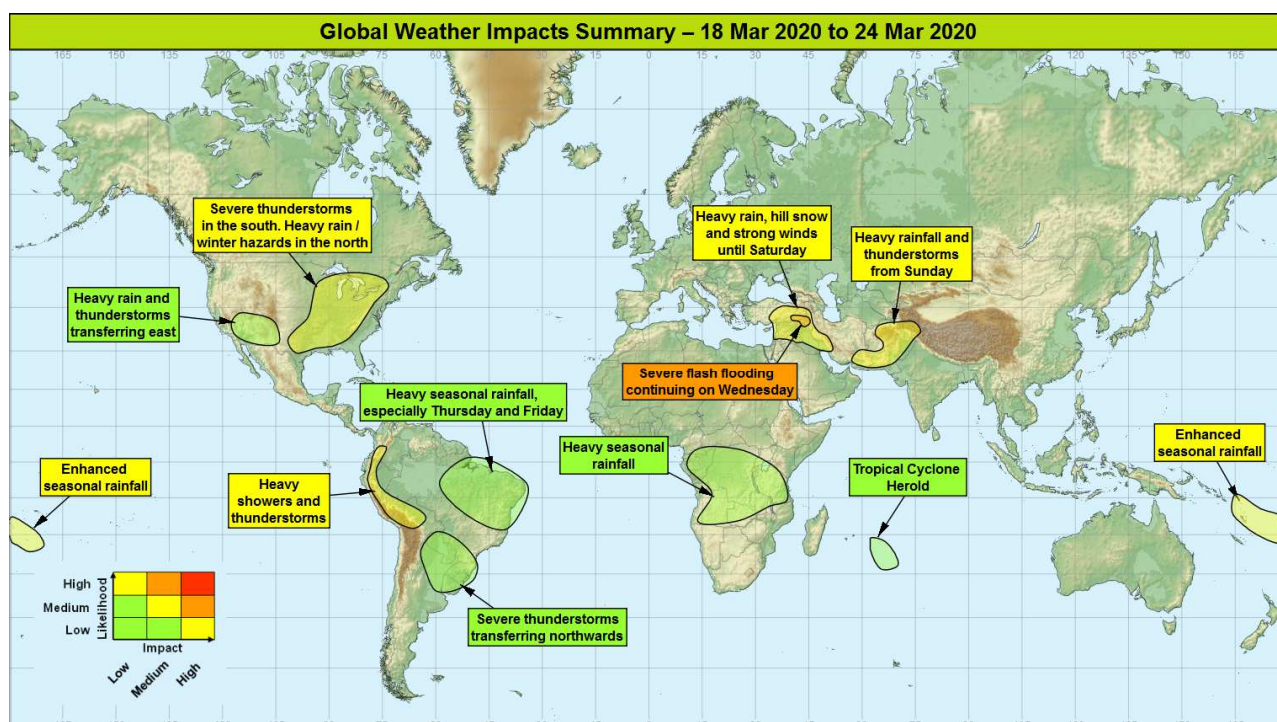


Global Weather Impacts – Wednesday 18th to Tuesday 24th March 2020

Issued on Wednesday 18th March 2020

HEADLINES

- Severe flash flooding likely in southeast Turkey and northern Iraq today.
- Flash flood and landslide threat in parts of southwest Asia and the Middle East.
- Further heavy rainfall over parts of the northern Andes, flash flooding is possible in places.
- Some Southwest Pacific islands likely to see flash flooding and landslides.
- Late winter storm affecting large parts of the USA and southeast Canada.



DISCUSSION

Tropical Cyclones

Tropical Cyclone Herold (Southwest Indian Ocean)

Weather

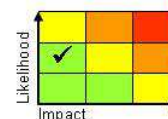
Herold is now (at 0600 UTC on 18th March) around 150 nautical miles south of Rodrigues island and is expected to continue to track southeastwards over the coming days. Herold currently has maximum sustained winds of around 70 mph, but gradually weakening later on Wednesday. The heaviest rain (200-300 mm) is likely to remain over the ocean with 30-50 mm most likely over Rodrigues island itself.

Discussion

The combination of high SSTs, upper level divergence and weak vertical wind shear has allowed Herold to intensify over the last couple of days. As Herold continues southeast over the next couple of days increasing vertical wind shear and lowering SSTs will lead to Herold weakening.

