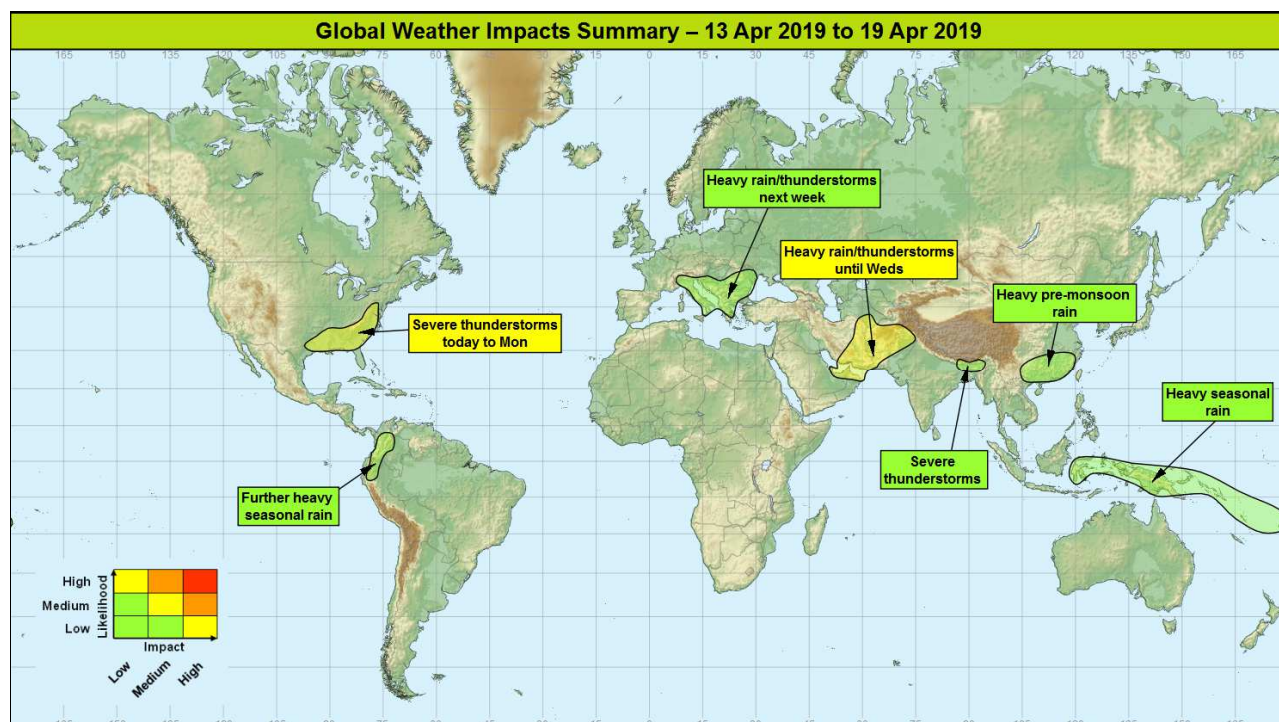


Global Weather Impacts – Saturday 13th April to Friday 19th April 2019

Issued on Saturday 13th April 2019

HEADLINES

- Heavy rain across parts of the Middle East and Afghanistan.
- Severe thunderstorms across southern and eastern USA over the weekend.
- Remaining unsettled across southeast Europe with heavy showers and thunderstorms.



DISCUSSION

Tropical Cyclones

There are currently no tropical cyclones, and no expectation of any imminent tropical storm developments.

Europe

Southern and southeast Europe

Weather

Areas of heavy rain and thunderstorms will continue to affect this region through much of the next 7 days. The rain could bring accumulations of up to 125 mm in some locations, with thunderstorms producing the potential around 50 mm within a few hours in places.

Discussion

A complex upper vortex across eastern Europe will engage a plume across more southeastern parts of Europe at times through the next 7 days to produce areas of heavy showers and thunderstorms at times.

Expected Impacts

Small chance of flash flooding causing disruption to travel and damage to property. Landsides could potentially be triggered in the mountainous terrain. Thunderstorms/lightning may trigger some localised disruption.



This forecast may be amended at any time

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North America**Southern and eastern USA****Weather**

Heavy showers and severe thunderstorms are expected to affect central/southern parts of the USA on Saturday, with this threat gradually transferring east and north through Sunday and Monday. Up to 100-150 mm of rain could fall in a 6-12 hour period. Large hail, strong wind gusts and scattered tornadoes will be the greatest hazards. Numerous severe storms are likely for parts of Louisiana, E Texas and Mississippi on Saturday, with the risk then continuing north and east through into the early part of next week, though with a likely decrease in severity.

Discussion

Conditions are expected to be conducive to the development of numerous severe thunderstorms through Saturday, with the SPC showing a moderate risk of severe weather. Dynamics present are likely to lead to tornadic storms as a potent jet streak rounds the base of an advancing synoptic-scale trough. The most severe storms are likely to be on and ahead of the cold front (i.e. in the warm sector), where theta-W in excess of 22°C, strong directional and speed shear, plus PVA, are likely to combine to generate super cells and rotating storms.

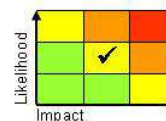
As the area of warm air and elevated instability continues NE through the rest of the weekend and into the early part of next week, further severe storms are likely.

