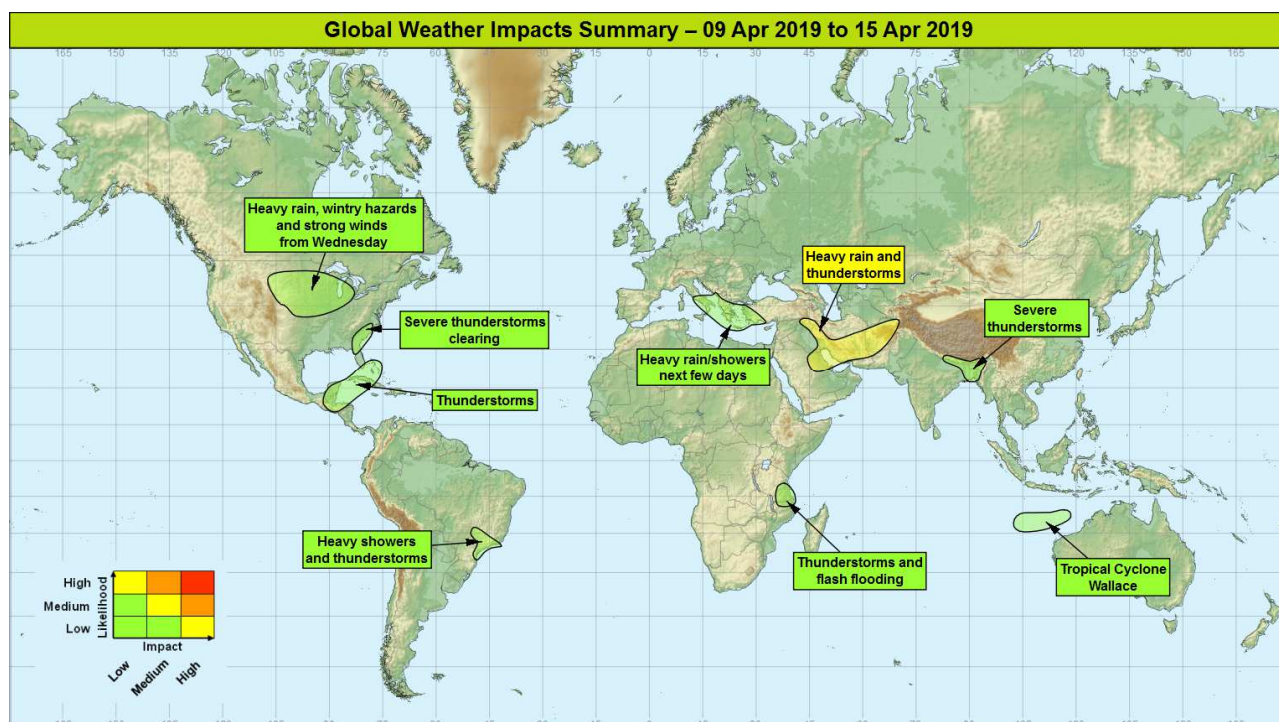


## Global Weather Impacts – Tuesday 9<sup>th</sup> April to Monday 15<sup>th</sup> April 2019

Issued on Tuesday 9<sup>th</sup> April 2019

### HEADLINES

- Further rain and thunderstorms likely to affect parts of the Middle East and Afghanistan this week.
- Remaining unsettled across southeast Europe with heavy showers and thunderstorms.
- Major storm likely to affect central USA later this week.



### DISCUSSION

#### Tropical Cyclones

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

##### **Weather**

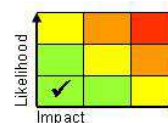
Tropical Cyclone Wallace has continued to track west-southwest well to the north of the coast of NW Australia, located around 340 miles NNW of Karratha on Tuesday morning. The system is expected to maintain a similar track but gradually weakening for the next few days, remaining over the open ocean. The system had maximum sustained winds of 68mph, with gusts to 95 mph making it a category 2 cyclone.

##### **Discussion**

NWP, as well as official track guidance, keeps Wallace out to sea for the next 4 to 5 days with now only a small minority of 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, Greece, Crete, the Balkans and southwest Turkey

#### **Weather**

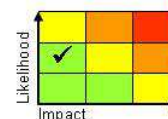
Areas of heavy rain and some thunderstorms will continue to affect this region of southern Europe this week. The rain could bring spot accumulations in excess of 150 mm in some locations, with showers next week able to locally bring a further 50-75 mm each day.

#### **Discussion**

A complex upper vortex and associated cold front will progress east across this region over the next day or two. A strong south-easterly wind in the warm conveyor ahead of the cold front, will lead to some marked orographic enhancement of rainfall across southeast facing hills, particularly across south-western Turkey and southern Greece. Following this repeated trough disruptions will engage the resident warm plume bringing further heavy showers.

#### **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. Strong winds may impact marine transport through the central Mediterranean.



## North America

### Central USA

#### **Weather**

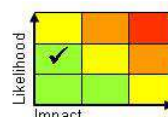
A developing area of low pressure will run east across the central USA through the middle of the week bringing heavy rain and strong winds. Conditions will turn wintry on the back edge of the low centre as it transfers further east, with snow and freezing rain likely to be the main hazards.

#### **Discussion**

The same upper trough responsible for the recent wet weather affecting the western USA will engage warm air drawn in from the Pacific, causing a rapidly deepening low to form by midweek and track quickly eastwards. As it transfers east it will draw in cold air from the north on its western flank causing a cold plunge behind.

