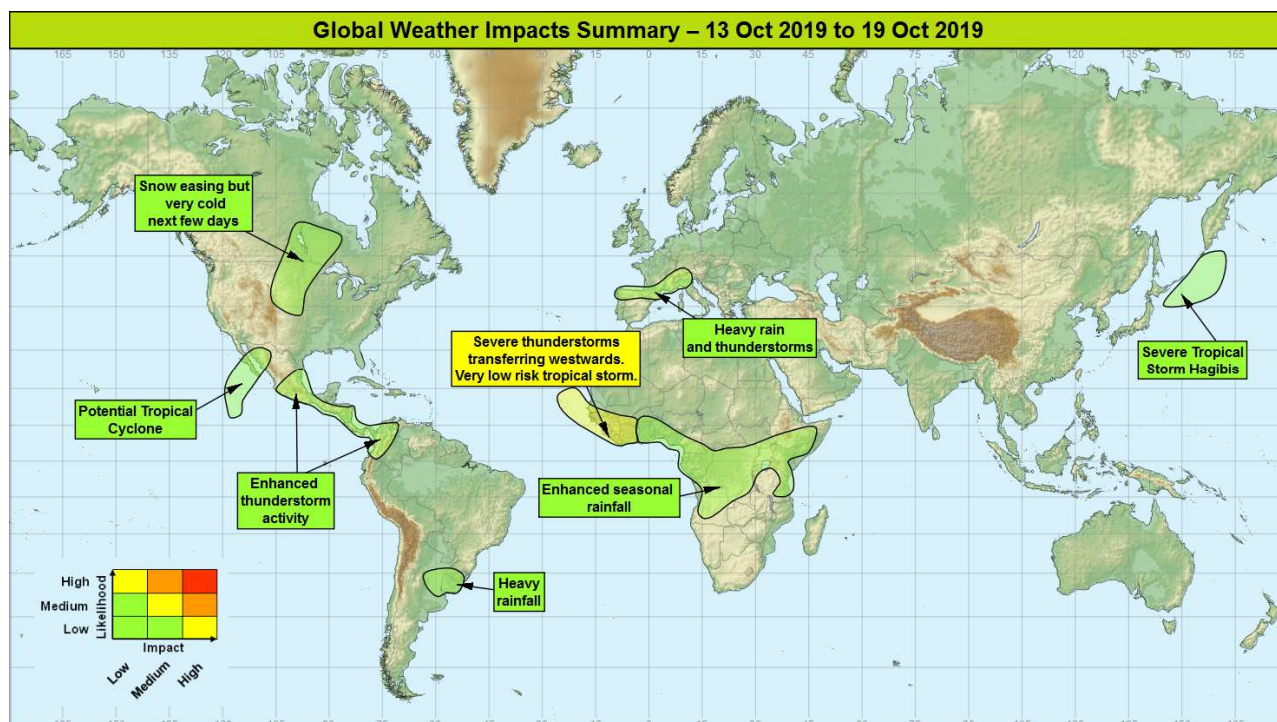


Global Weather Impacts – Sunday 13th to Saturday 19th October 2019

Issued on Sunday 13th October 2019

HEADLINES

- Severe Tropical Storm Hagibis now moving away from Japan.
- Heavy monsoon rainfall continues across portions of west equatorial Africa.



DISCUSSION

Tropical Cyclones

Severe Tropical Storm Hagibis (North-western Pacific)

Weather

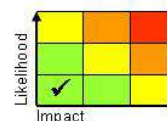
Hagibis made landfall on the Izu Peninsula of Honshu on Saturday morning UK time, then tracked inland passing close to Tokyo on Saturday afternoon, before accelerating north-eastwards across Honshu while weakening. It is now over the north-west Pacific and poses no further direct threat to land.

Discussion

Hagibis will complete extratropical transition soon. Now embedded in the mid-latitude flow the system will accelerate away into the northern Pacific, likely decaying over the Bering Sea midweek.

Expected Impacts

Other than residual large swells along some coasts on northern Japan, no further impacts to land are expected. The full impacts from Hagibis are yet to emerge, however the system produced a gust of 100 mph at Tokyo Airport. Widely 200-300 mm of rainfall occurred along its path, with peak event totals of over 900 mm recorded at Hakone, Kanagawa Prefecture.



This forecast may be amended at any time

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Other potential impactful tropical cyclones:

Eastern North Pacific

Weather

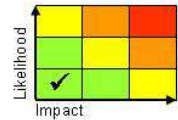
There is a high likelihood of imminent tropical cyclone development to the southwest of the Baja California peninsula, with any developing system then likely to track northeast across the peninsula and into northern Mexico early next week. There is the chance of 100-200mm of rain locally from this system.

Discussion

While models all support a development in this area, significant development looks unlikely due to increasing upper level winds and cooler sea surface temperatures.

Expected Impacts

Increased risk of flash flooding and mudslides, particularly over the rugged Mexican terrain.



Cabo Verde –See *Africa* section.

Europe

Northern Portugal, Northern Spain, Southern France Switzerland and North-western Italy

Weather

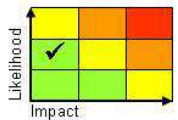
Heavy, persistent rainfall is expected to become established across north-west Iberia on Sunday, before the whole system moves eastwards and breaks out into heavy, locally violent thunderstorms with torrential downpours and gusty winds. Some locations will see 150-250mm of rain through the early part of next week, often coming in very heavy downpours bringing 50-75mm in the space of a few hours.

