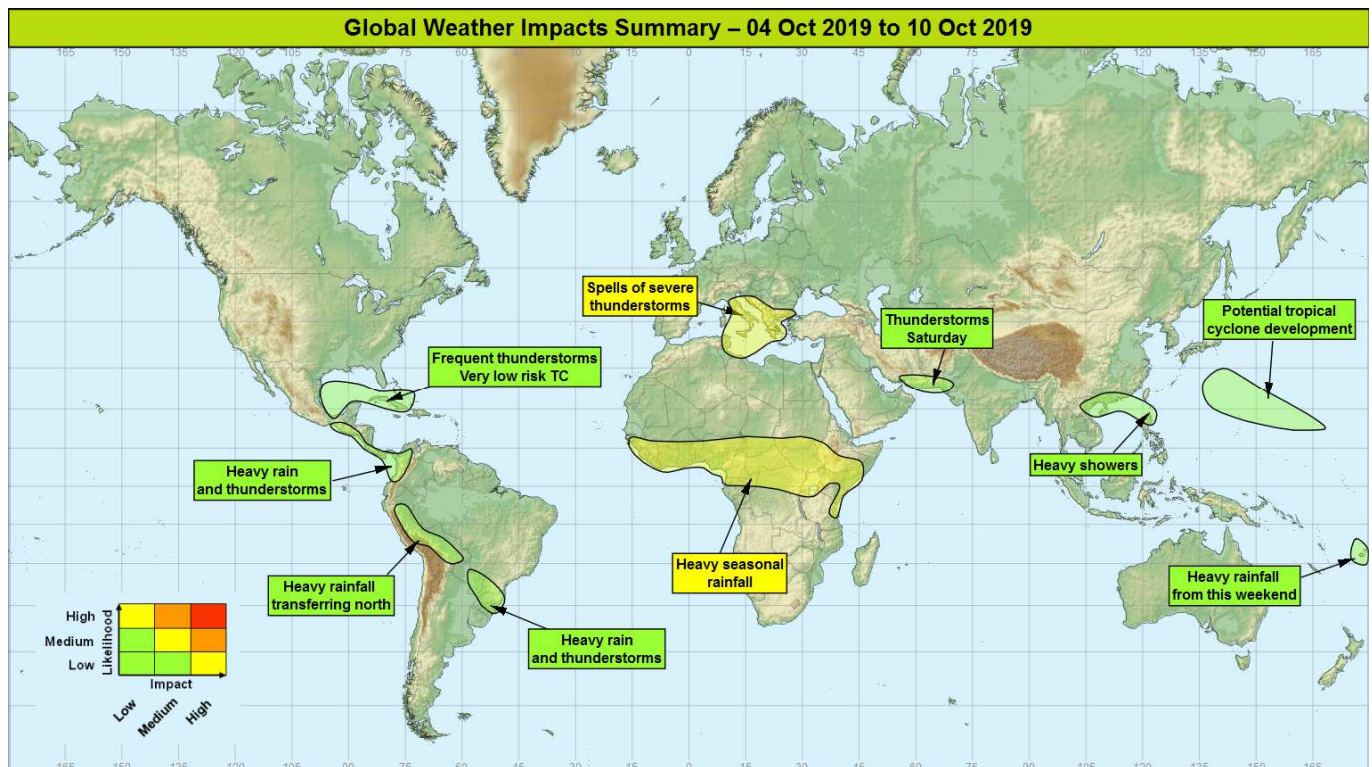


Global Weather Impacts – Friday 4th to Thursday 10th October 2019

Issued on Friday 4th October 2019

HEADLINES

- Enhanced rainfall across Tropical Africa in the coming week.
- Severe thunderstorm threat at times in southern Europe and the central Mediterranean.
- Indian Summer Monsoon (June to September) has been the third wettest on record (back to 1901) and the commencement of the withdrawal is now the latest recorded.



DISCUSSION

Tropical Cyclones

There are no active tropical cyclones, but the following areas are currently being monitored for potential tropical cyclone development affecting land:

Western Caribbean, Gulf of Mexico and eastern Mexico

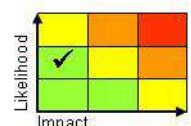
Weather

Shower and thunderstorm activity is expected to be more frequent than normal, producing locally torrential downpours across Cuba, Jamaica and the north-western Caribbean. Isolated rainfall accumulations of 20-40 mm are possible in a few hours, with some locations receiving 100-200 mm during the next 7 days. As this area transfers west towards Mexico, there is a small likelihood that this may develop into a tropical cyclone, but a more significant threat of very heavy rainfall to parts of eastern Mexico (perhaps 200-300 mm of rain from Monday which would be the equivalent of the whole average October rainfall in a few days).

Discussion

A broad area of low pressure and the main focus for the deepest and most organised convection will tend to migrate westwards through the next week, although development of this system into a tropical cyclone is thought unlikely.

Expected Impacts



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Increased risk of flash flooding, with landslides also more likely in areas of steep terrain.

Northwest Pacific

Weather

An area of thunderstorms is likely to become more organised through the next week as it tracks west-northwest across the Northern Mariana Islands, with the potential to strengthen into a tropical cyclone by next week.

Discussion

An Equatorial Rossby Wave is likely to be the source for any developments in this region, but there remain a wide range of solutions and so low confidence for any development.

Expected Impacts

There is just a low likelihood of this system producing flood impacts across some of the Northern Mariana Islands.



