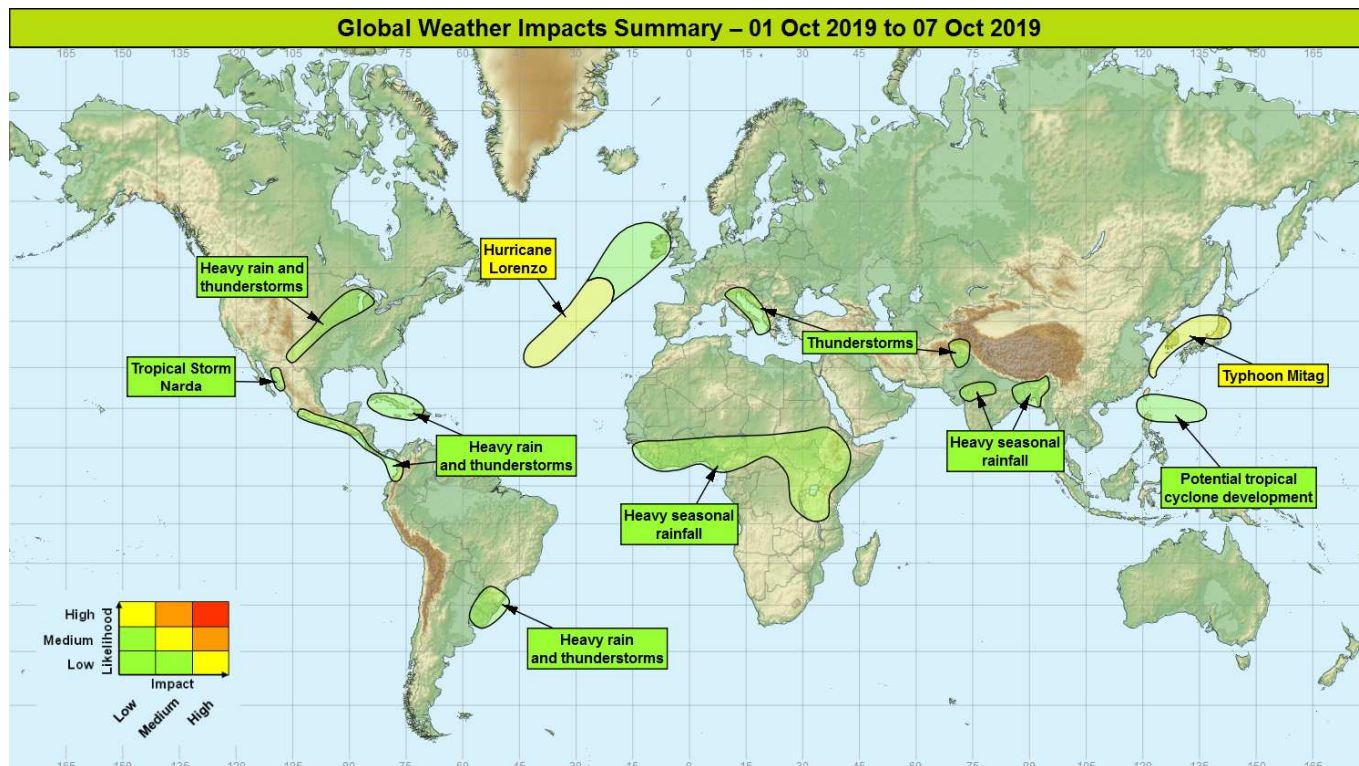


Global Weather Impacts – Tuesday 1st to Monday 7th October 2019

Issued on Tuesday 1st October 2019

HEADLINES

- Hurricane Lorenzo expected to impact the Azores on Wednesday.
- Typhoon Mitag to bring impacts to eastern China and Korean Peninsula over the next 36 hours.
- Heavy monsoon rainfall affecting parts of India and Bangladesh maintains heightened flood risk.



