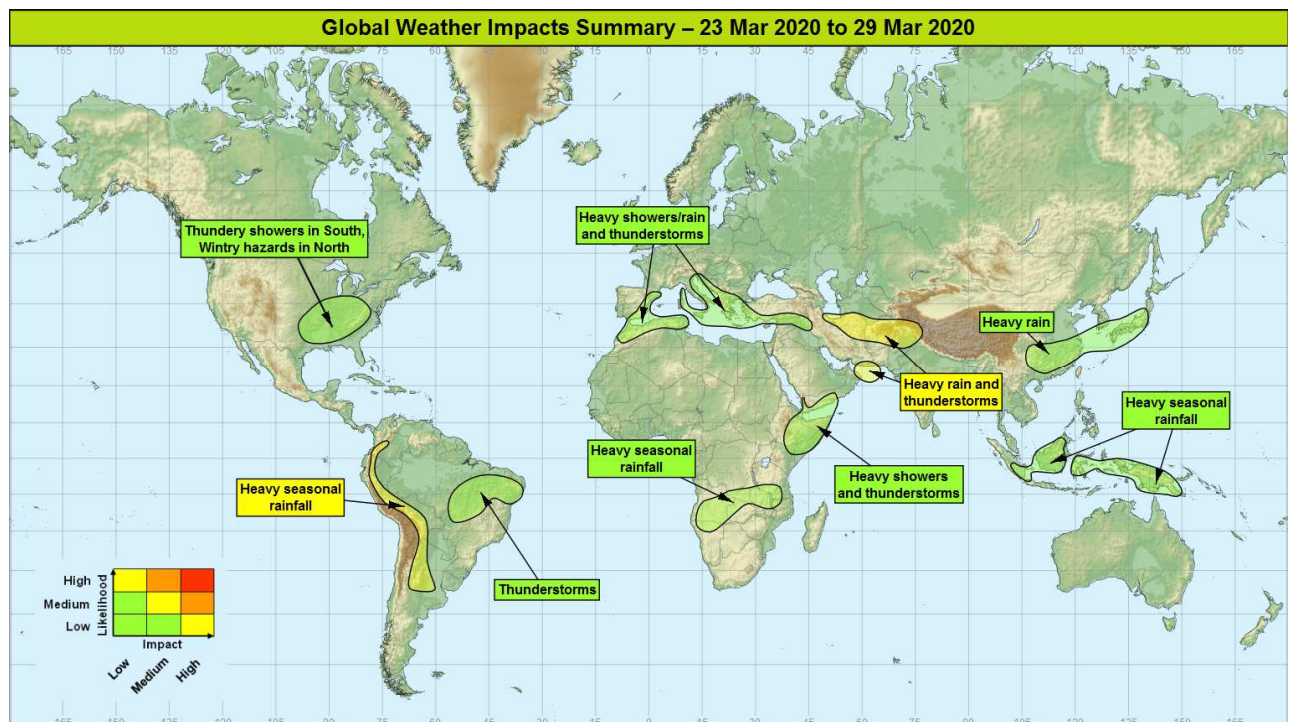


Global Weather Impacts – Monday 23rd to Sunday 29th March 2020Issued on Monday 23rd March 2020**HEADLINES**

- Heavy rain and thunderstorms transferring east across the Middle East into southwest Asia.
- Ongoing above average rainfall and landslide threat affecting the northern Andes.
- Heavy rain expected to affect parts of Yemen and the Horn of Africa early this week.

**DISCUSSION****Tropical Cyclones**

There are currently no named tropical cyclones expected to affect land over the next seven days.

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

Eastern and southern Spain, Morocco, the north of Algeria and Tunisia. South-east Europe stretching across the northern Syria and northern Iraq.

Weather

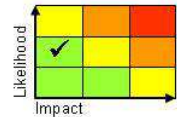
Unsettled weather is expected to affect large parts of southern Europe over the next week, gradually transferring eastwards across the Mediterranean basin. The heaviest rain is likely to be across Italy, Greece, and other isolated parts of south-east Europe, with up to 200mm possible here by the end of Friday, which is two to three times the monthly average. Many other places are likely to see 50-75mm in the space of a day or two.