Expected Impacts

Potential for flash flooding. Large hail could cause damage to structures and vehicles. Tornadoic activity is also a significant threat with this event.

Central America and Caribbean

Nil significant.

**South America****Western Colombia, Ecuador and far northwest of Peru****Weather**

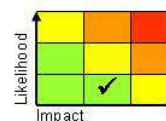
Further heavy seasonal rain is expected this week, following what has been a very wet rainy season. The rains will come in the form of thunderstorm activity that could produce intense rainfall (up to 75 mm in a few hours). Through the next 7 days up to 250 mm of rain could fall in places along the Andes. This equates to over 50% of the average April rainfall falling within a week.

Discussion

There continues to be a strong model signal for enhanced rain through the next week in this region. A Kelvin Wave may well help enhance the deep convection as it passes through the region this weekend.

Expected Impacts

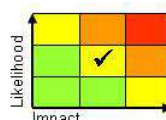
Flash flooding as well as river flooding and landslides are the likely impacts.

**Africa**

Nil significant.

Middle East**Qatar, UAE, northern Oman, much of Pakistan, eastern Iran and Afghanistan****Weather**

The most intense thunderstorms are expected to continue to affect the UAE on through Saturday, eastern Oman on Saturday and Sunday, eastern Iran from Sunday and Monday, and then Pakistan and Afghanistan from Sunday to Wednesday. Drier conditions will then follow from the west. Up to 30-60 mm of rain could fall within a few hours in UAE, eastern Oman and southwestern Pakistan, which is up to 5 times the average monthly rainfall. However, as much as 100 mm could fall on the Al Hajar Mountains of eastern Oman. Further north and east, the rain will not be as intense, but will likely be longer lived, with up to 150 mm of rain likely in parts of Afghanistan, and up to 100 mm of rain in parts of Pakistan and eastern Iran. These totals are equivalent to around 5 times the average April rainfall. Strong winds are also likely to be associated with these storms, perhaps producing dense Haboob dust storms.

Discussion

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Latest satellite imagery shows a major upper trough continuing to destabilise the airmass across a large area extending from the Empty Quarter of Saudi Arabia, E and N through Oman, the UAE and into Iran. Large-scale lift will continue, leading to conditions conducive to spells of heavy rain and severe thunderstorms. The trough should finally relax/weaken by mid-week, by which point severe disruption may have occurred across parts of the region.

Expected Impacts

Severe flash flooding is possible, with totals potentially overwhelming flood channels in the Al Hajar mountains. Disruption to aviation in the area could be significant.

Eastern Iran is less populated and is east of the recent severe flood areas, and so the impact here may be less. Afghanistan is likely to see increased flood and landslide impacts due to the combination of heavy rain and continued snow melt.

Asia

Northern Bangladesh, northeast India, and eastern Nepal

Weather

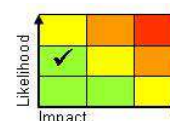
There is a continued threat of severe thunderstorms developing across this region during the next week, which as well as producing large amounts of rain (50-100 mm) in a short space of time, will bring frequent lightning and a risk of, strong winds, large hail and a few tornadoes. The most likely days for these storms are on Sunday and Monday.

Discussion

We are in the peak tornado season across this part of the world, and with a southerly flow bringing very warm moist air north from the Bay of Bengal and various upper troughs in the sub-tropical jet (that remains close to the area). At times forecast profiles exhibit large amounts of CAPE and strong shear, strong outflow aloft and potential for supercells and tornadoes.

Expected Impacts

Localised flash flooding is possible, with lightning/large hail/strong gusty winds/isolated tornadoes likely.



Southeast China

Weather

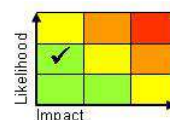
The south-eastern part of China will see heavy pre-monsoonal rain through the next 7 days, with many places seeing the average April rainfall (150-250 mm) falling in just a week. Thunderstorms are likely at times which could produce intense rain (100 mm in 6 hours).

Discussion

Short wave upper troughs in the sub-tropical jet will engage the warm plume across south-eastern China to produce pulses of very heavy pre-monsoonal rain. Forecast profiles show the potential for embedded high based thunderstorms within the plume. The highest risk of impacts in Hong Kong will be as the area of rain/thunderstorms shifts south through the weekend.

Expected Impacts

Flash flooding is the most likely impact, with an increasing threat of river flooding and landslides. Hong Kong should avoid the most intense rain and storms, but could be at risk of flash flooding at times, especially on Sunday.



Eastern Indonesia, Papua New Guinea, Solomon Islands, Vanuatu and Fiji

Weather

Heavier than usual rain is expected through the next week across this region. Up to 300 mm of rain could fall in places, with some places seeing the average April rainfall falling within a week.

Discussion

An active ITCZ and South Pacific Convergence Zone will produce heavier than usual rain across this region, perhaps enhanced by at least one Equatorial Rossby Wave.

Expected Impacts

Flash flooding will be the most likely impact. Increased threat of river flooding and landslides too.



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Daily Global Weather Impacts Assessment

Australasia

Papua New Guinea, Solomon Islands, Vanuatu and Fiji – see *Asia* section.

Additional information

Nil.

Issued at: 130600 UTC **Meteorologists:** Jason Kelly / Nick Silkstone

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