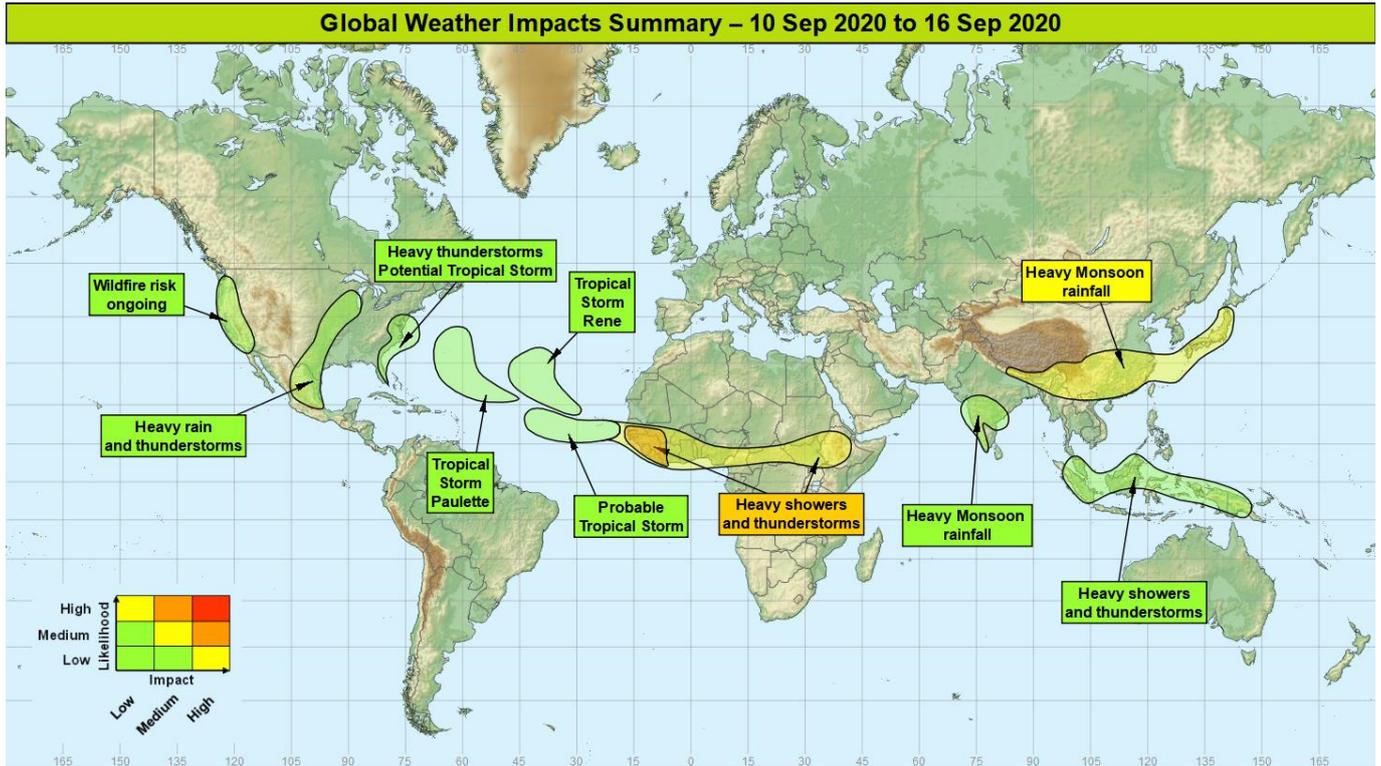


Global Weather Impacts – Thursday 10th to Wednesday 16th September 2020

Issued on Thursday 10th September 2020 – *update to reflect NHC track forecast for Paulette*

HEADLINES

- Tropical storm Paulette expected to strengthen to a hurricane over the weekend, potentially passing close to Bermuda
- Tropical storm Rene expected to remain over the open tropical Atlantic.
- High likelihood of another Tropical Storm forming near Cabo Verde.
- Heavy Monsoon rain over south Asia and sub-Saharan Africa.



Tropical Cyclones

Tropical Storm Paulette – North Atlantic Weather

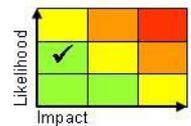
Tropical storm Paulette is expected to continue to drift northwest over the next few days, most likely maintaining tropical storm strength through the weekend. Latest NHC track guidance suggests Paulette could attain hurricane strength by the start of next week, and track near Bermuda. Confidence in this aspect of the forecast is low, with interaction with other tropical features likely to dictate Paulette's track in a very uncertain way.

Discussion

NHC increased the likelihood of Paulette becoming a hurricane, this a change from earlier advisories which suggested shear would prevent significant development. There is high confidence that its track will remain over open water through the next four days, before the latest track guidance brings Paulette close to Bermuda early next week. By then confidence in track is low.

Expected Impacts

Potential for Paulette to track near Bermuda, which could bring impacts from strong winds and heavy rain, as well as rough seas.



