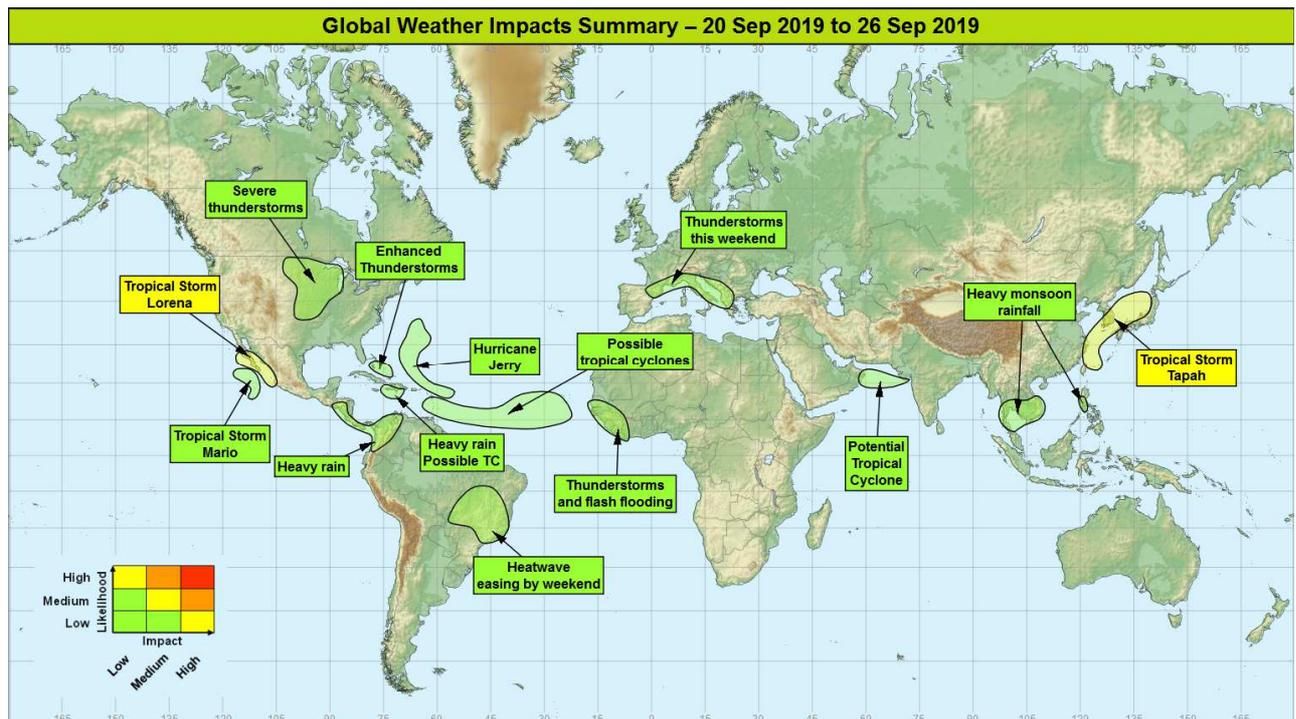


Global Weather Impacts – Friday 20th to Thursday 26th September 2019

Issued on Friday 20th September 2019

HEADLINES

- Tropics very active with a number of named systems and areas of interest.
- In the short term, Tropical Storm Lorena and Tropical Storm Tapah are the most threatening for land areas.
- Longer term, Hurricane Jerry could affect Bermuda by the middle of next week.



DISCUSSION

Tropical Cyclones

Hurricane Jerry – North Atlantic Weather

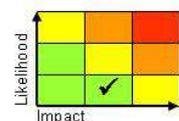
At 0600 UTC, Hurricane Jerry was located 340 miles east of the Leeward Islands with maximum sustained winds of 105 mph. The system is expected to maintain this intensity as it tracks west-northwest close to the northernmost Leeward Islands during Friday and Saturday. The track beyond this is more uncertain, although it currently looks most likely to head out into the open North Atlantic towards Bermuda by the middle of next week.