Europe

Italy, Balkan region, Greece, Western Turkey, central Mediterranean

Weather

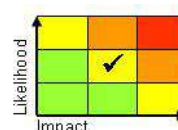
Organised and locally severe thunderstorms are likely across parts of Albania, Greece and western Turkey on Friday, producing up to 50-100mm of rain in just a few hours in a few places. Large hail, frequent lightning, strong winds and one or two tornadoes are additional hazards. Whilst drier conditions will follow from the west over the weekend, further heavy rain and thunderstorms are likely to affect Italy, the central Mediterranean and southeast Europe early next week.

Discussion

An extending upper trough engaging a plume of high WBPT air ahead of cold front across Greece today. Another major upper trough disruption into southern Europe is expected early next week.

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

Nil.

Central America and Caribbean

Western Caribbean, Gulf of Mexico and eastern Mexico – See *Tropical Cyclones* section.

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

Weather

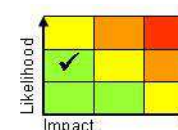
Shower and thunderstorm activity is expected across the tropical Pacific Ocean coastline, maintaining the possibility of locally heavy downpours producing 50-75 mm of rainfall in a few hours. The largest cumulative rainfall totals are expected to be across portions of western Colombia.

Discussion

A series of tropical waves will be supportive of enhanced convection across Central America.

Expected Impacts

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

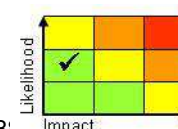


South America

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

Paraguay and southern Brazil

Weather



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An area of heavy rain and thunderstorms is expected to move very slowly north across this region through the next few days. Rainfall of up to 50-100 mm in 24 hours is possible.

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 left jet entrance region of the sub-tropical jet. 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 north-eastward across the region.

Expected Impacts

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

Bolivia and Peru

Weather

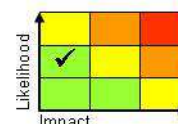
A northward transferring area of heavy rainfall and thunderstorms is expected across this region from Saturday to Wednesday. Up to 100-150 mm of rain could fall in a 24 hour period. This rainfall heralds the beginning of the rainy season in this region.

Discussion

A northward extension of the sub-tropical jet will engage the southern part of the tropical plume to produce an area of deep convection that will transfer north across western parts of South America.

Expected Impacts

Flash flooding is the main impact, with a lower likelihood of landslides.



Africa

Equatorial Africa

Weather

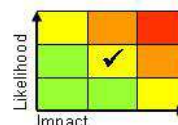
Shower and thunderstorm activity is expected to be more frequent than normal across a large portion of equatorial Africa over the next week. Up to 100 mm of rain could fall in a few hours in a few places, with some localised totals of up to 250 mm are possible through the next week which is close to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

Discussion

An active phase of the MJO moving through Phase 1 across Africa, plus Rossby waves and a strong positive Indian Ocean Dipole is expected to result 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.

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

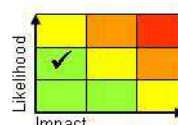
Nil.

Asia

Northern Mariana Islands – See *Tropical Cyclones* section.

Southern Pakistan and south-eastern Iran

Weather



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Thunderstorms are likely to affect this region during Saturday. These have the potential to produce up to 50 mm of rainfall in a short period, large hail, frequent lightning and strong gusts of wind.

Discussion

A shortwave upper trough is likely to engage the warm plume across this region on Saturday. Forecast profiles suggest that while much of the activity will be from elevated instability release, there is the potential for surface driven convection, with in excess of 2000 J/kg CAPE available and sufficient shear to allow some organisation of storms.

Expected Impacts

Flash flooding is likely the main impact. In addition some damage to crops is possible with potential disruption to power supplies.

Northern Philippines northern Vietnam and Southern China

Weather

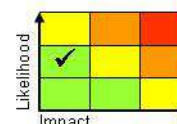
Enhanced heavy showers and thunderstorms are expected to move on to the northeast coast of Luzon, Philippines on Friday, this then transferring towards southern China and northern Vietnam later in the weekend and early next week. Up to 50 mm of rain may fall in short time, with potentially 100-150 mm in 24 hours.

Discussion

Enhance convection is expected in association with passage of a Rossby wave across the region.

Expected Impacts

Increased potential for flash flooding along with land/mudslides in areas of more steeply-sided terrain.



Australasia

Fiji

Weather

Enhanced heavy rain and embedded thunderstorms are expected to develop in the vicinity of Fiji late this coming weekend/early next week, bringing 100-200mm of rainfall in around 48 hours. This equates to almost a month's worth of rain for somewhere like Nadi

Discussion

The South Pacific Convergence Zone lies just to the N, with a sharp and relatively low-latitude trough disruption/cut-off vortex swinging by on Sunday/Monday. This will draw the SPCZ southwards, and develop an area of heavy rain and slow moving thunderstorms across Fiji and surrounding areas. As the upper trough relaxes away early next week rainfall will return to normal levels.

Expected Impacts

Increased likelihood of flash flooding, and disruption to transport/homes/businesses.



Additional Information

The Indian Summer Monsoon (also called the South Asian Monsoon) has still to retreat south. This process should have started on the 1st of September, with the northern edge of the monsoon by now having retreated southeast of Delhi and Mumbai. This is now the latest ever commencement of the monsoon withdrawal, but a marked withdrawal is expected to take place within the next week. The 2019 Indian 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.

Issued at: 040745 UTC **Meteorologists:** Paul Hutcheon / Mark Sidaway

Global Guidance Unit

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