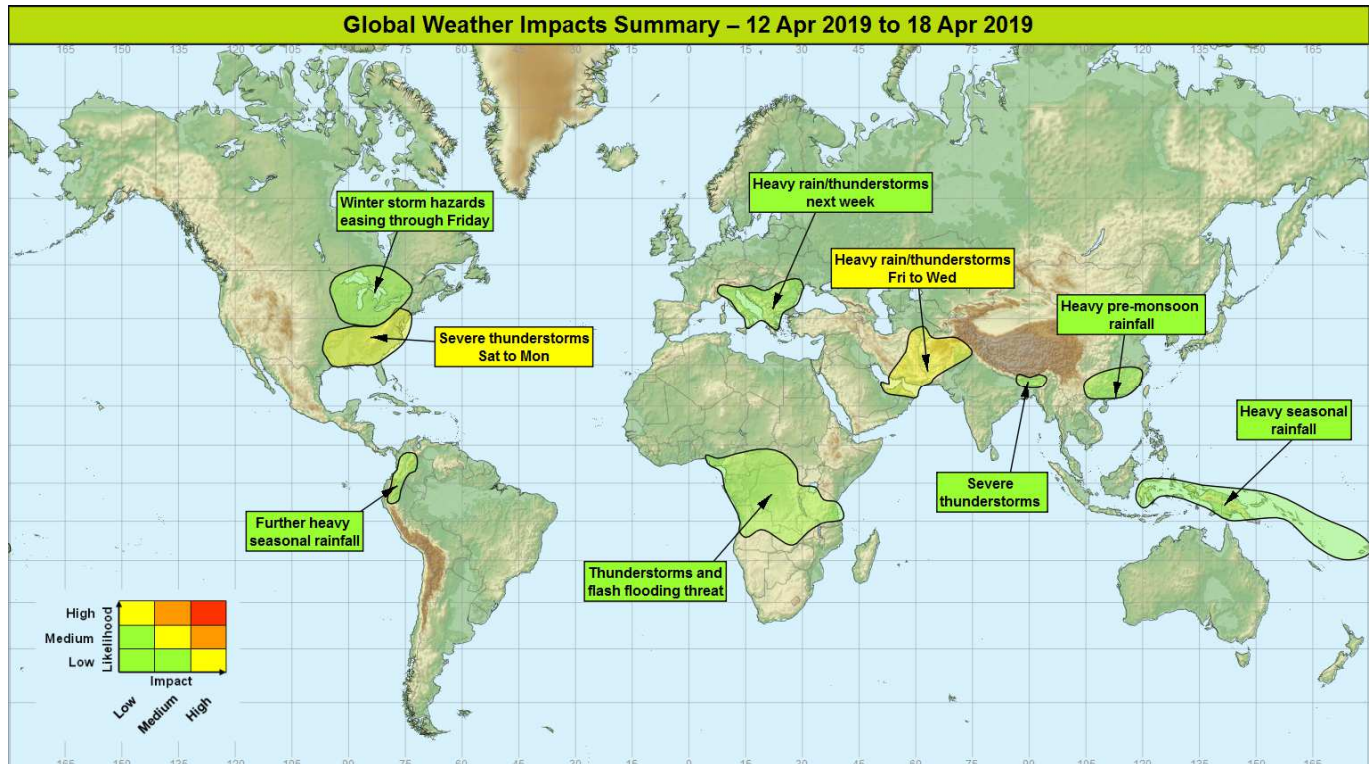


Global Weather Impacts – Friday 12th April to Thursday 18th April 2019

Issued on Friday 12th April 2019

HEADLINES

- Very heavy rainfall across parts of the Middle East and Afghanistan.
- Severe thunderstorms likely to affect the southern and eastern USA over the coming days.
- Remaining unsettled across southeast Europe with heavy showers and thunderstorms.



DISCUSSION

Tropical Cyclones

There are no active tropical cyclones and no tropical cyclones expected to form during the coming week.

Europe

Southern and southeast Europe Weather

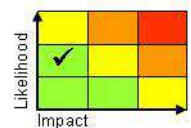
Areas of heavy rain and thunderstorms will continue to affect this region through much of the next 7 days. The rain could bring accumulations of up to 125 mm in some locations, with thunderstorms producing the potential around 50 mm within a few hours in places.

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

Central USA and southeast Canada

Weather

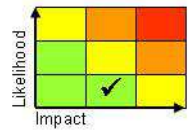
The deep area of low pressure that developed over the Central Plains during the past few days will weaken as it tracks northeast across the western Great Lakes through Friday. This system has produced very strong winds, heavy snowfall, heavy rain and thunderstorms, but these hazards will ease as the system moves east through Friday.

Discussion

Good model agreement for this depression to fill as it tracks northeastwards, with the main hazards likely to become intense rain associated with thunderstorms on the cold front as it tracks east, affecting Chicago and Detroit for a time. The large snow pack that has accumulated in recent days across the Northern Plains will melt through the next week and this snow melt is likely to increase the flood impacts over the upper Mississippi and Missouri river systems that have seen severe Spring flooding in the last month.

