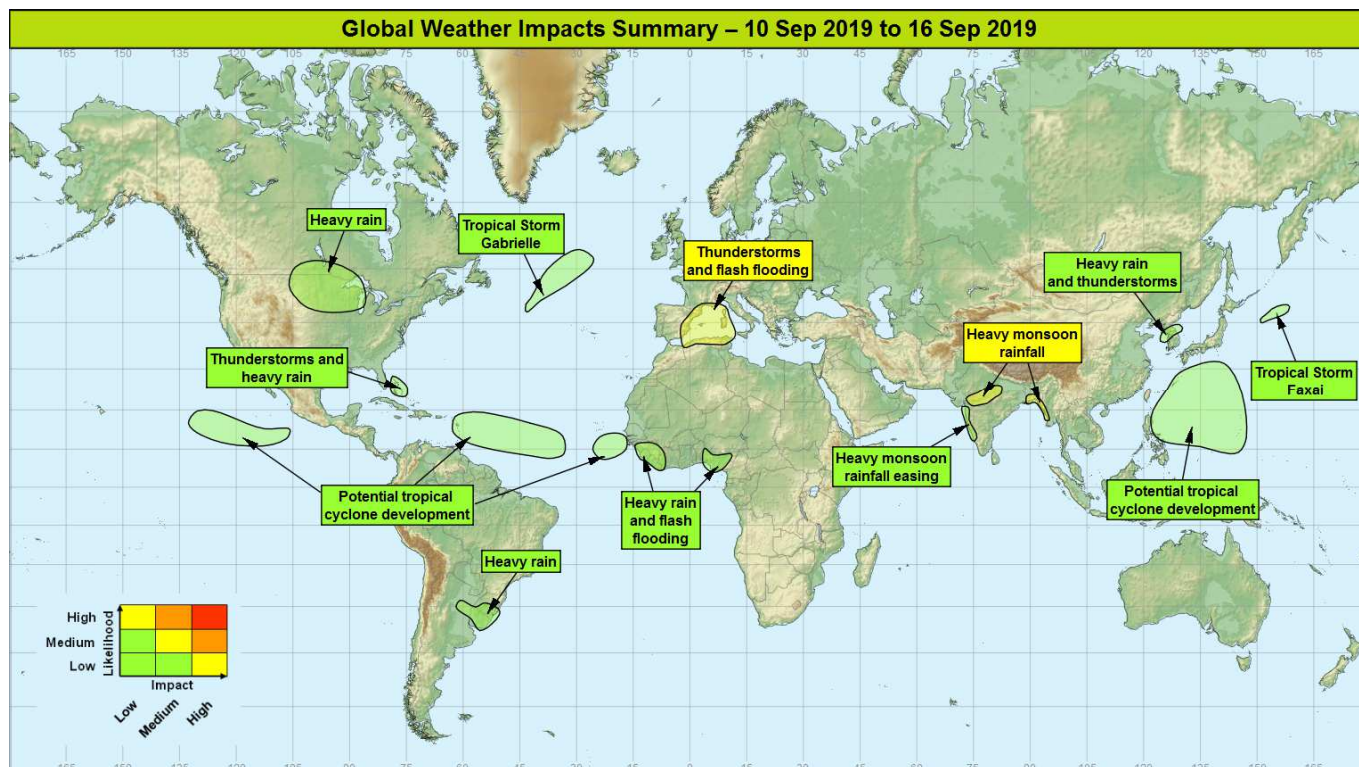


Global Weather Impacts – Tuesday 10th to Monday 16th September 2019

Issued on Tuesday 10th September 2019

HEADLINES

- Thunderstorms bringing an increased risk of flash flooding to the western Mediterranean.
- Heavy monsoon rainfall continues across central India and northern Bay of Bengal coast.
- Heavy rain likely to affect the Bahamas later this week.



DISCUSSION

Tropical Cyclones

Tropical Storm Gabrielle (North Atlantic)

Weather

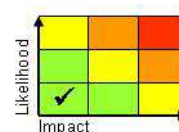
Gabrielle was located around 895 miles west of the Azores and is expected to transition into a mid-latitude depression through Tuesday bringing a further spell of wet and windy weather to the UK and Ireland on Thursday.

Discussion

Gabrielle will move north of the Gulf Stream during Tuesday into much colder water. This coupled with increasing shear and baroclinicity will allow the system to undergo transition into an extratropical low by Tuesday evening.

Expected Impacts

Nil.