#### **Expected Impacts**

Surface water flooding as well as travel impacts from poor driving conditions in snow and freezing rain, some flight delays also possible. Gales likely on the northern flank of the low cloud cause damage to power supplies. It is likely to affect parts of the Midwest which are already experiencing flooding from above average winter precipitation.



## Southeast USA

#### **Weather**

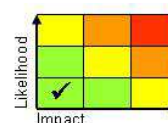
Further severe thunderstorm events possible across the far south-eastern USA through the next few hours. Intense downpours of rain could bring as much as 50-75 mm in places in a few hours. Large hail, strong wind gusts and a few tornadoes will be additional localised hazards.

#### **Discussion**

The plume of very warm air within which severe storms have developed in recent days will be displaced east into the Atlantic as a cold front progresses eastwards. Further storms are likely within the circulation of the parent low, these less intense and severe however, with much drier conditions from Wednesday. There is a possibility a further bout of severe storms may develop over the southern USA by the weekend, although models differ as to the location of these.

#### **Expected Impacts**

Increased potential for flash flooding. Large hail and/or strong winds could cause damage to structures and vehicles. Tornadoic activity occurred over the weekend although the risk of this is now rapidly decreasing. Some disruption to transport, particularly aviation (including transiting flights) is possible through Tuesday.



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

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## Central America and Caribbean

### The Bahamas, Cuba, Mexico, Belize, Guatemala and Honduras.

#### **Weather**

The cold front associated with the severe storms over the southern and eastern USA will remain an active feature as it sinks south into the Caribbean and Central America over the next day or two. Thunderstorm activity along it could produce locally 50 to 75 mm in a few hours, along with some strong gusts of wind and hail.

#### **Discussion**

The driving upper trough will maintain contact with the surface cold front until midweek, before it relaxes away to the east. This will maintain activity along the front as it sinks into this region, although less severe than across the USA earlier in the period.

#### **Expected Impacts**

Rainfall could be heavy enough to cause some localised flash flood impacts. Thunderstorms could impact travel into and through the region.



## South America

### Southeast Brazil

#### **Weather**

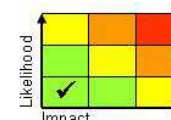
There is a risk of severe thunderstorms affecting southeastern parts of Brazil on Tuesday. These could produce 75 to 100 mm of rainfall in a few hours, along with hail and frequent lightning.

#### **Discussion**

An upper trough has engaged the southeastern extension of the monsoon plume and aid the development of heavy showers and thunderstorms. With in excess of 2000 J/kg CAPE available these storms could be locally severe. The driving trough will relax away to the east by Wednesday.

#### **Expected Impacts**

Flash flooding is likely to be the main impact, with some major cities at risk including Sao Paulo and Rio de Janeiro. Lightning could cause some disruption to power supplies. Disruption to transport to and through the region is possible.



## Africa

### Tanzania

#### **Weather**

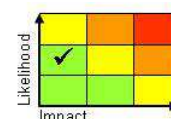
Heavy showers and thunderstorms are expected to affect coastal and southern parts through the next few days, with up to 50-80 mm falling in a short period of time. It is the peak of the wet season this month but over 150 mm rain could accumulate in places over a few days which represents over half of the average monthly rainfall.

#### **Discussion**

An active spell of the ITCZ is expected to bring particularly heavy spells of thunderstorms to this region. The southern portion of an equatorial Rossby wave may enhance this rainfall later in the period.

#### **Expected Impacts**

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



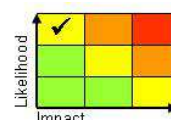
## Middle East

### Northern Iraq, western Iran, Persian Gulf and Afghanistan

#### **Weather**

Scattered heavy showers and thunderstorms are expected to affect these areas over the next week, although these will be less widespread and rainfall amounts lower than recent past events. However, a more organised area of rain is likely to transfer across the southern Persian Gulf, Iran and into Afghanistan this weekend.

#### **Discussion**



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A mobile, westerly upper pattern will continue to engage the resident warm plume across the region through the next week resulting in further heavy showers and thunderstorms. A more significant upper trough is likely to move east over the weekend and spawn a more organised area of cloud and rain.

## **Expected Impacts**

The areas highlighted are already sensitive to further rainfall following significant property and infrastructure damage from heavy rainfall events over the past 4-6 weeks. Therefore, localised flash flooding is possible, as well as maintaining high river levels in the region, which may cause some further property/infrastructure damage as well as travel disruption.

## **Asia**

### **Bangladesh, northeast India, and eastern Nepal**

#### **Weather**

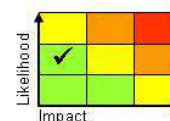
There is an increased likelihood of severe thunderstorms developing across this region during the next week, which as well as producing large amounts of rainfall (50-100 mm) in a short space of time, will bring frequent lightning and a risk of, strong winds, large hail and a few tornadoes.

#### **Discussion**

We are approaching peak tornado season across this part of the world, and with very warm moist air in place at low levels, an elevated mixed layer at medium levels 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. Last Sunday a severe storm in this region injured hundreds of people and caused multiple fatalities as it moved through Nepal, with poorly constructed buildings an aggravating factor.

#### **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.



## **Australasia**

Nil significant.

## **Additional information**

Nil.

**Issued at:** 090715 UTC **Meteorologist:** Mark Sidaway/Ele Hands

**Global Guidance Unit**

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