Discussion

An upper trough will invigorate the waving baroclinic zone across NW Iberia on Sunday while further east elevated instability could be released within the warm plume. As the system moves east it is likely to disrupt and form a cut off upper vortex, which will bring MCS developments to S France in particular. It could also then allow for some more prolonged rainfall and thunderstorms across the broader region should it become slow moving.

Expected Impacts

There is the potential for flash flooding across the region, although this likely fairly localised. Risk of landslides in mountainous areas. Disruption to transport is probable. Disruption to power/other utilities likely, particularly given frequent lightning in places.



North America

Central Canada, Central northern USA

Weather

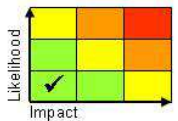
A major early season "winter storm" has brought very heavy snowfall to parts of Central Canada and Central northern USA, with around 50 cm of snow reported across parts of North Dakota. The snow should gradually peter out through Sunday and winds should begin to ease.

Discussion

The upper vortex and coincident surface low should gradually ease away to the east through Sunday. A footprint of very cold air drawn south in its wake will maintain anomalously low temperatures across the region well into next week.

Expected Impacts

Impacts from the snow and strong winds should gradually abate through Sunday.



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Central America and Caribbean**Southern and central 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, and weekly accumulation of up to 250 mm (around the average for the month of October). From the middle of next week the focus for the heaviest rainfall could extend further north into parts of Mexico.

Discussion

A series of tropical waves will be supportive of enhanced convection across parts of Central America and the northwest of South America. There is the potential for weak tropical cyclonic circulation to develop across / around southern Mexico (most likely a Central American Gyre) that could produce intense rainfall early next week.

Expected Impacts

Increased risk of flash flooding with landslides also more likely in areas of steeply sided terrain. Further river flooding is possible.

Baja California, Mexico – See *Tropical Cyclones* section.

South America

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

Parts of Uruguay, northeast Argentina and far south of Brazil**Weather**

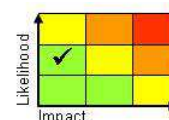
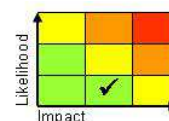
Outbreaks of rain with the potential for thunderstorm activity is expected to continue for the next couple of days before easing somewhat. Locally heavy downpours could bring 50-100 mm in one day, with the wettest areas perhaps seeing 150-200 mm in a couple of days. Activity in the region may increase again toward the end of the week.

Discussion

A frontal zone is expected to be active over the region through Sunday and into Monday, before lifting northwards and weakening towards the middle of next week. There is the additional potential for the moist subtropical plume to its north to destabilise and allow development of severe thunderstorms with a risk of hail. There is the potential for activity to increase across a similar region toward the end of the week, although models are not united in this signal at this time.

Expected Impacts

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



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Africa

Parts of West Africa and Cabo Verde

Weather

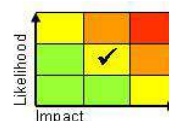
Shower and thunderstorm activity is expected to be more frequent than normal over the next couple of days. Severe thunderstorms will tend to bring 30-50 mm of rain within a few hours in places and where they become more organised could produce up to 100-150 mm in a 24 hour period.

Discussion

The West African Monsoon has been slower to withdraw than climatology would suggest. A very active African Easterly Wave (possibly inertio-gravity wave) will bring an area of enhanced thunderstorms activity westwards through this region of West Africa through the next couple of days. This comes at a time when river levels are at an annual maximum and is therefore when flooding impacts are considered most likely. As this wave emerges into the Atlantic there is a signal from models for a potential tropical low to form which may bring very heavy rainfall close to Cabo Verde for a time.

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. Low risk of torrential rainfall, strong winds and flash flooding to Cabo Verde.



Parts of East and Central Africa

Weather

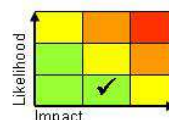
Whilst heavy showers and thunderstorms are typical in these areas, activity is likely to be heavier than usual in parts of this region over the coming week. Severe thunderstorms will tend to bring 30-50 mm of rain within a few hours in places and where they become more organised could produce up to 80-120 mm in a day. Through the week the wettest areas could see 200-250 mm of rain, which would be the equivalent of a month's rainfall at this time of year.

Discussion

A strong positive Indian Ocean Dipole event is now underway. This is likely responsible for the above average rainfall signal 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.



Middle East

Nil.

Asia

Japan – See *Tropical Cyclones* section.

Australasia

Nil.

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Additional Information

India: The Indian Meteorological Department on Wednesday announced the commencement of the withdrawal of the Southwest Monsoon, which has now progressed out of much of northern India. The 2019 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.

Atlantic: Subtropical Storm Melissa formed on Friday over the western Atlantic, but is not expected to directly affect land.

Pacific: Tropical Storm Ema formed to the west of Hawaii on Saturday, but is not likely to affect any land.

USA: Wildfires continue across California, although winds have now eased enabling fire-fighters to make progress in their containment efforts.

Issued at: 130335 UTC **Meteorologists:** Mark Sidaway / D J Harris

Global Guidance Unit

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