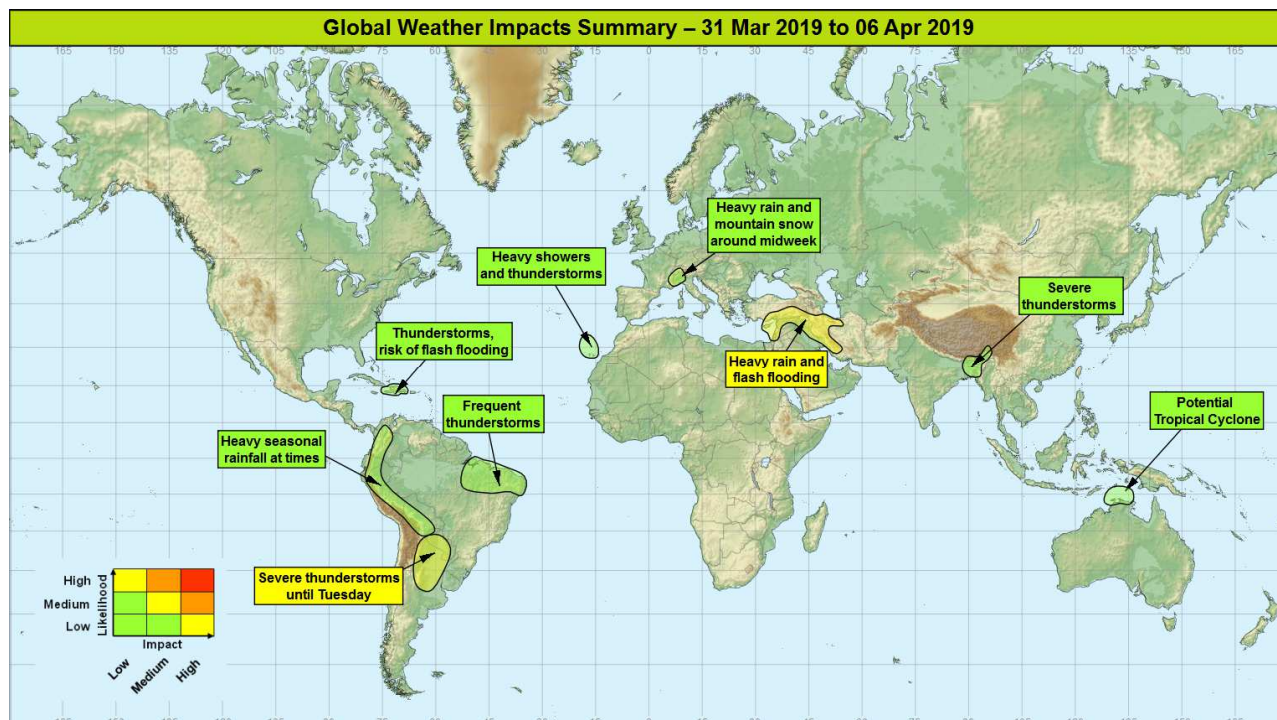


Global Weather Impacts – Sunday 31st March to Saturday 6th April 2019

Issued on Sunday 31st March 2019

HEADLINES

- Heavy rain and thunderstorms across the eastern Mediterranean and into the Middle East.
- Severe thunderstorms across northern Argentina and Paraguay.
- Heavy rain and mountain snow for southeast France and northwest Italy next week.



DISCUSSION

Tropical Cyclones

There are presently no active tropical cyclones.

The following area is being monitored for potential tropical cyclone formation:

Northern Australia (Arafura Sea)

Weather

There is growing evidence to suggest the potential for a tropical cyclone to develop in the Arafura Sea and track towards the Northern Territory in Australia later this coming week. Given that a system is yet to form, there is large uncertainty surrounding this development. However, a spell of very heavy rain and strong winds is possible later next week in the Darwin area.

Discussion

As a southern portion of an ERW moves over an areas of high SSTs and low wind shear, there is potential for a tropical cyclone to spin up later this week. Regardless of development, a period of heavy rain is probable across the Northern Territory, most likely around the Darwin areas.

Expected Impacts

Potential for flash flooding to bring travel disruption and damage to property. In addition, should a strong tropical cyclone develop, wind damage would be expected, with damage to buildings and interruptions to power supplies potential impacts.