DISCUSSION

Tropical Cyclones

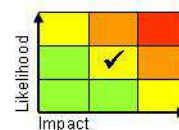
Hurricane Lorenzo (North Atlantic)

Weather

Lorenzo was located around 700 miles southwest of Ilha das Flores, Azores on Tuesday morning with maximum sustained winds of 105 mph, equivalent to category 2 on the Saffir-Simpson scale. Lorenzo is expected to continue moving northeast with the eye likely passing close to or across the westernmost islands of Corvo and Flores on Wednesday morning. Tropical storm force winds (sustained winds exceeding 39 mph) are expected to affect the entire archipelago with hurricane force winds (sustained winds exceeding 73 mph) affecting the western islands. Some locally heavy rain is possible with up to 50-100 mm close to the centre of Lorenzo. Whilst conditions will improve here later on Wednesday, the remnants of the system may bring a spell of wet and windy weather to portions of the British Isles on Thursday.

Discussion

Lorenzo continues to weaken slowly as drier air continues to be pulled into the circulation and the system moves over progressively cooler waters. Over the next 24-36 hours, the interaction with an approaching trough, cold front and increasing southwesterly shear will help transition Lorenzo into an extratropical low. There is now increasing confidence that the remnants of Lorenzo will affect the British Isles later this week (see Medium Range guidance products).



This forecast may be amended at any time

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Expected Impacts

Across the Azores, strong winds and large waves are likely to disrupt inter-island transport and communication. Some damage to property and infrastructure is likely, particularly in the westernmost islands of Corvo and Flores. Lorenzo is also producing large swells across much of the North Atlantic basin bringing dangerous conditions to beaches along adjoining coastlines.

Typhoon Mitag (Western North Pacific)

Weather

Mitag was located around 180 miles south-southeast of Shanghai on Tuesday morning with maximum sustained winds of around 75 mph, equivalent to category 1 on the Saffir-Simpson scale. Mitag is expected to move away from the Zhejiang coast through Tuesday afternoon before likely making landfall in South Korea on Wednesday with sustained winds of around 60 mph. Whilst the system is likely to continue weakening as it transitions into an extratropical depression over the Sea of Japan, gale force winds are expected to affect portions of northern Honshu on Friday. Heavy rainfall is expected to affect the far east of mainland China and South Korea in particular with widely 100-200 mm locally 400 mm falling in 24-36 hours.

Discussion

Continued land interaction, cooler sea surface temperatures and increasing vertical wind shear will conspire to weaken Mitag as it grazes the eastern coast of China on Tuesday. However, there is good model agreement in the system tracking towards South Korea and across Honshu by Friday whilst it undergoes extratropical transition.

Expected Impacts

Flash flooding is likely close to the centre of Mitag, especially across coastal eastern China and South Korea. Strong winds and large waves will likely cause some coastal flooding as well as air/sea transport and some damage to temporary/poorly-built property and infrastructure.



Tropical Storm Narda (Eastern North Pacific)

Weather

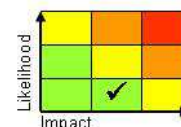
Narda is expected to continue grazing the western coast of mainland Mexico through the next couple of days. The main threat posed by Narda continues to be very heavy rainfall with potential for this system to produce event totals of around 350-400 mm in a few locations. Narda is likely to move sufficiently far inland during Wednesday to dissipate.

Discussion

Continued land interaction will preclude intensification of Narda over the next 36 hours before it is likely to dissipate as the centre moves further inland across western Mexico. Nevertheless, the large amount of moisture being advected northward over Mexico on the eastern side of the circulation is producing significant rainfall and will continue to do so over the next day or so.

Expected Impacts

Very heavy rainfall, particularly in the states of Sinaloa over the next 24 hours, is expected to lead to flash flooding and mudslides, particularly in regions of mountainous terrain.



The following area is currently being monitored for potential tropical cyclone development affecting land:

Philippine Sea

Weather

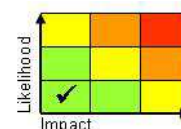
A disorganised area of shower and thunderstorm activity currently in the Philippine Sea is expected to move west towards southern Taiwan and northern Philippines by Friday with a low likelihood of developing into a tropical storm. Irrespective of development, there is potential for heavy downpours to produce 100-150 mm in 24 hours.

Discussion

An equatorial Rossby wave currently lying several hundred miles east of Luzon has a low probability of developing into a tropical cyclone as it moves slowly west later this week.

Expected Impacts

Increased likelihood of flash flooding across northern portions of Luzon and Taiwan later this week. Very low likelihood of tropical cyclone impacts (additional strong winds and high seas).