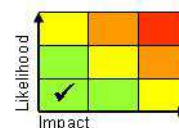


Tropical Storm Faxai (Western North Pacific)

Weather

This cyclone has now cleared Japan and will continue to move northeast across the Pacific Ocean and decay in the next few days.

Discussion



This forecast may be amended at any time

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Cooler SSTs and interaction with a baroclinic zone will conspire to Faxai transitioning into an extra-tropical depression over the next 12 hours, posing no further threat to land as it eventually dissipates over open water through midweek.

Expected Impacts

No further impacts are expected.

The following areas are being monitored for possible tropical cyclone development that may affect land over the next week:

Atlantic Ocean

Weather

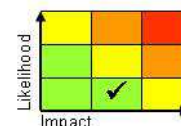
A couple of tropical waves have the potential to develop as they move west across the tropical Atlantic Ocean this week. Should these develop, they would likely track near or across the Leeward Islands over the coming weekend. However, the majority of model output do not develop these features and instead remain areas of enhanced shower and thunderstorm activity that is typical of September in the Caribbean.

Discussion

Further AEWs will move west across the tropical Atlantic, with a low likelihood of these being sources for tropical cyclogenesis. Given a largely unsupportive MJO background state (phase 6), development of these features are expected to be gradual with only statistical models (e.g. SHIPS) and a minority of dynamical models developing tropical cyclones.

Expected Impacts

Some localised flash flooding possible from increase heavy shower and thunderstorm activity from Friday. Very low likelihood of tropical cyclone impacts (heavy rain, damaging winds and storm surge).



Western North Pacific

Weather

An area of shower and thunderstorm activity may briefly develop into a subtropical cyclone as it moves northeast across the Yellow Sea and into the Korean Peninsula during Tuesday, before dissipating. Irrespective of development, heavy rain is likely to affect parts of the Korean Peninsula with 100-200 mm possible in 24 hours, most likely along and near the North-South Korean border.

Additionally, a broad area of shower and thunderstorm activity near Guam may develop into a tropical cyclone through this week as it moves westward over open water. Any development may affect Taiwan, Philippines and/or the Ryukyu Islands by the end of the week.

Discussion

An area of low pressure moving across the Yellow Sea may briefly acquire subtropical cyclone status today but increasing shear and interaction with a pre-existing baroclinic zone will ensure this is short-lived. An equatorial Rossby wave near Guam is another preferred area for development, although model output suggests only gradual organisation and development.

Expected Impacts

Risk of flash flooding leading to damage to property and infrastructure near the North-South Korean border. Additional risk of flash flooding for parts of The Philippines.



Eastern North Pacific

Weather

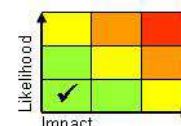
An area of low pressure several hundred miles south-west of Acapulco, Mexico is expected to develop into a tropical storm within the next few days. Any development is expected to remain well away from land.

Discussion

Environmental conditions are favourable for development. However any system will be steered north-westwards over the open ocean.

Expected Impacts

Nil.



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Europe**Western Mediterranean****Weather**

Several episodes of thunderstorms, locally severe, are likely to affect the western Mediterranean and adjoining land areas over the next week. Although the location of the heaviest rainfall is uncertain for a given day, there is potential for some locations to receive 100-150 mm in a few hours in addition to large hail, strong winds and a few tornadoes/waterspouts.

Discussion

An upper trough is expected to disrupt and become cut-off over northern Algeria over the next few days. This combination of abundant low level moisture in the western Mediterranean and steep lapse rates being drawn north from the Sahara will trigger several rounds of severe thunderstorms across the region this week. Near the cut-off low centre and where thunderstorms impinge on favourable terrain, some quasi-stationary thunderstorms are likely which would bring a heightened flash flood risk.

Expected Impacts

Primary hazard is expected to be localised flash flooding bringing a risk to life and damage to property and infrastructure. Landslides and rock-falls are possible in areas of more steeply sided terrain. Frequent lightning, large hail and squally winds may also cause some localised damage to property and infrastructure.

**North America****Northern USA and far southern Canada****Weather**

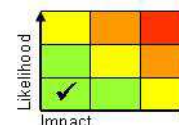
A succession of weather systems are expected to bring heavy rain to parts of the Great Lakes, upper Mississippi Valley and Northern Plains over the next 4 days. During this period, many areas are likely to receive between 50-100 mm locally 200 mm of rain. For context, Minneapolis and Fargo (North Dakota) typically receive 78 mm and 65 mm respectively during the month of September.

