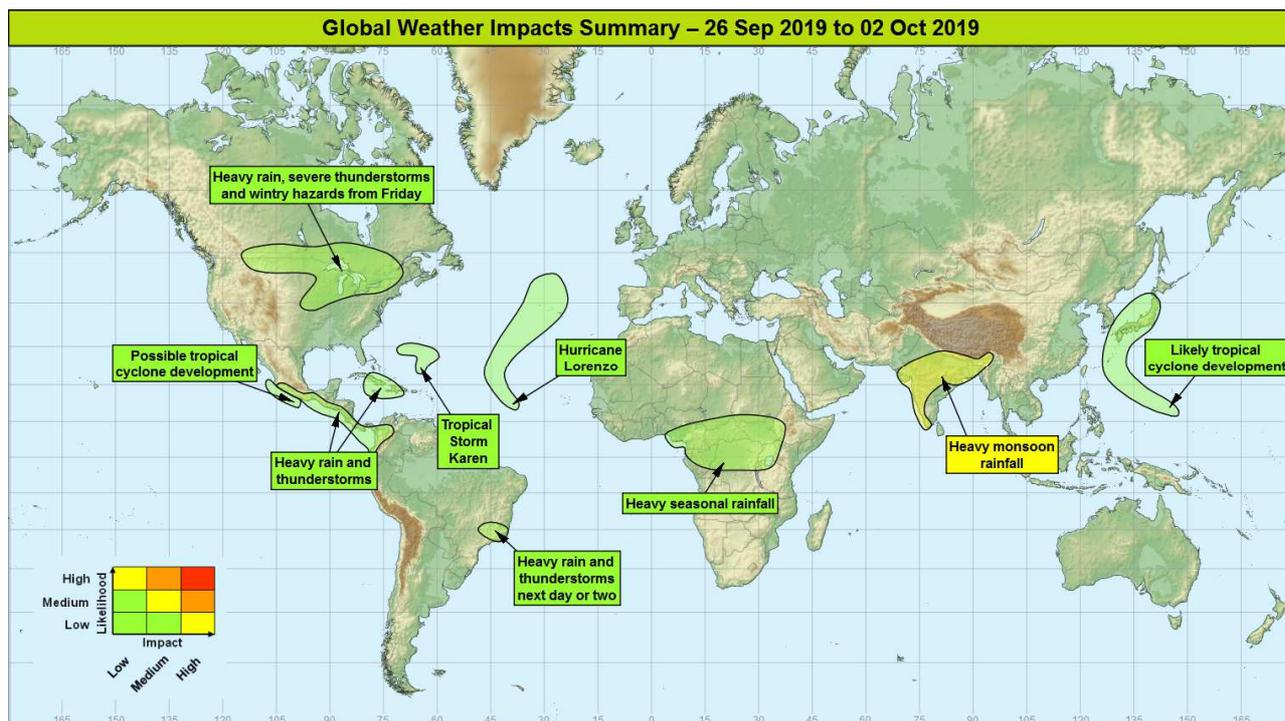


Global Weather Impacts – Thursday 26th September to Wednesday 2nd October 2019

Issued on Thursday 26th September 2019

HEADLINES

- Heavy monsoon rain is expected across much of the Indian subcontinent this week.
- Tropical Storm Karen and Hurricane Lorenzo in the Atlantic are unlikely to produce significant impacts in the short-term, however Lorenzo is expected to track towards the Azores next week.
- Likely tropical cyclone impact for Japan early next week.



DISCUSSION

Tropical Cyclones

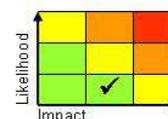
Hurricane Lorenzo (North Atlantic) Weather

Lorenzo developed on Monday to the south of Cabo Verde, and on Thursday morning was located around 900 miles west of the islands. Lorenzo will strengthen into a major hurricane through Thursday, but poses no threat to land over the next four or five days. By Tuesday or Wednesday of next week however the hurricane is expected to be tracking past the Azores, most likely on a path just to the west of the islands, bringing the threat of hurricane force winds and very heavy rainfall.

Discussion

Lorenzo is likely to strengthen further over the next few days as it remains within an environment conducive to intensification. Only occasional incursions of drier air could act as a limiting factor until shear starts to increase over the weekend. It will continue over the open Atlantic towards the Azores early next week; there's currently good ensemble agreement for a track passing either just west of or across the islands, with a significant threat that Lorenzo could still be a hurricane as it passes with the potential for impacts, particularly for Ilha das Flores.

Expected Impacts



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Hazardous marine transport conditions around the Azores are likely by the middle of next week. A lower likelihood – due to uncertainty in Lorenzo’s strength and proximity to the islands of its track – of flash flooding rains, landslides, storm surge flooding and disruption to transport and communications.

Tropical Storm Karen (North Atlantic)

Weather

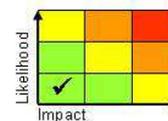
Tropical Storm Karen was located around 400 miles north of the British Virgin Islands on Thursday morning. The track and intensity of Karen are uncertain but it is most likely to remain clear of land, with only a very low probability of affecting the Bahamas or Bermuda next week.

Discussion

Karen remains an unconventional and disorganised cyclone despite environmental conditions supporting slight strengthening over the coming days, especially with shear expected to decrease. However the steering mechanism of the system is becoming incredibly complicated and confidence is thus low; despite this most model output keeps Karen away from land.

Expected Impacts

None.



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

Northwest Pacific

Weather

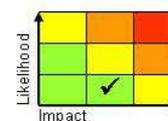
There is a high likelihood of tropical cyclone development in the Northwest Pacific (between Guam and the Ryukyu Islands) in the next couple of days, with this system likely to strengthen to a typhoon early next week as it tracks towards Japan.