Expected Impacts

Damaging winds look likely for Rodrigues with a lower likelihood of more destructive winds. Flash flooding looks unlikely but remains a small risk.



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

© Crown copyright 2020. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

Europe

Nil significant

North America

Central / eastern USA and southeast Canada

Weather

The southern parts of this region will see a severe thunderstorm threat at times through the next 3 or 4 days, with the potential for intense rainfall (50-75 mm in a few hours; up to 200 mm through this week), large hail, strong winds, tornadoes and frequent lightning. Northern parts of this region will see periods of heavy rain (50-100 mm) from Wednesday to Friday. The average March rainfall in this region of interest is between 40 mm and 70 mm. The far north of this region (especially southeast Canada) could see a period of heavy snow and freezing rain.

Discussion

Earlier this week a trailing frontal zone was engaged by short wave upper troughs producing a severe storm risk which will continue due to an eastward transfer of a complex upper trough. This will also result in the development of a depression and complex frontal system east of the Rockies that will sweep east across the rest of North America later this week.

Expected Impacts

Severe storm impacts of flash flooding, wind and large hail damage in the south. Disruption due to flash flooding and winter hazards are likely in the north.



Southwest USA

Weather

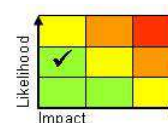
Heavy showers and thunderstorms will affect normally arid regions of southwest USA on Wednesday and Thursday. Up to 100 mm of rain could fall across the Sierra Nevadas, this manifesting as large amounts of snow above 1000-1500 metres. Elsewhere, 30-70 mm of rain could fall in a few days, which is up to 3 times the March average rainfall in this region.

Discussion

An upper vortex will track east into the Rockies region on Wednesday. This upper air feature will be associated with a cold front that will be the focus for heavier precipitation.

Expected Impacts

Flash flooding is the main impact, which could affect major cities in the area. Deep snow in the mountains could lead to some disruption to travel.



Central America

Nil significant.

South America

Southern Colombia, Ecuador, Peru and northwest Bolivia

Weather

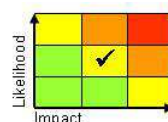
Enhanced shower and thunderstorm activity will continue across the northern Andes at times through the next 7 days. Rainfall accumulations could reach up to 250 mm in places, which would represent more than the average for the whole of March.

Discussion

Northerly flow across Central America is expected to continue, leading to stronger than normal convergence along the ITCZ that will be south-shifted compared to climatology, bringing enhanced precipitation to this region. The passage of a weak MJO and perhaps one or two Westward Inertio-Gravity waves through this region is also likely to contribute to enhanced rainfall. This continues the trend of above average precipitation in recent weeks making impacts more likely.

Expected Impacts

Ongoing enhanced threat of flash flooding and landslides.



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

© Crown copyright 2020. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

Northeast Brazil

Weather

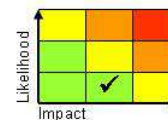
Heavy showers and thunderstorms will affect the region for much of the coming 7 days, with the peak activity likely on Thursday and Friday. Around 50-100 mm could fall within a few hours in places with a few locations having up to 300 mm in total for the seven-day period, equivalent to a month's worth of rain.

Discussion

The ITCZ is likely to remain very active over the next week or so, mainly due to high SST's in the South Atlantic, but possibly also some influence of the MJO and at least one Westward Inertio-Gravity wave as they move through this region during the next week. Forecast profiles are very moist at depth (precipitable water around 65mm), with relatively modest CAPE, suggesting high rainfall efficiency and the potential for large accumulations in places.

Expected Impacts

Heavy rain will bring an enhanced threat of flash flooding and landslides, particularly in mountainous terrain, especially on Thursday and Friday.



Northeast Argentina, Uruguay, southern Brazil and Paraguay

Weather

Pulses of severe convection are likely to develop across northeastern Argentina on Wednesday and then slowly transfer northwards across this region through the rest of this week. Up to 100-150 mm of rain could fall in 12-24 hours, with frequent lightning, large hail, strong winds and a threat of tornadoes are also possible.

Discussion

The South Atlantic Convergence Zone (SACZ) will transfer north and become more active as forcing from a series of upper troughs associated with a north shifting jet engages the SACZ.

Expected Impacts

Flash flooding is the most likely impact, but with damage from lightning, strong winds and large hail possible too.



