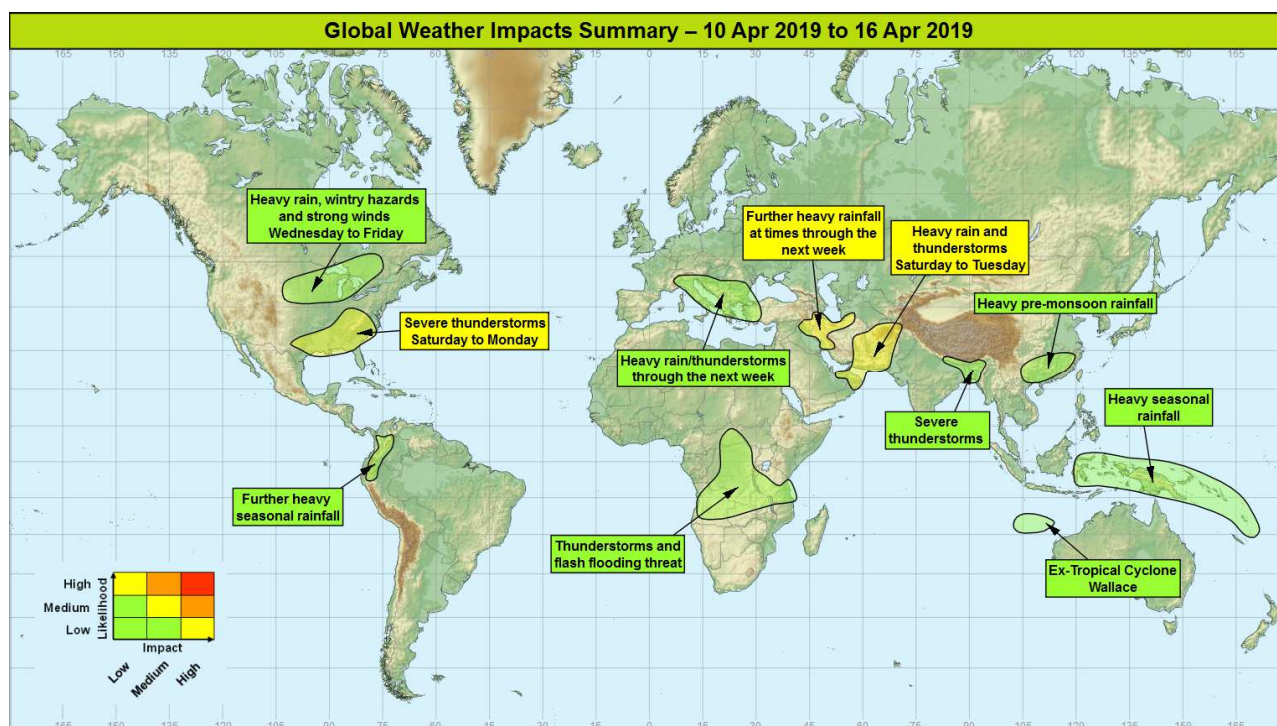


## Global Weather Impacts – Wednesday 10<sup>th</sup> April to Tuesday 16<sup>th</sup> April 2019

Issued on Wednesday 10<sup>th</sup> April 2019

### HEADLINES

- Very heavy rainfall across parts of the Middle East and Afghanistan from Saturday.
- Further heavy rainfall across northern Iraq and northern and western Iran.
- Severe thunderstorms likely to affect the southern USA this weekend.
- Remaining unsettled across southeast Europe with heavy showers and thunderstorms.



### DISCUSSION

#### Tropical Cyclones

#### Ex-Tropical Cyclone Wallace (Southeast Indian Ocean)

##### Weather

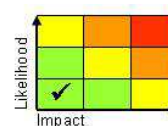
Wallace has continued to track west-southwest well to the north of the coast of NW Australia, located around 280 miles north-northwest of Exmouth (Western Australia) on Wednesday morning, but has now weakened below tropical cyclone intensity. The system is expected to maintain a similar track but continue to weaken through the next few days as it remains over the open ocean.

##### Discussion

NWP, as well as official track guidance, keeps Wallace out to sea for the rest of its life with no ensemble members showing a turn toward the Australian mainland.

##### Expected Impacts

None.



This forecast may be amended at any time

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## Europe

### Italy, Southeast Europe and western Turkey

#### **Weather**

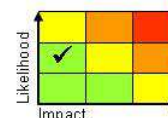
Areas of heavy rain and thunderstorms will continue to affect this region of southern Europe through much of the next 7 days. The rain could bring spot accumulations in excess of 150 mm in some locations, with showers next week able to locally bring a further 50-75 mm each day.