Discussion

Jerry has been showing increasing organisation over the past 48 hours, and is now a category 2 hurricane. Increasing shear should slowly weaken Jerry, but the cyclone should remain a hurricane as it moves out to the open waters of the North Atlantic. There remains an increasing spread in tracks beyond this in the ensemble data but the majority of solutions suggest Jerry will re-curve north and pass close to Bermuda around the middle of next week, whilst maintaining or even possibly temporarily strengthening through baroclinic processes as it comes under the influence of at least two low-latitude upper troughs.

Expected Impacts

Main impact will be flash flooding across the northernmost of the Leeward Island chain. Winds may be strong enough to cause some minor damage.



This forecast may be amended at any time

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Tropical Storm Lorena – Eastern North Pacific

Weather

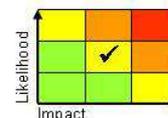
At 0600UTC, Tropical Storm Lorena was located around 110 miles east-southeast of Cabo San Lucas, Mexico with maximum sustained winds of around 65 mph. The behaviour of Lorena over the next few days is very uncertain. The most probable scenario is that Lorena will re-strengthen into a hurricane and move slowly along the Baja California peninsula. This cyclone has the potential to bring large amounts of rain to the Mexican states of Michoacan, Colima and Jalisco, with 200 to 400 mm falling here.

Discussion

Lorena is a small cyclone, and will be close to the rugged Mexican coastline over the next couple of days. Modest strengthening will probably occur but this is largely dependent on the track which will be influenced by the upper ridge over Mexico and the close proximity of Tropical Storm Mario. Some solutions fail to make landfall, allowing Lorena to move west away from Baja California and dissipate. Further adjustments to the predicted patch of this cyclone are likely in the coming days.

Expected Impacts

Flash flooding and mudslides are likely across the Mexican coastline, south of the cyclone. Locally damaging winds are possible near the coast. Heavy rain may affect Baja California over the weekend should Lorena track in this direction.



Tropical Storm Mario – Eastern North Pacific

Weather

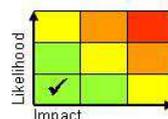
At 0300 UTC, Tropical Storm Mario was located around 365 miles south of the southern tip of Baja California with maximum sustained winds of 65 mph. Mari will continue to move north, before turning northwest away from land early next week. Currently this storm is not expected to make landfall, but could bring further heavy rain to parts of Baja California.

Discussion

Environmental conditions are favourable for intensification over the next few days, with a Mario possibly becoming hurricane for a time, before the system then weakens early next week through a combination of increasing shear and colder water. There is some uncertainty with the track of Mario by early next week and whilst most solution keep the cyclone offshore, there is a minority which allow landfall next week across the Baja California peninsula.

Expected Impacts

Currently no hazards are expected over land. However, should Mario move a little closer to the Mexican coastline next week, there is the potential for heavy rainfall and flash flooding across Baja California.



Tropical Storm Tapah – Western North Pacific

Weather

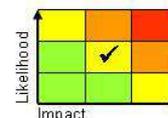
Tropical Storm Tapah formed on Wednesday night and is forecast to gradually track northwestwards across the East China Sea, possibly strengthening into a Typhoon (10-minute sustained winds of 64mph). Over the systems path strong winds and heavy rainfall are expected to skirt by eastern Taiwan and the east coast of China, before more directly affecting Japan's southernmost islands on Friday, and then mainland parts of Japan and South Korea over the weekend where 150-300mm of rain is expected.

Discussion

As Tapah tracks northwards environmental conditions are favourable for gradual development of the system into a severe tropical storm, then perhaps a typhoon. As the system approaches the Sea of Japan it will be picked up by a sharp upper trough in the mid-latitude jet stream and undergo transition to an extra-tropical cyclone.

Expected Impacts

Strong winds will generate rough seas in the East China Sea and later in the Sea of Japan, and perhaps cause some disruption across parts of Japan and South Korea. Heavy rain will enhance the risk of flooding and landslides where terrain is steep.