This forecast may be amended at any time

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Tropical Storm Rene – North Atlantic

Weather

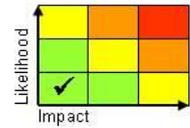
Over the coming days Rene is expected to track west-northwest over the open Atlantic before re-curving northeastwards around the sub-tropical high. There is the potential for Rene to attain hurricane strength by early next week, but again the storm should remain over open waters.

Discussion

Over the next couple of days, the system will move west over sea surface temperatures of around 28-29°C. This coupled with favourable atmospheric conditions (low vertical wind shear) means some intensification looks likely. Uncertainty in its track does increase beyond the next couple of days, with one MOGREPS member taking Rene towards the Caribbean – this is considered a very low risk at the moment.

Expected Impacts

Nil.



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

North Atlantic, east coast of USA

Weather

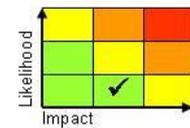
An area of organised thunderstorms 300 miles southeast of North Carolina has a small chance of strengthening into a tropical storm before reaching the coast of the USA over the next few days. Irrespective of development, enhanced heavy showers and thunderstorms are expected for parts of the east coast from Florida north to the Carolinas, with the potential for 75-150 mm of rain in places over the next couple of days.

Discussion

An enhanced easterly flow is feeding showers and thunderstorms into coastal areas associated with a high WBPT plume (>21°C). A more organised area associated with a shallow surface depression further offshore is being monitored by the NHC for possible development although the NHC suggest only a low likelihood (30%) over the next few days.

Expected Impacts

Slightly increased threat of flash flooding in places.



North Atlantic, Cabo Verde

Weather

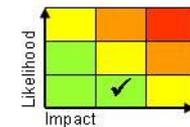
It looks likely that a disturbance moving west out of Africa will develop into a tropical depression at some point in the next couple of days. At this stage, any impacts look likely to be confined to the southern islands of the Cabo Verde with heavy rain likely and also a risk of strong winds and rough seas.

Discussion

An African Easterly Wave (AEW) is expected to move off the coast of West Africa later today or overnight in to Friday, which will likely develop into a tropical depression over the warm waters of the tropical Atlantic. NHC suggests a 90% chance for this to occur during the next five days.

Expected Impacts

Increased threat of flash flooding and potential impacts to transport and maritime activities for the Cabo Verde islands.



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Europe

Nil.

North America

Western USA and far northwest of Mexico

Weather

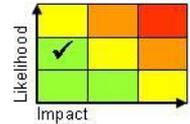
Although the very high temperatures have eased a little, there is no sign of any significant rain in the next week so wildfire conditions will continue for the next few days, especially as the wind strengthens for a time.

Discussion

This area is forecast to remain under a strong upper ridge associated with a persistent large-scale omega block over the western USA. We could see the development of a Santa Ana wind event for a short time, courtesy of an unusually cold high (for the time of year) over the Great Basin.

Expected Impacts

Wildfires will continue to burn in the region, even with temperatures easing, leading to reduced air quality. Strengthening winds in southern California will make fire containment more difficult.



Parts of central & southern USA and far north of Mexico

Weather

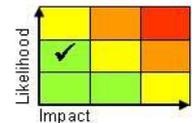
Prolonged heavy rainfall, along with some thunderstorm activity, is expected across these areas over the next few days of days. 100-150 mm of rain is likely to fall fairly widely with 200-250 mm in a few locations. This well in excess of a typical month's worth of rain.

Discussion

A marked trough extension will engage an extremely strong baroclinic zone across the area (unusually cold air to its rear leading to heavy snowfall and unseasonal cold weather) leading to a spell of persistent rain with some thunderstorm activity likely to be triggered in the warm air ahead of the surface front. Activity on the front will ease over the weekend as it moves eastwards, but thundery showers are likely to continue in the warm air over the southern part of this area.

Expected Impacts

Increased risk of flash and riverine flooding.



East and south-east USA

See *Tropical Storm* section

Central America and Caribbean

Far north and far northwest Mexico – See *North America* section

South America

Nil.

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Africa**Sub-Saharan Africa****Weather**

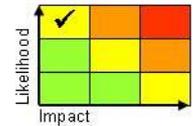
Further periods of prolonged, heavy showers and thunderstorms will affect the region at times in the coming week. Whilst not all areas will see heavy rain, each day 50-75 mm could fall in places within a few hours, and over this period the wettest areas may see 200-300 mm build up. This does tend to be the wettest time of the year in the region, but the forecast rainfall will still be significant, especially given recent flooding events in the past week.

Discussion

The monsoon trough currently lies close to its climatological northern extent from roughly Senegal towards southern Sudan and Ethiopia. Along and to the south of this trough lies moisture-laden air, with the African Easterly Jet periodically buckling due to the passage of African Easterly Waves.

Expected Impacts

The potential for further flash and riverine flooding across much of the region, with an enhanced risk of landslides in areas where terrain is steep (such poorly located settlements on the edge of expanding cities). Along the northern boundary of the highlighted region strong wind gusts from thunderstorms will likely trigger dust storms reducing air quality and impacting travel.