Expected Impacts

The major winter hazards have already occurred, with the main focus on Friday being intense rainfall on the cold front due to embedded thunderstorms. Through the next week the snow pack melt in the Northern Plains will likely find its way into the upper Mississippi and Missouri river systems, possibly producing further flooding here.



Southern and eastern USA

Weather

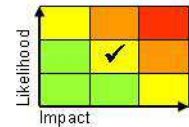
Heavy showers and severe thunderstorms are expected to affect central/southern parts of the USA on Saturday, with this threat gradually transferring eastwards and northeastwards through Sunday and Monday. Up to 100-150 mm of rain could fall in a 6-12 hour period. Large hail, strong wind gusts and a few tornadoes will be additional localised hazards. The highest risk of severe storms will be in the southwest part of this area, with more northeastern parts more likely to see heavy rain rather than severe storms.

Discussion

A sharp low latitude upper trough will engage a very warm (PS22C 850hPa) plume and low level southerly jet to produce conditions for severe thunderstorm development this weekend and early into the new week. There is the potential for some significant snowfall on the northern side of the low, but this is unlikely to be as impactful as the event further north during the next few days.

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. Disruption(s) to the US Masters golf tournament from thunderstorms are possible Friday through to Sunday.



Central America and Caribbean

Nil significant.

South America

Western Colombia, Ecuador and far northwest of Peru

Weather

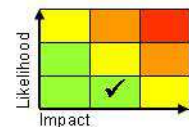
Further heavy seasonal rainfall is expected this week, following what has been a very wet rainy season. The rains will come in the form of thunderstorm activity that could produce intense rainfall (up to 75 mm in a few hours). Through the next 7 days up to 250 mm of rain could fall in places along the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



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Africa

Central parts of Africa

Weather

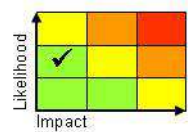
The next 7 days will see heavier than usual rainfall affecting many central parts of Africa. The rain will come in the form of thunderstorms which could produce 50-75 mm of rain in a few hours. Some places could see as much as 150 mm of rainfall in the next 7 days, which is close to the average April rainfall in the region.

Discussion

An active spell of the ITCZ is expected to bring enhanced heavy rainfall from thunderstorm activity to this region. This could be enhanced by the southern portion of an Equatorial Rossby Wave for a time during the next week.

Expected Impacts

Surface water flooding, especially in urban areas, could cause travel delays and damage to poor infrastructure. Additional hazards are likely to include strong winds and lightning.



Middle East

Qatar, UAE, eastern Oman, much of Pakistan, eastern Iran and Afghanistan

Weather

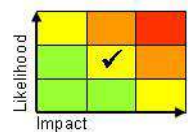
The most intense thunderstorms are expected in the UAE on Friday and Saturday, eastern Oman on Saturday and Sunday, eastern Iran from Sunday and Monday, and then Pakistan and Afghanistan from Sunday to Wednesday. Drier conditions will then follow from the west. Up to 30-60 mm of rain could fall within 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 rainfall 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

A sharpening upper trough will destabilise a warm plume to produce the threat of intense thunderstorms across southeastern parts of the Arabian Peninsula through Friday, the weekend and into next week. Large CAPE and marked wind shear could result in large hail as well as intense rainfall. Strong downdraught gusts are also likely, which could produce dense dust storms. The upper trough and plume will transfer north and east across eastern Iran, Afghanistan and Pakistan through the weekend and into next week. Across the UAE, eastern Oman and Pakistan the GM remains the model with the highest rainfall totals for this event. So the GM may be too extreme with the rainfall accumulations. However, the GM has good support for the rainfall amounts across Afghanistan and eastern Iran.

Expected Impacts

Severe flash flooding could affect some cities in the UAE and Oman, with flash flooding likely to cascade down from the Al Hajar Mountains in Eastern Oman this weekend. 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.



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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 rainfall (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

Flash flooding is likely along with lightning/large hail/strong gusty winds/isolated tornadoes causing a risk to life, plus damage to property and infrastructure.

**Southeast China****Weather**

The southeastern part of China will see heavy pre-monsoonal rainfall 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 rainfall (100 mm in 6 hours) in places.

Discussion

Short wave upper troughs in the sub-tropical jet will engage the warm plume across southeastern China to produce pulses of very heavy pre-monsoonal rainfall. Much of the rainfall will be heavy dynamic rains on the sharp baroclinic zone. However, forecast profiles show the potential for embedded high based thunderstorms within the plume. The highest risk of impacts in Hong Kong will be associated with the baroclinic zone shifting south across Hong Kong this 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 rainfall 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 rainfall 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 rainfall 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.

**Australasia****Papua New Guinea, Solomon Islands, Vanuatu and Fiji** – see Asia section**Additional information**

Nil.

Issued at: 120720 UTC **Meteorologist:** Paul Hutcheon / Chris Bulmer

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