#### **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**

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 Colorado across the western Great Lakes into Canada through the rest of the week bringing heavy rain (50-100 mm) and very strong winds (gusts reaching 55 mph). Conditions will become wintry on the northwestern side of the low as it transfers east, with heavy snow (up to 40 cm), blizzards and freezing rain likely to be the main hazards.

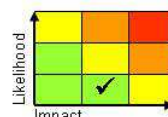
#### **Discussion**

An upper trough will engage the warm plume just east of the Rockies, resulting in a rapidly deepening low developing through the next few days. 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 60kt NE'ly gradient will result in a risk of gales or severe gales that could combine with heavy snow to produce blizzards, and could combine with freezing rain to bring down power lines.

Heavy rainfall could 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 impacts will likely be from the winter hazards. Freezing rain and strong winds could cause disruption to the power network, with the winds, snow and freezing rain producing significant disruption to the transport network. Heavy rain falling over the upper Mississippi and Missouri river systems could produce further flooding here.



## Southern USA

#### **Weather**

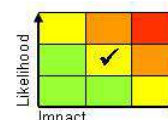
Heavy showers and severe thunderstorms are expected to affect central/southern parts of the USA on Saturday, with this threat gradually transferring eastwards through Sunday and Monday. Up to 150 mm of rain could fall in a 6 hour period. Large hail, strong wind gusts and a few tornadoes will be additional 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.

#### **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.

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**South America****Western Colombia and Ecuador****Weather**

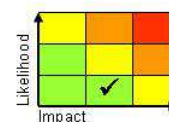
Further heavy seasonal rainfall is expected this week, following what has been a very wet rainy season. The rains will come in the form of thunderstorm activity that could produce intense rainfall (up to 75 mm in a few hours). Through the next 7 days up to 250 mm of rain could fall in places along the 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, the Democratic Republic of Congo, Central African Republic, Rwanda, Burundi and southern/western 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 will be on Wednesday where up to 50-75 mm of rain could fall.

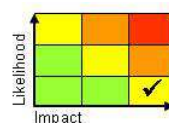
For northern and western Iran it looks like being Friday and Saturday where the heaviest showers are expected, again with thunderstorms producing locally intense rainfall. During this period up to 40 mm of rain could fall in places, although many places will see less than 20 mm. The average April rainfall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

**Discussion**

An upper trough will track east from Iraq across Iran through the next 4 days, with the upper forcing engaging the plume to produce deep convection and potential for intense rainfall events.

**Expected Impacts**

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.



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## **UAE, eastern Oman, southwestern Pakistan, eastern Iran and Afghanistan**

### **Weather**

Heavy showers and thunderstorms will develop across the UAE, eastern Oman and eastern Iran on Saturday, with this activity gradually transferring east across southwestern Pakistan and Afghanistan through Sunday, Monday and Tuesday, with settled conditions following from the west. Up to 100-150 mm of rain could fall in a short space of time in UAE, eastern Oman and southwestern Pakistan. This is around 10 times the average monthly rainfall.

Further north and east, the rainfall amounts will not be as large (up to 50-100 mm in 24-48 hours), but will still be several times the average April rainfall.

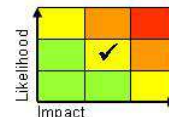
Strong winds are also likely to be associated with these storms, perhaps producing dense Haboob dust storms.

### **Discussion**

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

### **Expected Impacts**

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**

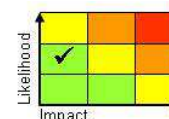
There is a continued threat of severe thunderstorms developing across this region during the next week, which as well as producing large amounts of rainfall (50-100 mm) in a short space of time, will bring frequent lightning and a risk of, strong winds, large hail and a few tornadoes. The most likely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



## **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. Forecast profiles show the potential for embedded high based thunderstorms within the plume.

### **Expected Impacts**

Flash flooding is the most likely impact, with an increasing threat of river flooding and landslides.



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**Eastern Indonesia, Papua New Guinea, Solomon Islands and Vanuatu****Weather**

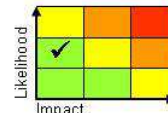
Heavier than usual rainfall is expected through the next week across this region. Up to 250 mm of rain could fall in places, with some places seeing the average April rainfall falling within a week.

**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 and Vanuatu** – see Asia section

**Additional information**

Nil.

**Issued at:** 100700 UTC    **Meteorologist:** Paul Hutcheon/Elle Hands

**Global Guidance Unit**

**This forecast may be amended at any time**

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