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**Europe**

Azores – See *Tropical Cyclone* section.

Adriatic Sea region**Weather**

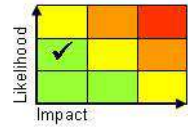
Organised and locally severe thunderstorms are likely to develop across northern portions of the Adriatic and adjoining land areas through Wednesday and move southeast into Greece on Thursday. Whilst drier conditions are likely to follow through Friday and Saturday, further heavy rain and thunderstorms are likely to affect the region from Sunday. The heaviest rainfall is expected across the eastern Adriatic coast where widely 30-60 mm of rain is possible in 24 hours with locally 150-200 mm possible. Large hail, frequent lightning, strong winds and one or two tornadoes are additional hazards.

Discussion

An extending upper trough will engage a plume of high WBPT ahead of cold front moving southeast across the region through the second half of the week. The cold front will act to augment thunderstorm activity triggered ahead of it whilst high ground along the eastern Adriatic coast will act to enhance rainfall accumulations here. As the upper trough disrupts through Friday, activity should wane before a repeat evolution is possible through Sunday and Monday.

Expected Impacts

The primary impact is expected to be from flash flooding causing localised damage to property and infrastructure as well as posing a threat to life. Other hazards including hail, lightning and strong winds could also produce similar impacts.

**North America****Central USA****Weather**

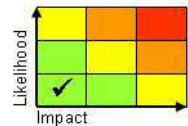
A slow-moving weather system is expected to bring further heavy rain and thunderstorms across the central states along a broad corridor from New Mexico to Michigan through the next 2-3 days. Many locations are likely to receive 20-40 mm of rain but isolated event totals of 100 mm are possible across the Midwest and Great Lakes regions in particular. Behind this system, below normal temperatures will continue across a large portion of the west, whilst above normal temperatures will continue across the east until later in the week.

Discussion

A high amplitude trough-ridge pattern across North America will continue to extrude subtropical moisture northward ahead of a slow-moving cold front across the central USA on Tuesday. With the upstream pattern encouraging mobility, the trough should gradually relax through midweek leading to a more mobile pattern developing by the weekend and for temperatures either side of the front to moderate.

Expected Impacts

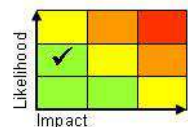
Main impact is expected to be from flash flooding although localised impacts from hail, strong winds and one or two tornadoes is also possible. Across the northwest, significantly below average temperatures may affect sensitive vegetation, whilst in the east high heat indices may have an adverse affect on vulnerable population groups.

**Central America and Caribbean**

Western Mexico – See *Tropical Cyclone* section.

Greater Antilles**Weather**

Shower and thunderstorm activity is expected to be more frequent than normal producing locally torrential downpours across Cuba and Hispaniola in particular. Isolated rainfall accumulations of 30-50 mm are possible in a few hours, with some locations receiving 150-200 mm through the next 3-4 days.



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Discussion

A slow-moving upper trough will maintain a focus for scattered to frequent thunderstorm activity over western portions of the Caribbean through midweek. As the large upper high cell across the southeast USA declines, convection should gradually return to nearer normal over the weekend.

Expected Impacts

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

Southern Mexico, Guatemala, El Salvador, Nicaragua, Costa Rica and western Colombia

Weather

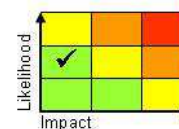
Shower and thunderstorm activity is expected to remain enhanced across the tropical Pacific Ocean coastline through the remainder of this week. This will maintain the possibility of locally heavy downpours producing 50-75 mm of rainfall in a few hours. The largest cumulative rainfall totals are expected to be across portions of western Colombia.

Discussion

A combination of tropical waves will be enhanced by an MJO background state (phase 1) supportive of enhanced convection across Central America over the next several days. As the MJO progresses into the Indian Ocean, convection should return to nearer normal next week.

Expected Impacts

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



South America

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

Uruguay and southern Brazil

Weather

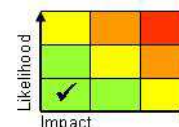
A slow-moving area of heavy rain and thunderstorms is expected to affect the region through the next week. Whilst the potential for very heavy rainfall (localised 24-hour accumulations of around 150 mm) is expected to decrease as the band of rain shifts slowly north from Uruguay into southern Brazil by Thursday, isolated totals of 50-100 mm remain possible here.