This forecast may be amended at any time

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: ggu@metoffice.gov.uk

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Europe

Southeast France and northwest Italy

Weather

Heavy rain and mountain snow will affect the region from the middle of this coming week. The heaviest precipitation is expected to be across northwest Italy, with up to 250 mm of rain likely to fall in a 36-48 hour period. Significant falls of snow (perhaps up to 2 metres) above 1000 metres above sea level are expected the Italian Alps, with heavy snowfall (up to 1 metre) across the French Alps down to as low as 500 metres above sea level.

Discussion

A cold front will sink southeast across western Europe by midweek, becoming increasingly active as an upper trough extends and disrupts, ultimately forming an upper vortex across southwestern Europe. A high WBPT plume will be drawn up ahead of the cold front, with this, along with forcing from the upper vortex, producing very heavy precipitation along the southern facing slopes of the Alps. The exact amount of snowfall will be difficult to estimate due to differences in the WBFL within the heavy precipitation plume. There is also significant uncertainty regarding the timing and location of the upper trough disruption, with differences between all models. Therefore, the likelihood is assessed as low, but the level of impact has been increased to medium due to the increased precipitation totals that the models are producing.

Expected Impacts

Surface water flooding seems likely in low-lying areas, with deep fresh snow leading to a risk of avalanche at higher levels. The combination of flooding and heavy snowfall at higher elevations is likely to lead to disruption to travel in the region.



Canary Islands & Madeira

Weather

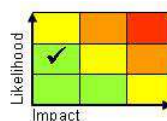
Heavy showers and thunderstorms are expected to affect these islands on Tuesday and Wednesday. The most intense storms will probably affect Tenerife; here 50-100 mm of rain could fall in 24 hours. Additional hazards will be hail and frequent lightning. The April average monthly rainfall for the region is between 10 and 30 mm.

Discussion

An upper vortex will drift south towards the region early this coming week, increasingly destabilising the airmass, allowing diurnal heavy showers and thunderstorms to widely develop. Currently, the heaviest and most widespread convection is expected to be on Tuesday and Wednesday.

Expected Impacts

Flash flooding causing disruption to travel and possibly damage to property. Landsides could potentially be triggered in the mountainous terrain.



Cyprus and Southeast Turkey – See *Middle East* section.

North America

Nil significant.

Central America and Caribbean

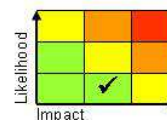
Haiti and Dominican Republic

Weather

Daily heavy showers and thunderstorms are expected over the coming 3 or 4 days over Haiti and the Dominican Republic. There is the potential for 30-50 mm to fall in places each day with as much as 150 mm building up through the period in the wettest spots. So, up to a month's worth of rainfall could fall within a 3 or 4 day period in places.

Discussion

A plume of tropical air held in place by the extension of the Azores high will be engaged by several upper troughs through the next 3 or 4 days, developing frequent heavy and thundery showers.



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Expected Impacts

Increased risk of flash flooding (and increased risk of landslides in more mountainous terrain), disrupting transport, flooding homes/businesses, and posing a danger to life. Lightning strikes an additional hazard. Some of the region affected is still recovering from the devastating hurricane season of 2017, increasing vulnerability to further hazardous weather.

South America

Northern Argentina and Paraguay

Weather

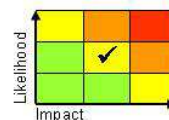
Through the next 3 days increasingly heavy showers and severe thunderstorms are expected to develop across parts of northern Argentina and Paraguay. Each day in the worst affected areas as much as 100-150mm of rain could fall which is roughly equivalent to a month's worth of rainfall. Depending on the exact location of where the most severe thunderstorms develop, 300-400mm of rain is possible over a few days. Lightning, large hail and strong gusty winds associated with thunderstorms will be additional hazards. Conditions should become drier from Wednesday.

Discussion

An extrusion of the tropical air will become engaged by a trough in the STJ extending over central parts of South America from Sunday. This will aid the development of organised severe thunderstorms including the likelihood of MCSs.

Expected Impacts

Very heavy rainfall increases the chances of flash flooding as well as landslides in more mountainous terrain disrupting transport, flooding property and posing a danger to life. Parts of Paraguay could be more sensitive than usual with reports of flooding during mid March. Over the last 30 days a large proportion of Paraguay and parts of northern Argentina have seen more than double of their average rainfall. Lightning strikes, large hail and the potential for tornadoes will pose additional risks to lives and infrastructure.



