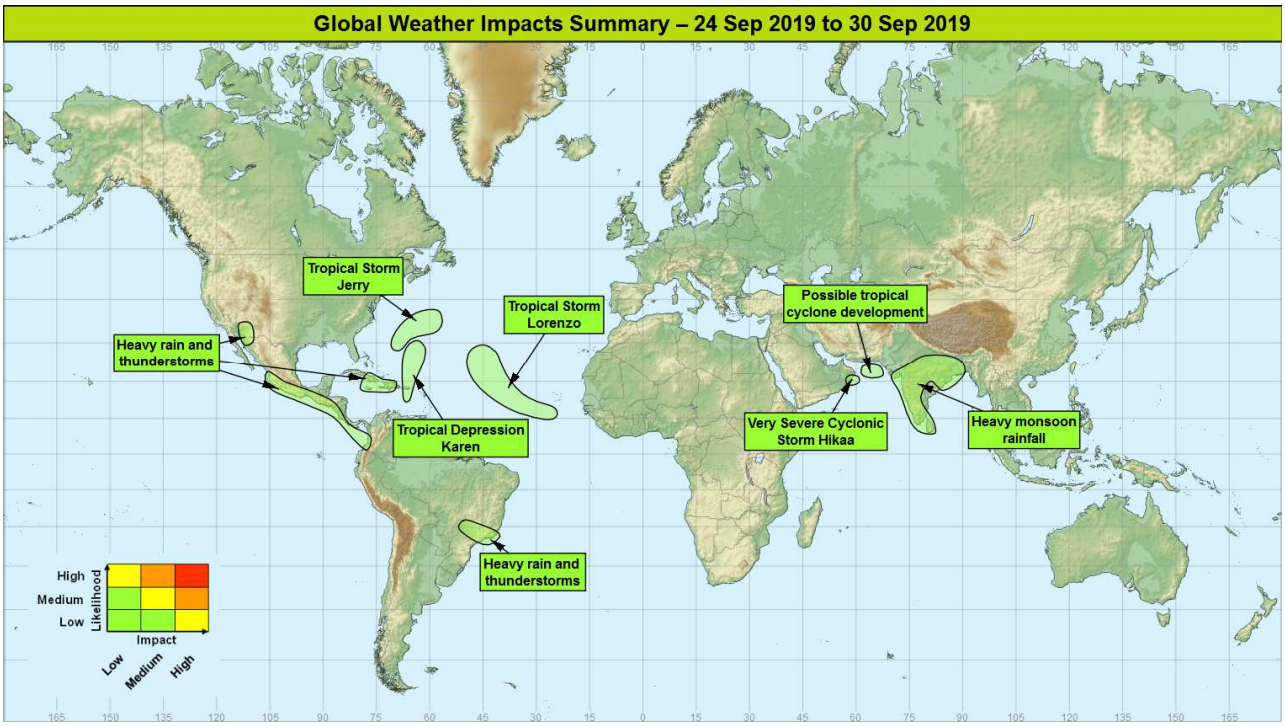
Daily Global Weather Impacts Assessment

Global Weather Impacts – Tuesday 24th to Monday 30th September 2019

Issued on Tuesday 24th September 2019

HEADLINES

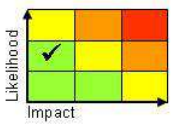
- A combination of strong winds and locally heavy rain to affect Bermuda from Tropical Storm Jerry and Puerto Rico and the Virgin Islands from Tropical Depression (soon to be Storm) Karen over the next couple of days.



DISCUSSION

Tropical Cyclones

Tropical Depression Karen (North Atlantic)



Weather

Tropical Depression Karen was located around 150 miles south of Puerto Rico on Tuesday morning and is expected to cross the island later today as it strengthens back to a tropical storm. Karen is expected to bring a combination of tropical storm force winds (sustained winds of 40 mph) and frequent heavy showers and thunderstorms to both Puerto Rico and the Virgin Islands through Tuesday and into Wednesday before clearing north. The track and intensity of Karen becomes uncertain later in the week but could affect Bermuda by Friday.

