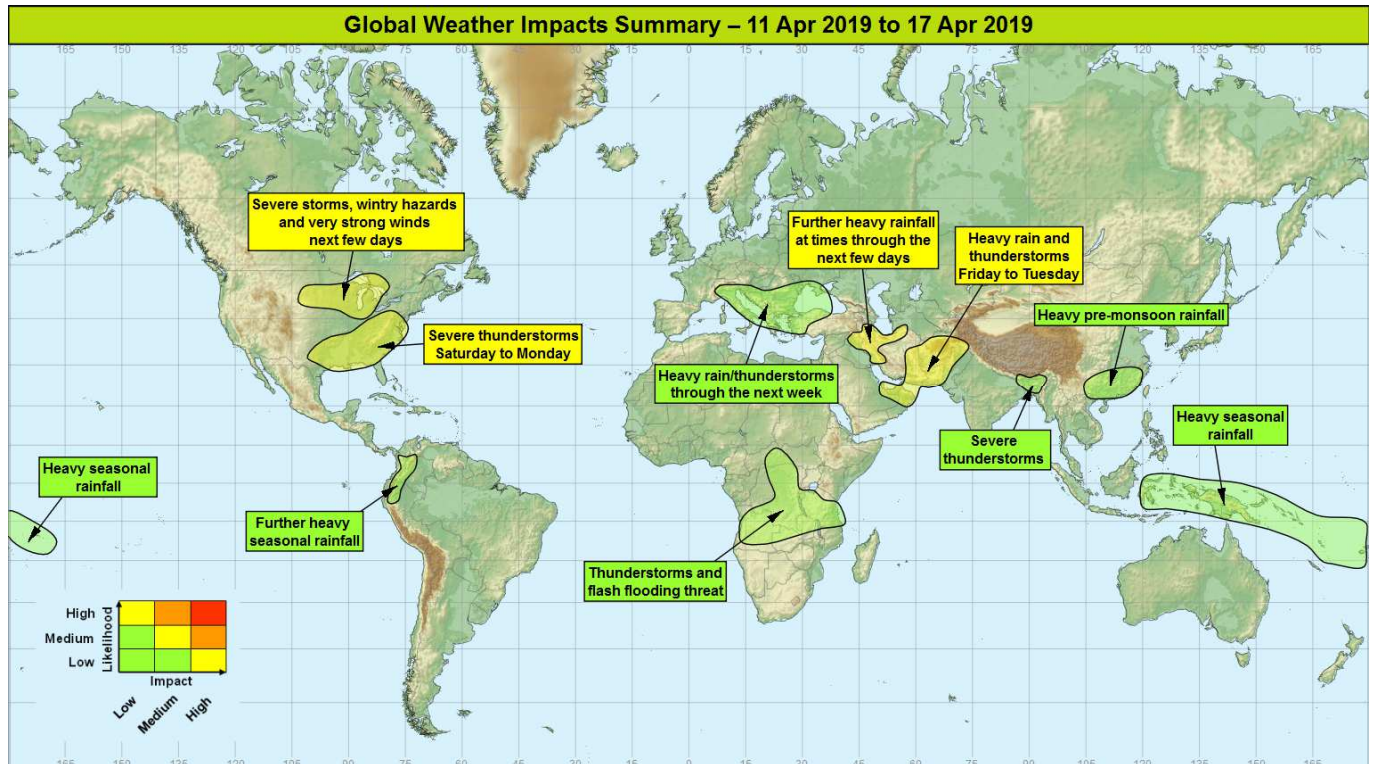


Global Weather Impacts – Thursday 11th April to Wednesday 17th April 2019

Issued on Thursday 11th April 2019

HEADLINES

- Very heavy rainfall across parts of the Middle East and Afghanistan from Friday.
- Further heavy rainfall across northern Iraq and northern and western Iran.
- Severe winter storm affecting some central parts of the USA during the next few days.
- Severe thunderstorms likely to affect the southern and eastern USA this weekend.
- Remaining unsettled across southeast Europe with heavy showers and thunderstorms.



DISCUSSION

Tropical Cyclones

There are no active tropical cyclones around the globe, and no tropical cyclones expected to form during the next week

Europe

Italy, Southeast Europe and Black Sea region

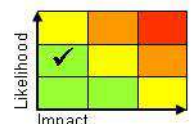
Weather

Areas of heavy rain and thunderstorms will continue to affect this region of southern and southeastern Europe 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 for up to 50 mm in a day.

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



This forecast may be amended at any time

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

North America

Central USA and southeast Canada

Weather

A deepening area of low pressure will track northeast from the central Plains across the western Great Lakes into Canada through the next couple of days bringing heavy rain (50-100 mm) and very strong winds (gusts reaching 60 mph), with the potential for severe thunderstorms too. Severe wintry conditions are expected on the northwestern side of the low as it transfers east, with heavy snow (up to 60 cm), blizzards and freezing rain likely to be the main hazards.