Colombia, Ecuador, Peru and Bolivia

Weather

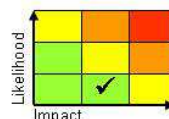
Heavy showers and thunderstorms are expected to be more numerous than normal along the northern Andes at times through the next week, especially from Monday to Wednesday. Rainfall accumulations will vary by location due to the showery nature of the rainfall but locally a further 200-300 mm of rain is possible in a few locations over the next week.

Discussion

Despite the South American monsoon undergoing retreat across Brazil, abundant tropical moisture exists across the northern Andes to generate further heavy showers and thunderstorms. The peak of activity this week will likely be influenced by a STJ upper trough disruption just to the southwest of Peru. The reason for the prolonged nature of this above average rainfall is less clear since SST anomalies along the Peru to Ecuador coastline are now widely below average.

Expected Impacts

Flash flooding and landslides remain an ongoing threat in the mountainous areas, as well as downstream river flooding. With much of this region preconditioned by previous rainfall, further heavy rain will produce some additional impacts. Over recent weeks there have been reports of significant damage to infrastructure from flooding, with homes, bridges and roads destroyed.



Northeast Brazil

Weather

A persistent feed of thunderstorms into this region could see some areas receiving 200-300mm over the course of the next week, equating to around a month's worth of rainfall for the area.

Discussion

Forecast precipitation anomalies over the next week reveal a southward shifted ITCZ, leading to a persistent feed of thunderstorms onto the coast of NE Brazil.

Expected Impacts

Increased risk of flash flooding in this region, with potential damage to property and risk to life.



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Africa

Nil significant.

Middle East**Cyprus, southeast Turkey, the Levant, northern Syria, northern Iraq, and western Iran**
Weather

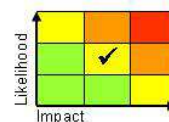
Heavy showers and thunderstorms will affect this region through the next few days. Many places are likely to receive at least 50 mm of rain during this period, but locally 150-200 mm is possible and would be roughly equivalent to twice the average monthly rainfall for the time of year. From Tuesday conditions will begin to turn somewhat drier across the region.

Discussion

An upper vortex and coincident surface low will transfer slowly east through the next few days, with a high WBPT plume aiding the development of severe convection east of the Levant coastline. Here, multicell convection and MCS are likely with convection likely to be long lived. Early next week the upper vortex begins to fill and move away east, with conditions gradually becoming quieter across the region.

Expected Impacts

Flash flooding is likely along with the potential for landslides in mountainous areas. Strong gusty winds and possible large hail associated with thunderstorms could cause damage to temporary or poorly built structures and are likely to lead to lifted dust in desert regions.

**Asia****Bangladesh and northeast India**
Weather

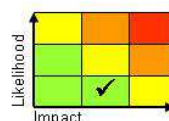
There is an increased likelihood of severe thunderstorms developing across this region from Sunday, which as well as producing large amounts of rainfall in a short space of time, will bring frequent lightning and a risk of large hail and tornadoes.

Discussion

We are approaching peak tornado season across this part of the world, and with very warm moist air in place a broad upper trough with embedded shortwave elements is expected to move across the region leading to increased potential for severe storms to develop. Forecast profiles exhibit large amounts of CAPE and strong shear, strong outflow aloft and potential for supercells and tornadoes.

Expected Impacts

Should these storms develop, flash flooding is a possibility, along with lightning/large hail/strong gusty winds causing a risk to life, plus damage to property and infrastructure.

**Australasia**

Northern Australia – See *Tropical Cyclones* section.

Additional information**Item of Interest: New Zealand, South Island**

Media reports of 1086 mm reported in 48 hours at Cropp Waterfall (975m elevation) in the recent “atmospheric river” event that affected the South Island. If official this would be a new 48 hour rainfall record for New Zealand. There is potential for further heavy rainfall today (Sunday). Whilst less severe this could still impact the ongoing recovery from flooding including rebuilding a bridge on highway 6 near Franz Joseph.

Issued at: 310515 UTC **Meteorologist:** Paul Hutcheon

Global Guidance Unit

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