Discussion

A cut-off low over Iberia will be reinforced by another trough disruption this weekend and engage a modest warm plume across southern and eastern Spain and Morocco over the next few days. The weak steering flow will favour locally significant rainfall totals across the region. The rainfall should finally ease from Spain and Morocco by midweek. This complex upper vortex then migrates slowly across northern Africa promoting cyclogenesis which, together with a cut-off vortex over Central Europe will provide a further focus for areas of heavy rain and thunderstorms extending further east across the Mediterranean from Wednesday/Thursday. This is likely to be associated with the heaviest rainfall, before the system continues eastwards into the Middle East over the weekend.

Expected Impacts

Increased risk of surface and river flooding bringing a threat of localised damage to property and infrastructure. Risk of landslides where terrain is steep.

**North America**

Southern and Eastern USA

Weather

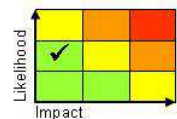
During Saturday a low will develop over the Southern or Central Plains of the USA and move Northeastwards as it deepens towards the Great Lakes and North-eastern states of the USA on Sunday. This will bring heavy rain and a risk of wintry hazards in the north of this region, and heavy, thundery showers and a low tornado risk in the south.

Discussion

A sharpening trough just East of the Rockies on Saturday will engage a warm plume from the Gulf of Mexico late on Saturday and on Sunday. Low pressure will deepen as it passes from Oklahoma or Kansas northeastwards during Sunday, bringing a risk of hazards.

Expected Impacts

Risk of flash flooding, disruption to transport, damage to property if tornadoes form.

**Central America**

Nil significant.

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South America**Southern Colombia, Ecuador, Peru, south-west Bolivia, northern Argentina****Weather**

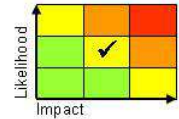
Enhanced shower and thunderstorm activity will continue across the northern Andes early this week, steadily spreading southwards with a peak in activity expected Wednesday through Friday across northern Argentina. Rainfall accumulations could reach up to 250 mm in places, which would represent more than the average for the whole of March.

Discussion

Convective activity is forecast to be above normal on the western side of the Northern Andes over the next few days. A southward extension of this tropical air is expected to be engaged by a sharp, low latitude cut-off vortex mid-week, generating heavy, thundery downpours over Northern Argentina and likely MCS developments, with hail and frequent lightning additional hazards.

Expected Impacts

Continued threat of landslides and flash flooding in the steep terrain of the Northern Andes. More populated areas in northern Argentina such as Cordoba could experience significant flash flooding with widespread disruption to transport, and damage to property and businesses.

**Eastern Brazil****Weather**

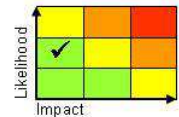
An active cold front will move north through eastern parts of Brazil through this week. This will be accompanied by a combination of heavy rain and locally severe thunderstorms capable of producing frequent lightning, strong winds and large hail. Some locations could see 75-150 mm in a few hours.

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

Heavy rain is likely to trigger flash flooding with multiple hazards from severe thunderstorms including localised property/infrastructure damage and risk to life. Localised property and infrastructure damage from lightning, strong winds and hail possible too.

**Africa**

Morocco, Algeria and Tunisia – See *Europe* section.

Horn of Africa and Yemen – See *Middle East* section.

Namibia, southeast Angola, Zambia, Malawi, northwest Mozambique and southern Tanzania**Weather**

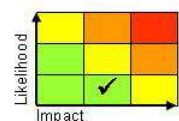
Scattered heavy showers and thunderstorms are expected to affect a broad region of central southern Africa through this week. These could locally produce 50-75 mm of rainfall in a few hours, with a few locations likely to receive 150-200 mm over the next seven days. The heaviest rainfall is expected to be along a line from southwest Angola to the Tanzania/Mozambique border.

Discussion

Northward movement of the ITCZ over Africa this week is expected to result in an increase in shower and thunderstorm activity across this region.