Discussion

Karen is a questionable tropical cyclone with strong northeasterly wind shear disrupting the development of persistent deep convection around a modest low-level centre. Shear is expected to persist through Tuesday which means that significant intensification is unlikely whilst shower and thunderstorm activity affects land. As it moves north towards Bermuda later in the week, intensification is possible although the steering flow becomes uncertain as it interacts with Tropical Storm Jerry.

Expected Impacts

Some damage to poorly built structures is possible from tropical storm force winds. Heavy rainfall is likely to cause some flash flooding and mudslides in Puerto Rico, and the US and British Virgin Islands on Tuesday into early Wednesday.

This forecast may be amended at any time

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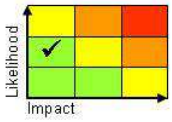
Met Office Daily Global Weather Impacts Assessment

Tropical Storm Jerry (North Atlantic)



Weather

Tropical Storm Jerry was located around 325 miles southwest of Bermuda and is expected to move northeast towards the island. Whilst Jerry is showing signs of weakening, tropical storm force winds (40 mph with higher gusts) are likely to affect Bermuda from tonight and through much of Wednesday. Locally heavy rainfall is likely to produce accumulations of 25-75 mm over the next couple of days. Whilst the future track of Jerry becomes less certain later in the week, the system is likely to continue weakening.

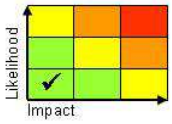
Discussion

Strong vertical wind shear continues to displace convection away from the low-level centre and a steady weakening trend is expected to persist through the next few days. The future track of Jerry becomes less certain as it moves towards Bermuda through midweek. The approach of Karen and an advancing upper trough mean that there is low confidence in its eventual track through midweek but is nevertheless unlikely to undergo significant re-intensification.

Expected Impacts

Tropical storm force winds are likely to affect Bermuda from Tuesday night with heavy rain leading to localised flash flooding. Large swells are already beginning to affect the island and are likely to persist through the next several days.

Tropical Storm Lorenzo (North Atlantic)



Weather

Tropical Storm Lorenzo developed to the south of the Cabo Verde on Monday and was located around 275 miles southwest of the islands on Tuesday morning. Lorenzo is likely to develop into a major hurricane over the next several days but pose no threat to land during this time.

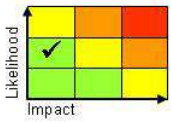
Discussion

Lorenzo is likely to steadily develop over the next few days as it remains within an environment conducive to further intensification. However, there is good model agreement of track over the open Atlantic during the next week.

Expected Impacts

None.

Very Severe Cyclonic Storm Hikaa (Arabian Sea)



Weather

Very Severe Cyclonic Storm Hikaa was located around 50 miles east of Masirah Island on Tuesday morning and is expected to make landfall here before moving inland over the sparsely populated region of northeast Al-Wusta Governorate of Oman later today. Hikaa is likely to weaken before making landfall, but still produce a combination of strong winds (55 mph with gusts of 65 mph) and locally heavy rain before dissipating on Wednesday.

Discussion

Whilst Hikaa intensified into a very severe cyclonic storm on Monday, the system is now about to make landfall and interaction with the arid landmass of Oman will lead to rapid dissipation by Wednesday.

Expected Impacts

Rough seas will affect the eastern Omani coast with a risk of localised flash flooding for Masirah Island and northeast Al-Wusta Governorate. However, strong winds extending further from the centre may lift plumes of dust across a wider part of the country.

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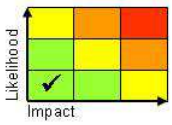
The following area is currently being monitored for potential tropical cyclone development affecting land over the next 7 days:

Arabian Sea



Weather

There is a moderate likelihood of a tropical cyclone developing in the Arabian Sea later this week which has a low likelihood of affecting the Oman coast by this weekend or early next week.

Discussion

Another monsoon low pressure system is likely to emerge from northwest India later this week and will move into an environment supportive of gradual development. However, there is large model spread in both the extent of development as well as its westward movement with the GM considered faster than consensus.

Expected Impacts

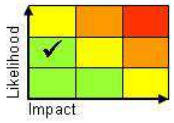
Locally heavy rain and strong winds may affect portion of the northern Omani coast later this or early next week.

Europe

Nil.