**West Africa from Senegal to Ivory Coast****Weather**

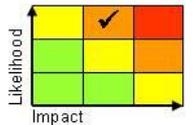
An intense area of showers and thunderstorms is likely to affect the area for the next 24 hours or so, bringing with it widely 50-100mm of rain. Some places may see 200-300mm of rain before the storms clear west into the Atlantic through tomorrow. These areas were badly affected by heavy rain earlier in the week, with the latest round of storms potentially causing further impacts in the region.

Discussion

The AEW which is likely to spawn the next tropical storm (Sally) tomorrow or into the weekend, will likely bring severe thunderstorms and heavy rain to this region through today, clearing into tomorrow. Some medium impacts are likely, with very large totals being signalled by the tropical Africa 4km model in particular.

Expected Impacts

Flash and riverine flooding, landslides, disruption to transport and infrastructure are all possible.

**Middle East**

Nil.

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Asia

Northern Bangladesh, Bhutan, eastern Nepal, northeast India, northern Myanmar, Southern China and the far north of Vietnam and Laos, and Japan

Weather

Weather

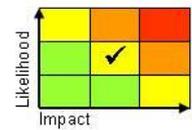
Further spells of heavy rain and thunderstorms are expected over large parts of southern and southeastern Asia in the coming week thanks to an active Monsoon. It won't be wet all the time, there will be drier interludes between the rains, but the intensity and frequency of showers will bring some large totals of rain over the coming week, after what has already been a particularly wet monsoon season. 100-150mm can be expected widely, with some parts of the region, particularly eastern Nepal, northern Bangladesh and northern Myanmar potentially seeing 500-650mm of rain by the end of the period.

Discussion

This broad area associated with the south Asian Monsoon will be invigorated by various factors in the coming days, leading to further large rainfall totals – all of which is falling on to very saturated ground. A marked upper trough, or troughs in the mid-latitude jet will engage the baroclinic northern edge of the Monsoon plume, bringing spells of persistent and heavy rain to Japan, while further south an active phase of the MJO as well as Kelvin wave activity will enhance the heavy rain and thunderstorms here.

Expected Impacts

Increased risk of flash flooding and landslides in mountainous areas. Risk of flash flooding and riverine flooding in small catchments and urban areas.



Southern and central India

Weather

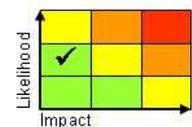
An active pulse in monsoon rains are expected over the next week across much of southern India. Overall the highest rainfall totals are likely to build up over the Western Ghats with 250-350mm building up in places over the next few days. Elsewhere, many areas will see 100-150 mm of rain.

Discussion

The Monsoon trough to the north will strengthen the southwesterly flow over the coming days bringing an abundance of warm and moist air onshore, this combined by orography and large scale ascent provided by the withdrawing MJO, will lead to some heavy and prolonged showers and thunderstorms in the coming days.

Expected Impacts

Increased risk of flash flooding in places.



Indonesia, Malaysia, Papua New Guinea and Brunei

Weather

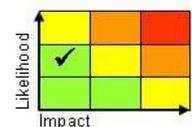
Heavy showers and thunderstorms will continue to be more frequent, intense and widespread than normal over the coming few days. Around 50-75 mm of rain could fall in a couple of hours in places, with overall accumulations through the week of around 150-250 mm.

Discussion

Higher than normal SSTs in the region, and enhanced easterly trade winds, perhaps in part due to the developing La Niña like conditions, is fuelling deep convection, with showers and thunderstorms more intense and frequent than is usual for the time of year. This may well be further enhanced by the passage of the weak MJO oscillation across the region Maritime Continent over the next week.

Expected Impacts

Slight increase in the risk of flash flooding and landslides in mountainous areas.



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Australasia

Papua New Guinea – see *Asia* section.

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

Whilst showers and thunderstorms can't be ruled out each day, especially early in the period, there is a signal for drier than average conditions over the coming week, as the heavy Monsoon rains largely stay to the north of Cox's Bazar. This will lower the risk of any impacts from flash flooding.

Yemen

The development of scattered, daily heavy showers is likely to remain focused over the Western Highlands. Activity probably around if not below average for the time of year.

Sudan/South Sudan

Daily heavy showers and thunderstorms are expected through the coming days across South Sudan and the south of Sudan. Probably wettest in parts of South Sudan with 75-125 mm building in a few locations. This is now the latter part of the wet season which means localised flash flooding events are a little more likely where the heaviest showers fall.

Mainland Europe, away from Iberia

Whilst not likely to cause too many impacts, a late-season heatwave is likely for parts of Mainland Europe, developing through the coming weekend, and peaking early next week. Temperatures are likely to be widely some 5-8°C above normal, with parts of France seeing temperatures come 8-12°C above normal. This would bring maximum temperatures into the high 30s°C in places.

Western Central USA

An unusually early cold snap has been affecting parts of western central USA, with some places seeing a temperature drop of 30°C in just a day earlier in the week. The cold temperatures, especially overnight will pose a risk to vulnerable crops. The cold air will retreat northeastwards, and gradually warm out by the end of the week, with temperatures returning to (or above) normal.

Issued at: 100900 UTC **Meteorologists:** Jason Kelly

Global Guidance Unit

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