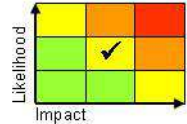
Discussion

An upper trough is engaging the warm plume just east of the Rockies, resulting in a rapidly deepening area of low pressure across the central Plains. The low will continue east-northeast through Friday, but as a weakening feature as the upper forcing weakens. As the low deepens it will drag in much colder air from the north, resulting in a combination of heavy snow and freezing rain. A 40-50Kt gradient around the low will result in a risk of gales or severe gales that could combine with heavy snow to produce blizzards in places, and could combine with freezing rain to bring down power lines.

Heavy rainfall and the large snow pack 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 main short term impacts will likely be from the winter hazards. Freezing rain and very strong winds could cause disruption to the power network, with the winds, snow and freezing rain producing significant disruption to the transport network. Severe storms could produce tornadoes and large hail. Heavy rain falling over the upper Mississippi and Missouri river systems (and significant snow melt through the next week) could produce further severe 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 150 mm of rain could fall in a 6 hour period. Large hail, strong wind gusts and a few tornadoes will be additional localised hazards.

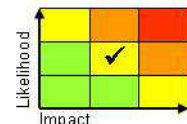
Discussion

A sharp low latitude upper trough will engage a very warm plume 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.



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Central America and Caribbean

Nil significant.

South America

Western Colombia and Ecuador

Weather

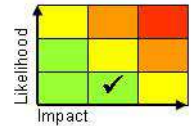
Further heavy seasonal rainfall is expected this week, following what has been a very wet rainy season. The rains will come in the form of thunderstorm activity that could produce intense rainfall (up to 75 mm in a few hours). Through the next 7 days up to 250 mm of rain could fall in places along the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



Africa

Central parts of Africa

Weather

The next 7 days will see heavier than usual rainfall affecting parts of Angola, Zambia, northern Malawi, parts of Democratic Republic of Congo and Central African Republic, Rwanda, Burundi and much of Tanzania.

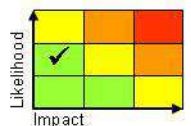
The rain will come in the form of thunderstorms which could produce 50-75 mm of rain in a few hours. Some places could see as much as 150 mm of rainfall in the next 7 days, which is close to the average April rainfall in the region.

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

Northern Iraq and northern and western Iran

Weather

Further periods of heavy showers and thunderstorms are expected in this region that has experienced severe flooding in recent weeks.

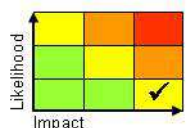
The peak thunderstorm activity for northern Iraq was on Wednesday, but further thunderstorms are likely on Thursday, possibly producing another 25-40 mm of rain.

For northern and western Iran it looks like being Thursday to Saturday where the heaviest showers are expected, again with thunderstorms producing locally intense rainfall. During this period up to 40 mm of rain could fall in places, although many places will see less than 20 mm. The average April rainfall in this region is between 20 and 30 mm.

Discussion

An upper trough will track east from Iraq across Iran through the next 3 days, with the upper forcing engaging the plume to produce deep convection and potential for intense rainfall events.

Expected Impacts



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Flash flooding is likely across a region that has recently seen severe flood impacts. River levels are likely to rise again, especially the Tigris river in northern Iraq.

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

Weather

Heavy showers and thunderstorms will become more frequent across Qatar, the UAE, eastern Oman on Friday, extending into eastern Iran, Pakistan and Afghanistan over the weekend.

The most intense thunderstorms will be seen in the UAE on Friday and Saturday, eastern Oman on Saturday and Sunday; eastern Iran from Saturday to Monday; Pakistan and Afghanistan from Sunday to Tuesday. Settled conditions will then follow from the west.

Up to 30-60 mm of rain could fall in a short space of time in UAE, eastern Oman and southwestern Pakistan. This is up to 5 times the average monthly rainfall.

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.

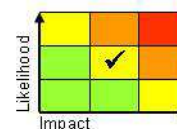
Discussion

A sharpening upper trough will destabilise a warm plume to produce the threat of intense thunderstorms across southeastern parts of the Arabian Peninsula later this week and through the weekend. 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.

The GM has lowered the rainfall totals for the UAE, eastern Oman and Pakistan, but 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. 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

Bangladesh, northeast India, and eastern Nepal

Weather

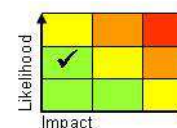
There is a continued threat of severe thunderstorms developing across this region during the next week, which as well as producing large amounts of rainfall (50-100 mm) in a short space of time, will bring frequent lightning and a risk of, strong winds, large hail and a few tornadoes. The most likely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

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.



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Southeast China

Weather

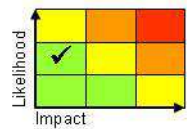
The southeastern part of China will see heavy pre-monsoonal rainfall through the next 7 days, with many places seeing the average April rainfall (150-250 mm) falling in just a week. The most active days look like being from Friday. Thunderstorms are likely at times which could produce intense rainfall (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

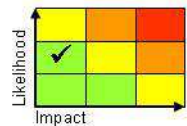
Heavier than usual rainfall is expected through the next week across this region. Up to 300 mm of rain could fall in places, with some places seeing the average April rainfall falling within a week.

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: 110700 UTC **Meteorologist:** Paul Hutcheon / Mark Sidaway

Global Guidance Unit

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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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