North America

Desert Southwest USA and northwest Mexico



Weather

Heavy showers and thunderstorms are likely to become more frequent across the region over the next 3 days. Whilst rainfall amounts will be very variable, there is potential for some locations to receive as much as 100-150 mm of rain during this period, most likely in Arizona.

Discussion

An upper trough will disrupt across southwest North America and engage a plume of moisture containing the remnants of Lorena and Mario. This will result in shower and thunderstorm activity becoming more frequent than much of the summer so far before the cut-off relaxes eastward by Friday.

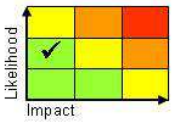
Expected Impacts

Whilst much of the region is experiencing drought conditions following limited rainfall during the summer so far, flash flooding will be the primary concern, particularly in mountainous and urban areas such as Phoenix and Tuscon.

Central America and Caribbean

Puerto Rico and Virgin Islands – See *Tropical Cyclones* section.

Eastern Cuba, Jamaica and Hispaniola



Weather

Enhanced shower and thunderstorm activity is expected to continue affecting the region over the next 3 days before drier conditions become established from Friday onward. Isolated rainfall accumulations of 30-50 mm are likely in a few hours, with some places receiving up to 150 mm over this period.

Discussion

Tropical Storm Jerry moving away from the region will allow a well-defined zone of low-level moisture convergence to become established across the region, forced by a low latitude cut-off vortex, generating persistent and slow-moving showers and thunderstorms.

Expected Impacts

Risk of flash flooding with landslides possible in mountainous areas.

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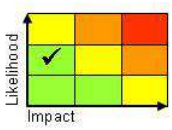
Southern Mexico, Guatemala, El Salvador, Nicaragua, Costa Rica and western Colombia



Weather

Shower and thunderstorm activity is expected to remain more widespread, frequent and intense than normal over the next week. Whilst the showery nature of rainfall will mean accumulations will vary significantly across the region, some locations are likely to receive 75-150 mm in 24 hours and as much as 350 mm over the next week.

Discussion

The eastward progression of the MJO continues through Phase 8 (Western Hemisphere) contributing to enhanced shower and thunderstorm activity along the ITCZ. It is only through early October where shower activity is likely to return to nearer normal.

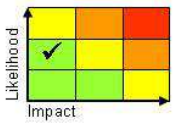
Expected Impacts

Increased likelihood of flash flooding with landslides also possible in more mountainous regions.

South America

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

Southeast Brazil



Weather

An area of heavy showers and thunderstorms is expected to develop through midweek with 50-100 mm of rain possible in a few hours, accompanied by frequent lightning, large hail and a risk of tornadoes. This region includes populated cities such as Rio de Janeiro.

Discussion

The usual synoptic set-up of warm advection returning southwards in the wake of a dissipating South Atlantic Convergence Zone further north, being engaged by a potent shortwave upper trough, is likely to generate severe thunderstorms. Forecast profiles indicate large amounts of CAPE and strong vertical wind shear supporting isolated supercells and upscale growth to one or more MCSs.

Expected Impacts

Flash flooding of homes/businesses possible, particularly in more urbanised areas. Localised hail and wind damage.

Africa

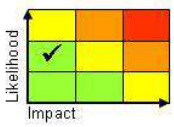
Nil.

Middle East

Oman – See *Tropical Cyclones* section.

Asia

Much of India, parts of Sri Lanka and Bangladesh



Weather

Enhanced monsoon rainfall expected over the next 7 days with 50-100 mm per day and up to 500 mm in some places over the course of the next week. The heaviest rainfall is most likely to fall across portions of northern India, including the states of Uttar Pradesh and Bihar.

Discussion

Within the broadly enhanced monsoon rainfall, one, possibly two monsoon depressions are signalled to develop and move west. The enhanced rainfall signal decreases generally toward the end of the week, although it's possible a further system may form over the Bay of Bengal by the weekend.

Expected Impacts

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Since this heavy rainfall comes at the end of the summer monsoon, many areas are relatively sensitive compared to earlier in the season. Therefore, an increased likelihood of flash flooding and river flooding is expected.

Australasia
Nil.

Additional information
Nil.

Issued at: 240640 UTC **Meteorologist:** Matthew Lehnert / Paul Hutcheon **Global Guidance Unit**

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