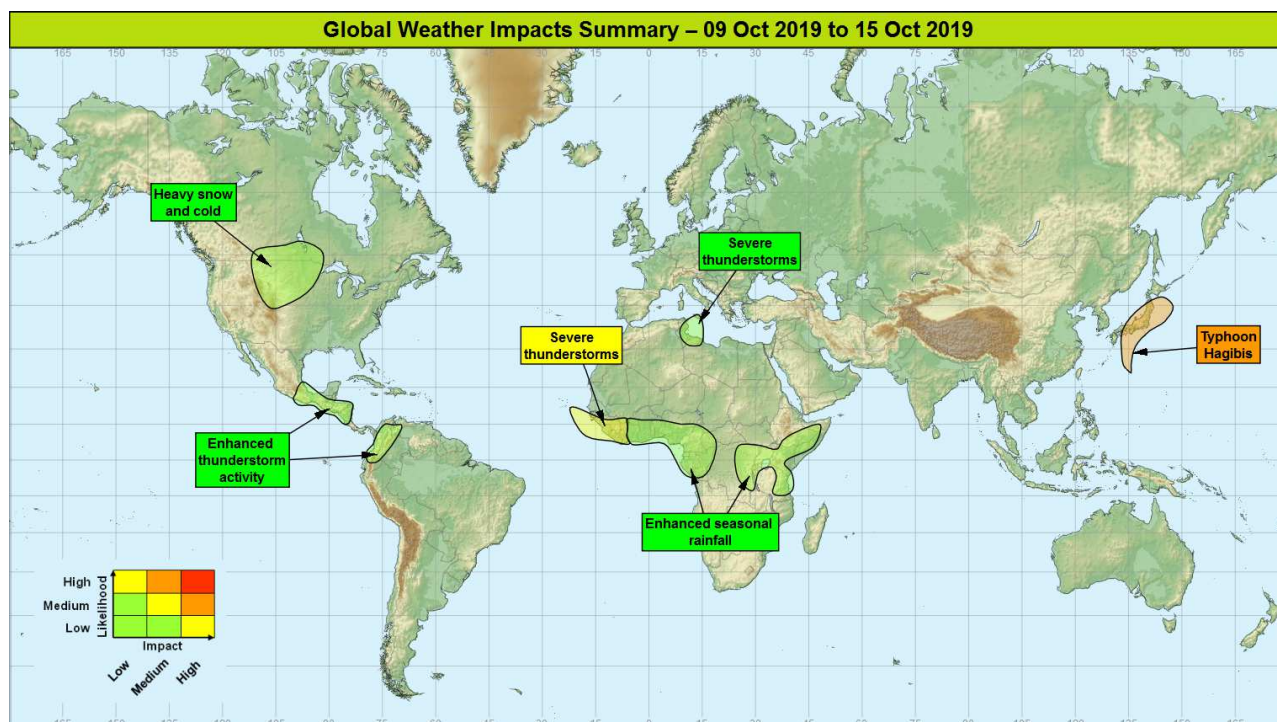


Global Weather Impacts – Wednesday 9th to Tuesday 15th October 2019

Issued on Wednesday 9th October 2019

HEADLINES

- Typhoon Hagibis expected to impact Japan this weekend.
- Heavy monsoon rainfall continues across portions of equatorial Africa.



DISCUSSION

Tropical Cyclones

Typhoon Hagibis (Western North Pacific)

Weather

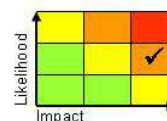
Hagibis was located around 900 miles south of Tokyo on Wednesday morning with estimated 10 minute maximum sustained winds of 120 mph with gusts of 170 mph.

Hagibis is expected to continue moving north, then northeast, towards mainland Japan into the weekend, with an increasing likelihood of landfall along the southeast Honshu coast, not too far from Tokyo, on Saturday. Whilst some weakening is expected before landfall, Hagibis is still expected to be have sustained winds of around 90 mph with gusts of 135 mph at landfall. Additionally, Hagibis is expected to bring very heavy rain along its path with 100-200 mm locally 450 mm possible (so up to twice the average October rainfall in a 24-36 hour period).

Discussion

Hagibis largely maintained its identity as a large and violent typhoon through Tuesday. Imagery suggests that there have been eye-wall replacement cycles, which likely led to some fluctuation in strength. As Hagibis moves further north, it should encounter increasing vertical shear, as well as slightly cooling SSTs. These combined with further eye-wall replacement cycles should lead to a slow weakening of the storm as it approaches Japan.

Expected Impacts



This forecast may be amended at any time

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There is a high likelihood of flash flooding and a significant likelihood of damaging winds and coastal flooding from a large storm surge. There is a lower, but still significant of large scale flooding around the Tokyo region. Whilst the location and extent of impacts remain rather uncertain there is an increasing likelihood of Hagibis affecting southern Japan this weekend. Impacts could be exacerbated with a large number of tourists in this area due to the ongoing Rugby World Cup and Japanese Grand Prix.