Africa

Rodrigues Island – see *Tropical Cyclones* section.

Central parts of Africa

Weather

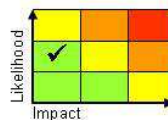
Heavy showers and thunderstorms are likely to affect a broad region of central and east Africa through this week. These could produce 50-75 mm of rainfall in a few hours, with over 200 mm through the week in a few places. This would represent the March average precipitation falling in the space of a few days.

Discussion

There is a consistent model signal for this region of Africa to see enhanced seasonal rainfall through the next week. The advance of the MJO later next week could contribute to more widespread rainfall events.

Expected Impacts

Increased risk of flash flooding should these thunderstorms affect a major population centre.

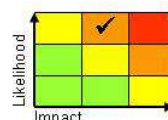


Middle East

Southeast Turkey and northern Iraq

Weather

Following up to 150-200 mm of rain through on Tuesday, severe weather is expected to continue to affect southeast Turkey and northern Iraq through part of Wednesday, with up to another 50-100 mm of rainfall possible from widespread heavy showers and intense thunderstorms before drier weather arrived later in the day. The event total rainfall in places could be as much as twice the March rainfall in just a day or two.



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

Discussion

Marked forcing from a short wave upper trough rounding the developing upper vortex will engage the cold front and pre-frontal warm plume to produce an area of enhanced deep convection. Forecast profiles show the potential for MCS development that could produce long lasting intense thunderstorms, before this warm airmass clears to the east by later on Wednesday.

Expected Impacts

High likelihood of severe flash flooding events in this mountainous region, with rockslides increasingly likely. This looks like a particularly significant weather event, hence the elevation to the top of the medium impact column.

Syria, Lebanon, much of Iraq, far west of Iran and eastern Turkey

Weather

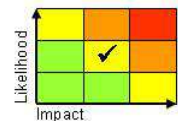
Unsettled weather is expected to continue until Saturday across this region with showers or longer spells of rain that will fall as snow on higher ground (especially central Turkey and Lebanon). Much of this region will see 25-40 mm of rainfall until Saturday, with up to 50-100 mm in places. The most intense rainfall being seen in southeast Turkey and northern Iraq (as above). Strong winds are also expected, with the main impact being the potential for dense lifted dust plumes across southern parts of this region.

Discussion

A complex upper trough will extend southeast and disrupt, with the vortex becoming slow moving over central Turkey to produce a prolonged spell of unsettled weather across this region.

Expected Impacts

Flash flooding is likely, with strong winds also generating localised areas of lifted dust, which could impact human health. Heavy snowfall could become disruptive on higher ground, especially in central Turkey. This region includes areas of humanitarian concern that may be more significantly susceptible to this adverse weather.



Asia

Southeast Iran and much of Afghanistan and Pakistan

Weather

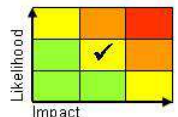
Heavy showers and thunderstorms will slowly transfer east and northeast across this region from Sunday. These storms could bring 50-75 mm of rain in a few hours, with accumulation of up to 150 mm of rain in just 2 or 3 days. Frequent lightning, large hail and strong winds with dense dust storms also likely.

Discussion

An upper vortex will gradually transfer east across the region, engaging a very warm plume to produce intense deep convection that could become organised, displaying MCS characteristics due to marked vertical wind shear.

Expected Impacts

Flash flooding (with a contribution from snow melt) and landslides look like the most likely impacts. Lightning and wind damage also likely, with dense dust storms possibly impacting on human health.



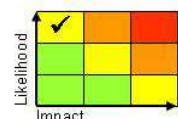
Australasia

Vanuatu, Fiji and Tonga

Weather

Enhanced seasonal rainfall is expected across this region through the next 7 days due to more widespread thunderstorms activity. Up to 50-100 mm of rain could fall in just 12 hours, with event totals of up to 350 mm likely.

Discussion



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

© Crown copyright 2020. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

The South Pacific Convergence Zone looks likely to be more active than usual through much of this week, partly in response to the southeastwards track of ex-Tropical Cyclone Gretel to the south.

Expected Impacts

Flash flooding is possible in places. Also a risk of landslides in mountainous areas.

Additional Information

Nil.

Issued at: 180800 UTC **Meteorologists:** Chris Tubbs / Paul Hutcheon **Global Guidance Unit**

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

© Crown copyright 2020. This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.