Expected Impacts

Increased risk of surface water and riverine flooding from heavy rainfall, particularly in southern Tanzania where impacts from flooding have already been reported. Areas of Angola (Cuanza Sul, Malanje and Luna Sul) which experienced recent heavy rainfall are likely to be spared the most significant rainfall.



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Middle East

UAE and northern Oman – See *Asia* section.

Horn of Africa and Yemen

Weather

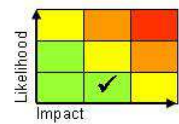
Shower and thunderstorm activity is expected to be widespread through to the middle of next week across Western Highland and southern coastal areas of Yemen and the wider Horn of Africa region. Some locations could see 20-30 mm in a few hours, which would exceed the average monthly rainfall for most places (eg Sana'a 8.2mm, largest daily total 29.0mm). Some higher ground locations could see 50-100mm. It should become drier later this week.

Discussion

An upper trough extending across the Arabian Peninsula is likely to engage a plume of tropical moisture (and old cold front) being drawn northward from Horn of Africa through to the middle of this week. This is expected to trigger more frequent shower and thunderstorm activity, particularly over highland areas of Yemen compared to recent weeks, as well as result in early season heavy rainfall across the Horn of Africa.

Expected Impacts

Increased likelihood of flash flooding and an enhanced risk of landslides where terrain is steep. In addition these conditions often increase the risk of cholera attacks.



Asia

Iran, Afghanistan, northern Pakistan, UAE and northern Oman

Weather

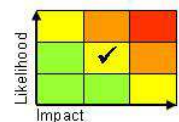
Following recent heavy rain and thunderstorms, a further spell of disturbed weather is expected from Monday to Wednesday, initially across the Persian Gulf before moving northeast. Frequent lightning, large hail and strong winds with dense dust storms also likely. The heaviest rainfall is expected over higher ground of Iran, Afghanistan and northern Pakistan where 50-75 mm locally 150 mm is possible and this is equivalent to the typical monthly rainfall for March.

Discussion

The Western Disturbance that was responsible for exceptionally heavy rain across parts of the Levant last week is now transferring east across southwest Asia. Once this departs, another trough disruption will occur across a similar region bringing a renewed threat of heavy rainfall, enhanced orographically over parts of Iran, Afghanistan and Pakistan as well as with embedded deep convection.

Expected Impacts

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



Malaysia, eastern Indonesia

Weather

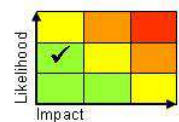
Shower and thunderstorm activity is expected to remain more widespread than normal over this week with many places receiving 50-100 mm during this time, with 250 mm in a few places. The heaviest rain is expected to occur over Kalimantan and the west coast of Sumatra.

Discussion

Convection along the ITCZ is expected to be more widespread as a Kelvin wave transfers east across the region over the next few days along with a pair of Rossby waves.

Expected Impacts

Increased risk of flash flooding, particularly in areas that have been affected by recent heavy rainfall e.g. West Java including Jakarta.



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Eastern China, South Korea and Japan**Weather**

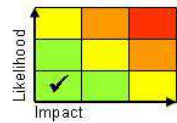
Further heavy rain and thunderstorms are expected to affect eastern China early this week, before spreading to south Korea and Japan later in the week. During this period, up to 125-175 mm is locally possible, half of which may fall in under 24 hours, and would be equivalent to around the average March rainfall for eastern China.

Discussion

The baroclinic zone becomes slow-moving for the next few days and prone to further engagement into the early part of this week as shortwave upper troughs overrun it. The high WBPT air to the south of the front could also see areas of mainly elevated convection developing. This plume then extrudes NE towards Korea and Japan later this week ahead of the frontal zone which comes SE in response to cyclogenesis over E Russia.

Expected Impacts

Localised flash flooding causing damage to property and infrastructure.

**Australasia**

Nil significant.

Additional Information

Nil.

Issued at: 230850 UTC **Meteorologists:** Chris Tubbs / D J Harris

Global Guidance Unit

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