Europe

Southern Italy (Sicily), Malta, Tunisia and northern Libya

Weather

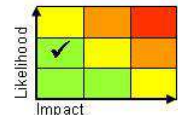
Thunderstorms will continue across the region over the next day or two bringing locally large amounts of rain (50-75mm in a few hours) and isolated large hail. Furthermore, strong to gale force northerly winds are likely to result in rough seas. Conditions should slowly improve later in the week.

Discussion

A major upper low continues to engage the warm and moist airmass across the central Mediterranean and is generating clusters of locally severe thunderstorms. The trough disrupted on Tuesday, with the mobile portion accelerating east, taking thunderstorms across Greece and into Turkey before these dissipated overnight. The slow-moving cut-off should sink S across Tunisia and Libya allowing thunderstorms to persist in these areas for another day or so. A developing easterly flow beneath the upper cold pool helping to focus activity into coastal areas.

Expected Impacts

Localised flash flooding, isolated hail/lightning and minor wind damage, some disruption to transport and utilities possible.



North America

Northern Rocky Mountains and High Plains

Weather

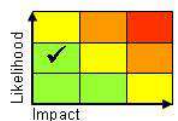
A strong cold front is now moving southeast across the northern Rockies bringing temperatures 15-20 °C below average across the region. Some record minimum temperatures are possible before temperatures moderate later in the week. Heavy snow is expected to accompany this change with over 30 cm of snow possible with lying snow possible as far south as Denver by tomorrow (Thursday).

Discussion

A continuation of the trough-ridge pattern across the USA will maintain a strong contrast in temperatures with a renewed plunge of Arctic air across central Canada into portions of northern USA. Along the strong baroclinic zone, a mixture of precipitation types is expected, with snow falling in the cold air on the western flank, whilst further heavy rain with embedded thunder is expected in the warm air extruded north from the Southern Plains.

Expected Impacts

Similar to that seen last week, some transport and utilities disruption is likely in the region.



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Central America and Caribbean

Parts of Central America, northwest Columbia and Ecuador

Weather

Shower and thunderstorm activity is expected across the tropical Pacific Ocean coastline, maintaining the possibility of locally heavy downpours producing 50-75 mm of rainfall in a few hours. The largest cumulative rainfall totals are expected to be across portions northwest Colombia which has already been impacted by flooding in the past week.

Discussion

A series of tropical waves will be supportive of enhanced convection across Central America.

Expected Impacts

Increased risk of flash flooding with landslides also more likely in areas of steeply sided terrain. Further river flooding is possible, especially in parts of northern and western Colombia.



South America

Colombia and Ecuador – See *Central America and Caribbean* section.

Africa

Parts of West Africa

Weather

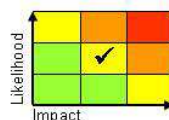
Shower and thunderstorm activity is expected to be more frequent than normal over the next 7 days. Severe thunderstorms will tend to bring 30-50 mm of rain within a few hours in places and where they become more organised could produce up to 100 mm. Through the week the wettest areas could see 250-300 mm of rain.

Discussion

Whilst the West African Monsoon is slowly withdrawing, AEW activity will continue to enhance thunderstorms activity in this area with a consistent signal for positive rainfall anomalies from NWP. This comes at a time when river levels are approaching an annual maximum and is therefore when flooding impacts are considered most likely. Toward the end of the week, the areas of deep convection could get as far west as the Cabo Verde, impacting routings through the islands.

Expected Impacts

Increased likelihood of flash and river flooding along with land/mudslides in areas of more steeply-sided terrain. Antecedent conditions contributing to increased sensitivity.



Parts of East Africa

Weather

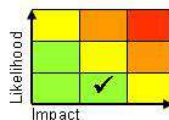
The rainy season is now underway and whilst heavy showers and thunderstorms are typical in these areas, activity is likely to be heavier than usual in parts of this region over the coming week. Severe thunderstorms will tend to bring 30-50 mm of rain within a few hours in places and where they become more organised could produce up to 80 mm. Through the week the wettest areas could see 200-250 mm of rain.

Discussion

A strong positive Indian Ocean Dipole event is now underway. This is likely responsible for the signal for above average rainfall in these areas over the coming week. Based on the strength of the positive IOD event 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

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



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Daily Global Weather Impacts Assessment

Middle East

Nil.

Asia

Japan – See *Tropical Cyclones* section.

Australasia

Nil.

Additional Information

The Indian Summer Monsoon has yet to retreat from the Pakistan-Indian border region. Whilst this process should have started at the beginning of September and the withdrawal now lie across central and northeast India, the current withdrawal is regarded as the latest ever commencement. That said, a rapid withdrawal towards the nearer climatology is expected to take place over the next few days. The 2019 Indian Summer Monsoon (June to September) has been the third wettest on record (back to 1901), and the wettest since 1994. September was the wettest September across India in 102 years.

Issued at: 090700 UTC **Meteorologists:** Jason Kelly/Paul Hutcheon

Global Guidance Unit

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