The following areas are being monitored for potentially impactful developments through the forecast period:

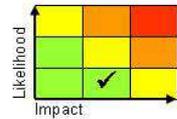
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Caribbean Sea/Central/E Atlantic Weather

Three further potential cyclone development areas have been identified, with these only having fairly low chances of development due to the forecast of unfavourable environmental conditions in their vicinity. The first feature located just south of Hispaniola, will likely bring heavy rainfall to the island over the coming couple of days with locally 100-150mm possible, the second currently over the Central Atlantic should pass close to the Lesser Antiles early next week and likewise may bring heavy rainfall and strong gusty winds. The third feature is the most likely (60% chance of development in the next 5 days) and is situated near the Cape Verde Islands.



Discussion

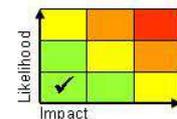
Three AEWs are moving westwards across this region associated with areas of enhanced convection. These features are expected to be affected by forecast strong vertical windshear, which should inhibit development of each feature. However they need watching carefully as any reduction in forecast windshear would see these systems lie in significantly more favourable development areas for tropical cyclones.

Expected Impacts

Locally strong gusts winds and heavy rainfall is likely to be associated with each feature. Most notably in the short term impacts from flooding and landslides will be probable across southern parts of Hispaniola.

Arabian Sea Weather

There is a risk of tropical storm formation over the Arabian Sea early next week off the coast of Gujarat, in northwest India. Any development is likely to track west into the Arabian Sea, perhaps towards Oman, by the middle of next week.



Discussion

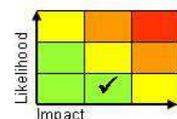
The monsoon low affecting parts of central India is likely to exit into the Arabian Sea this weekend. Some longer range model output, notably ECMWF, suggests this may then help in the formation of a tropical cyclone.

Expected Impacts

A moderate risk of strong winds generating rough seas in the northern Arabian Sea, and a low risk that these winds accompanied by heavy rainfall may approach Oman early next week.

Europe Southern Europe Weather

A very unsettled weekend, with heavy showers and thunderstorms breaking out across northern Spain on Saturday, southern France and Italy on Sunday and then parts of Southeast Europe on Monday and Tuesday. These could produce 75-150 mm of rainfall in 24 hrs, along with frequent lightning, large hail and gusty winds.



Discussion

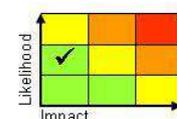
Although there are differences between models, all suggest a plume of very warm air will be engaged by an upper trough across this region this weekend, with the potential for some severe storms to develop ahead of a cold front.

Expected Impacts

The main impacts would be from flash flooding. Large hail and frequent lightning are possible, perhaps disrupting travel and power supplies.

North America Central and Northern Plains USA Weather

Severe thunderstorms are expected to break out across the region over the next 4 days. Intense rainfall, with 75-125 mm of rain falling in a day is possible with large hail, strong winds, frequent lightning strikes and tornadoes additional hazards.



This forecast may be amended at any time

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Discussion

Complex upper trough/vortex will remain slow-moving over the Rockies, with pulse of very warm and moist air moving north from the Gulf of Mexico towards the Canadian border. Very large CAPE (3000-4000 J/kg) and large vertical wind shear will allow severe convection to break out in the warm air ahead of a cold front. Discrete supercells are possible, although the dominant mode, at least initially will be linear with upscale growth into large MCS probable. Isolated tornadoes are possible, although the main hazards will be strong winds, intense rainfall and large hail.

Expected Impacts

Flash flooding and wind and or hail damage to property and crops.

Central America and Caribbean

Hispaniola and Northern Lesser Antilles – See *Tropical Cyclones* section.