Discussion

Good model agreement for this type of development by or during the weekend, with increasing confidence in the track next week with Japan looking a likely location for landfall at some point next week.

Expected Impacts

Dangerous marine transport conditions highly likely. A likelihood of flash flooding rains, landslides, storm surge flooding and damaging winds.



Eastern Pacific

Weather

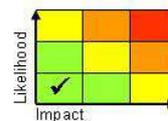
There is a moderate to high likelihood of tropical cyclone development this weekend or early next week in the East Pacific off the southern or southwestern coast of Mexico. The subsequent track is very uncertain so at present there is only a low probability of this directly affecting land.

Discussion

Reasonable agreement for the formation of a tropical depression (rated 70% by the NHC) over the weekend or next week, though its track and development once it does form remains uncertain. Some EPS members do track the system towards landfall in Mexico as a relatively weak system, with little support for a hurricane-strength cyclone at this stage.

Expected Impacts

The possibility of flash flooding rains and landslides in the far south or southwest of Mexico. Rough seas and strong winds along the coast of these areas.



Europe

Nil.

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North America

Central parts of the USA, across the Great Lakes into parts of southern Canada

Weather

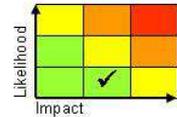
A mixture of heavy rain, very early season snow and severe thunderstorms looks likely across central parts of North America from Friday into the early part of next week. Up to 200 mm of rain could fall in places over a 3 day period (which is three times the average monthly rainfall), with short period (6-12 hours) rainfall of up to 100 mm in severe thunderstorms that could also produce large hail and tornadoes. The heaviest rainfall and severe storms are likely to affect the southern part of this region (from the Great Lakes southwards). The northern fringe of the region (the northern Rockies and into Canada) is likely to see a threat of heavy snow, which would result in an early season snow event.

Discussion

An amplifying upper pattern will result in a major trough extension south across the western USA, with the downstream backing flow allowing for a northward push of very warm air (PS24C 850hPa WBPT) into the Great Lakes. This will result in a very strong baroclinic zone (20C difference over several hundred miles) and the development of a surface depression. There will be enough upper forcing and upper level flow to develop an area of severe storm threat. The northern fringes of the region will see heavy precip falling into cold low level air due to a strong, deep undercut, resulting in a threat of early season heavy snowfall.

Expected Impacts

Flash flooding is the most likely impact, but with a threat of frequent lightning, hail damage and tornado impacts associated with severe thunderstorms. River flooding is also possible, with northern parts of this region at threat of significant wintry impacts from heavy snowfall.



Central America and Caribbean

Eastern Cuba, Jamaica and Hispaniola

Weather

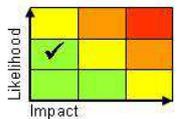
Enhanced shower and thunderstorm activity is expected to continue affecting the region through the period, although relatively drier conditions are possible on Friday and into the weekend. Isolated rainfall accumulations of 30-50 mm are likely in a few hours, with some places receiving up to an additional 100 mm over this period.

Discussion

In the wake of Tropical Storm Jerry a well-defined zone of low-level moisture convergence has 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.



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

Weather

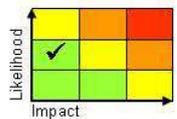
Shower and thunderstorm activity is expected to remain more widespread, frequent and intense than normal over the next week. Whilst the showery nature of rainfall will mean accumulations will vary significantly across the region, some locations are likely to receive 75-150 mm in 24 hours and as much as 300 mm over the next week.

Discussion

The eastward progression of the MJO continues through Phase 8 and 1 (Western Hemisphere and Africa) 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.



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South America

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

Southeast Brazil

Weather

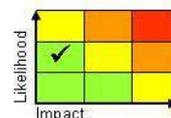
An area of heavy showers and thunderstorms is expected to continue through Thursday, bringing a possible further 50-100 mm of rain in a few hours, accompanied by frequent lightning, and towards the northwest of the highlighted region a risk of large hail and tornadoes. This region includes populated 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

Central parts of Africa

Weather

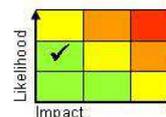
A period of enhanced seasonal rainfall is expected in this region of Africa through the next week due to more widespread thunderstorm development. Up to 100 mm of rain could fall in a few hours in places, with some parts seeing 250 mm of rain through the next week, which would be up to twice the average monthly rainfall in parts of this region.

Discussion

Strong model signal for a heavy rain event in this region of Africa, possibly influenced by the MJO moving through the Atlantic and the positive IOD.

Expected Impacts

Increased likelihood of flash and river flooding along with landslides.



Middle East

Nil.

Asia

Much of India, Nepal, Bhutan and Bangladesh

Weather

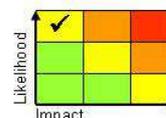
Enhanced monsoon rainfall expected over the next 7 days with 50-100 mm per day and up to 500 mm in some places over the course of the next week. The heaviest rainfall is most likely to fall across portions of northern India, including the states of Uttar Pradesh and Bihar.

Discussion

Within the broadly enhanced monsoon rainfall, the slow moving monsoon trough across northern India is likely to focus the heaviest rainfall here. The enhanced rainfall signal decreases across much of India through the weekend, but with enhanced rainfall likely to continue in northeastern India (between eastern Nepal and Kolkata) until early next week. This region has seen a drier than average monsoon season so far, so this rainfall will likely be welcome in the long run, even though it may cause floods / landslides through the next week.

Expected Impacts

Increased likelihood of flash and river flooding is expected, with this likely along even some of the larger rivers including the Ganges. Landslides also increasingly likely.



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Australasia

Nil.

Additional information

Nil.

Issued at: 260715 UTC **Meteorologist:** Laura Ellam / Paul Hutcheon **Global Guidance Unit**

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