Discussion

A longwave upper trough over the western USA is expected to spawn frontal systems to the lee of the Rockies that are most active across northern portions of the USA and the far south of Canada over the next several days. There is good model agreement for the depression currently developing to clear east by Tuesday night before another develops through Wednesday.

Expected Impacts

Cumulative impact of rainfall across the region by the end of the week is likely to lead to some flash flooding and flooding of streams and minor rivers.

**Central America and Caribbean****Lesser Antilles** – See *Tropical Cyclones* section.**Bahamas****Weather**

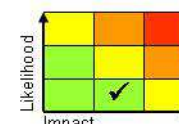
Following the passage of Hurricane Dorian, a broad area of low pressure associated with a tropical wave is expected to bring an area of enhanced shower and thunderstorm activity north-westward across the Bahamas later this week with around 50 to 100 mm of rain expected.

Discussion

Whilst tropical cyclone development from this wave is unlikely (NHC 20%), thunderstorm activity is likely to affect portions of the Bahamas from midweek.

Expected Impacts

Localised flash flooding from heavy downpours.



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**South America****Southern Brazil, northeast Argentina and Paraguay****Weather**

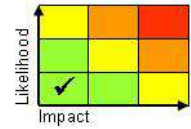
Although not as intense, nor as widespread as on Monday, further heavy rainfall and thunderstorms are expected across this region through the rest of the week. 50-100 mm of rainfall is expected quite widely with isolated accumulations of 150-200 mm possible.

Discussion

A slow-moving frontal zone will be the focus for a similarly slow-moving area of rain to persist across the region through the next 4 days. Activity will increase with the passage of several upper troughs and then ease later in the week as an upper ridge builds over the region.

Expected Impacts

Risk of flash flooding causing some travel disruption and localised damage to property and infrastructure.

**Africa****Northeast Morocco, northern Algeria and northern Tunisia** – See *Europe* section.**West Africa****Weather**

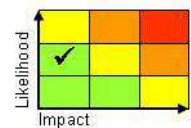
Above average rainfall has affected Sierra Leone and parts of Nigeria during the summer monsoon season and a continuation of this regime is expected over the next week. Frequent thunderstorm activity followed by a few days of drier conditions is expected with some locations receiving a further 100-150 mm in a few hours.

Discussion

African Easterly Wave activity will continue to bring organised bands of deep convection westward through the next week with activity likely contribute to above average rainfall across West Africa. However, the areas identified are those where heightened sensitivity exists following already anomalous rainfall this season.

Expected Impacts

Ongoing enhanced risk of flash flooding and high river levels. Some further damage to property and infrastructure is possible.

**Middle East**

Nil.

Asia**Korean Peninsula, Philippines, Ryukyu Islands and Taiwan** – See *Tropical Cyclones* section.**Central India****Weather**

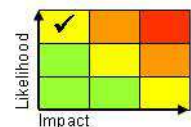
An area of frequent torrential showers and thunderstorms will remain slow-moving across central portions of India through this week. Most of the region, including large cities such as Bhopal and Nagpur, is likely to receive in excess of 100-200 mm over the next 5 days with some locations receiving 500-700 mm during this time. This region typically receives around 185 mm during September.

Discussion

A monsoon low pressure system has formed along the monsoon trough in central India but is expected to remain slow-moving through the next week. The state of Madhya Pradesh has been consistently signalled by model output to receive the highest rainfall totals.

Expected Impacts

Flash flooding events are likely, including in large population centres in Madhya Pradesh. There is also an increasing likelihood of river flooding and landslides.



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Western India, southern Bangladesh and western Myanmar**Weather**

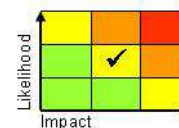
Frequent intense showers and thunderstorms are expected to continue, producing up to 150 mm in a 24-hour period, with up to 200-400 mm accumulating in places this week. This would result in the average monthly rainfall falling in a week in places. The rainfall is likely to affect SE Bangladesh, including Cox's Bazar. The rain will tend to ease later this week and into the weekend, initially across the Western Ghats, then more widely.

Discussion

A strong monsoonal flow will bring heavy rainfall to southern Myanmar and southern Bangladesh, due to the persistence of a monsoon low pressure system across central India. Southwest-facing upslopes will be most threatened by enhanced rainfall due to orographic uplift of the very moist airmass. The strong monsoonal flow will gradually ease by the weekend.

Expected Impacts

Flash flooding events are likely, with an increasing likelihood of river flooding and landslides.

**Australasia**

Nil.

Additional information

Nil.

Issued at: 100715 UTC

Meteorologists: Brent Walker / Mark Sidaway

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