Discussion

A warm plume from the tropics will aid frontogenesis along a slow-moving baroclinic zone as the narrowing WBPT plume finds itself beneath a jet left entrance. Profiles exhibit significant elevated instability within the warm plume, with heavy, thundery showers developing and a threat of large hail. Rain associated with the developing cold front will be persistent but generally less heavy as the whole system slowly moves northeastward across the region.

Expected Impacts

Increased risk of flash flooding, particular in the larger urban areas, and localised hail and wind damage.



Africa

Equatorial Africa

Weather

Shower and thunderstorm activity is expected to be more frequent than normal across a large portion of equatorial Africa over the next week. Up to 100 mm of rain could fall in a few hours in a few places, with some localised totals of up to 250 mm are possible through the next week which is close to what is normally seen over an entire month.

Discussion

With the active phase of the MJO moving through Phase 1 across Africa, it is unsurprising that this has resulted in period of above average rainfall across much of the equatorial region. Whilst the West African Monsoon has begun to retreat across the Sahel, additional late season rainfall in this region comes at a time where river levels are approaching an annual maximum and is where flooding impacts are considered most likely.



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Expected Impacts

Increased likelihood of flash and river flooding along with land/mudslides in areas of more steeply-sided terrain. These impacts are most likely in northern parts of the region highlighted due to antecedent conditions over recent weeks contributing to increased sensitivity.

Middle East

Nil.

Asia

Eastern China, Korean Peninsula, Japan and Philippines – See *Tropical Cyclones* section.

Northeast Afghanistan and northern Pakistan

Weather

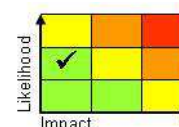
Several episodes of heavy showers and thunderstorms are expected to affect the region through to Friday with the potential for locally severe thunderstorms to produce a combination of heavy rain (locally 30-50 mm in a couple of hours), large hail and strong winds.

Discussion

A succession of shortwave upper troughs are expected to engage the receding seasonal higher WBPT plume across the region leading to the triggering of several rounds of locally severe thunderstorms. The environment is defined by moderate to high instability and directional wind shear which supports upscale development and organisation, as well as the potential for isolated supercells. Forecast CAPE across Pakistan is supportive of large (>5 cm hail).

Expected Impacts

Flash flooding, large hail and strong winds will pose a threat to property and infrastructure and could cause damage to crops.



Northeast India and Bangladesh

Weather

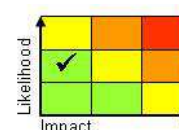
Summer monsoon rainfall is expected to remain enhanced through the next week although the intensity and frequency of downpours is likely to decrease over the next 2-3 days. Nevertheless, many locations are likely to receive a further 50-100 mm over the next week with isolated accumulations of 200-300 mm.

Discussion

The summer monsoon shows no imminent signs of retreat across India and will likely be welcome in the long term as rainfall during the season so far has been below average across parts of northern India. However, in the shorter term, this additional rainfall is likely to cause further flooding and landslide impacts over the coming days. As we are nearing the seasonal maximum in river levels and well-wetted soil, the region is sensitive to further heavy rainfall.

Expected Impacts

Increased likelihood of flash and river flooding is expected, with this likely to add to ongoing flooding currently along larger rivers in the region (including the Ganges). Where terrain is steep, landslides are also increasingly likely.



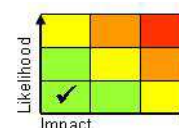
Northwest India

Weather

A monsoon low pressure system currently located over western Madhya Pradesh is expected to bring further frequent heavy showers and thunderstorms to parts of northwest India through Tuesday. As this system continues to move east, rainfall amounts will decrease through midweek.

Discussion

A monsoon low pressure system has been responsible for bringing a renewed uptick in rainfall over the region. However, there is good model agreement for this to become a weaker feature as it moves across northern India over the next couple of days.



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Expected Impacts

Increased risk of surface water and river flooding along the track of this system.

Australasia

Nil.

Additional Information

Nil.

Issued at: 010700 UTC **Meteorologists:** Matthew Lehnert and Laura Ellam **Global Guidance Unit**

This forecast may be amended at any time

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