Bahamas and Turks and Caicos Islands

Weather

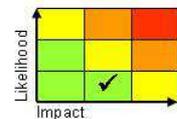
Several days of heavy rainfall is expected to affect these islands. Around 150 to 300 mm of rain is expected to fall, before conditions become much drier again from Monday. Heaviest rain is likely to be south of Grand Bahama and the Abacos, where more sporadic (but still heavy) showers are likely.

Discussion

Hurricane Jerry passing to the east of the islands will allow a well-defined zone of low-level moisture convergence to become established across the region, with several days of heavy rainfall expected.

Expected Impacts

Flash flooding, especially across the Turks and Caicos Islands.



Panama, Costa Rica and Nicaragua – See *South America* section.

South America

Brazil

Weather

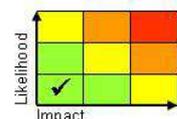
Heatwave conditions continue across parts of eastern Brazil on Friday, but should ease over the weekend. Temperatures have widely been recorded as 5 to 10°C above average, reaching the mid-to-upper 30s°C and have exceeded 40°C in several places. This spell of hot weather is unusual so early in the season. For context the average daily maximum temperature in Sao Paulo for September is around 26°C. Temperature records for September could be broken.

Discussion

A strong and persistent surface and upper ridge has allowed temperatures at the surface to rise, mainly through strong subsidence and cumulative sensible heating. 1000-850hPa partial thickness has exceeded 144dm quite widely. This will reduce by the weekend, with temperatures in the more populated regions returning to nearer normal values.

Expected Impacts

Disruption to travel and power outages are possible. Heat stress will increase especially for vulnerable groups in the general population. The heat may also exacerbate ongoing issues with forest fires in the region.



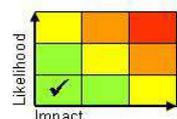
Colombia, Costa Rica, Panama and Nicaragua

Weather

Showers and thunderstorms will be more widespread, frequent and intense than usual over the region during the next few days. Daily accumulations of around 75-125 mm are possible, with up to 350 mm over the course of a week in places.

Discussion

The MJO is expected to cross South America over the next week enhancing rainfall across the ITCZ, especially across western parts of the continent.



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Expected Impacts

Increased incidents of flash flooding with perhaps an increase in the risk of landslides.

Africa

West Africa

Weather

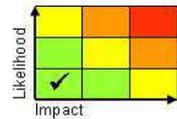
Much of this region has seen above average rainfall during the past 2-4 weeks courtesy of an unusually active West African Monsoon season, with reports of major flooding in several countries. Further heavy rainfall is expected with many locations experiencing periods of enhanced thunderstorm activity followed by a few days of quieter conditions. In the heaviest showers, 50-80 mm could fall in an hour, perhaps as much as 150 mm in a few hours.

Discussion

African Easterly Wave activity will continue to bring organised areas of deep convection/MCS activity westwards until the middle of next week, contributing to a further period of above average rainfall across these parts of West Africa.

Expected Impacts

Ongoing enhanced risk of flash flooding and high river levels. Some further damage to property and infrastructure is possible. In regions of steep terrain the risk of landslides will also be heightened.



Middle East

Oman – See *Tropical Cyclones* section.

Asia

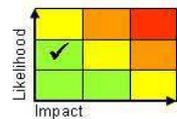
Parts of Southeast Asia

Weather

Above average rainfall is expected to persist for a few more days, associated with enhanced monsoonal flow in a broad region stretching from the southern Bay of Bengal through the South China Sea and into the western Philippines. The wettest locations could see a further 100-200mm of rainfall. Next week, conditions will turn much drier.

Expected Impacts

Flash flooding events are possible, especially if showers affect a large urban centre such as Manila. River flooding and landslides are possible, with these issues adding to the reported ongoing flooding across Thailand, Cambodia and Vietnam.



Eastern China, Taiwan, South Korea and Japan – see *Tropical Cyclones* section

Australasia

Nil.

Additional information

Nil.

Issued at: 20/0700 UTC **Meteorologists:** Chris Tubbs/ Brent Walker

Global Guidance Unit

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