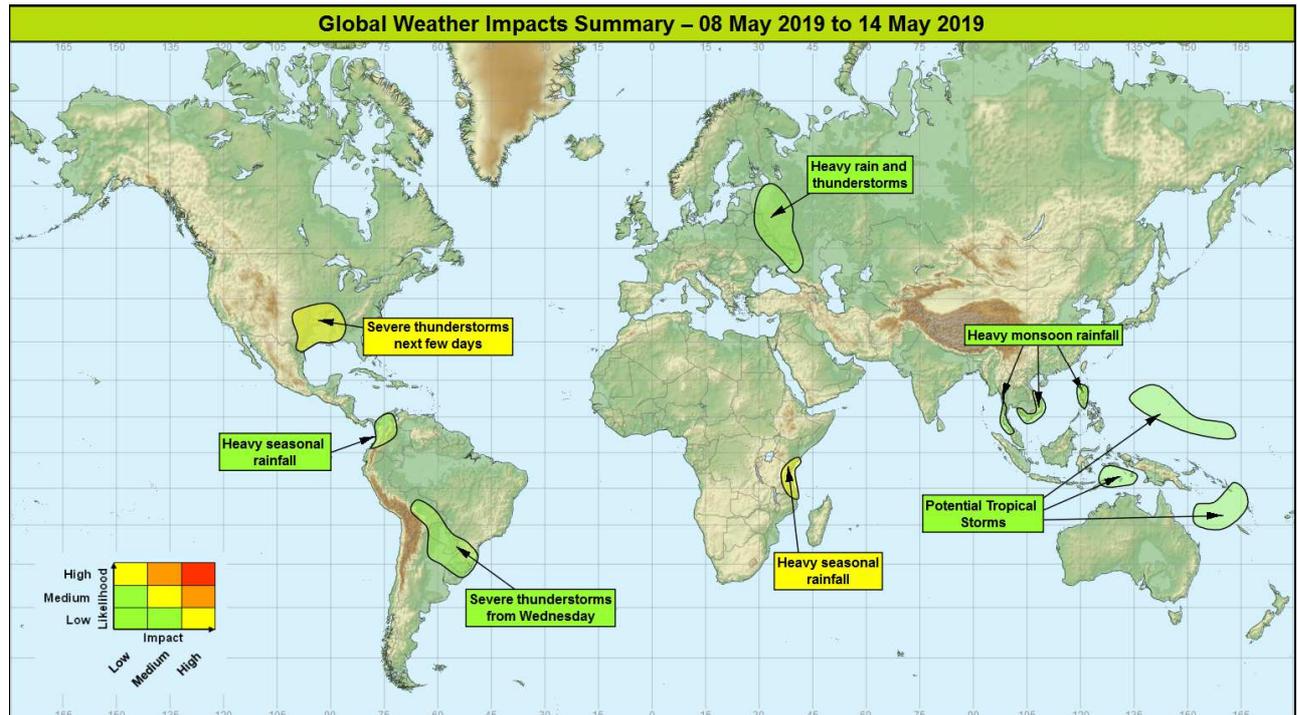


## Global Weather Impacts – Wednesday 8<sup>th</sup> to Tuesday 14<sup>th</sup> May 2019

Issued on Wednesday 8<sup>th</sup> May 2019

### HEADLINES

- Heavy seasonal rainfall continues across parts of eastern Africa.
- Severe thunderstorms and risk of flash flooding across southern USA next few days.
- Potential for tropical storm/cyclone development in the western Pacific.



### DISCUSSION

#### Tropical Cyclones

There are currently no named tropical storms.

The following regions are also being monitored for potential tropical cyclone formation:

#### Micronesia

##### Weather

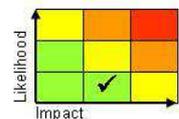
The main focus for a tropical cyclone development in this region is now further east, in southern Micronesia. There is a small chance that a tropical cyclone will develop here during the next few days, with any system likely to track northwest, possibly reaching Guam in around a week's time.

##### Discussion

This development is also the result of an Equatorial Rossby Wave (ERW) from the central Pacific MJO. There is reasonable model evidence for a tropical cyclone development from this system, with a preferred track being northwest towards Guam.

##### Expected Impacts

The most likely impact will be flash flooding across the Federated States of Micronesia and the Northern Mariana Islands, with a lower threat of damaging winds and storm surge.



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

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter  
 Tel: +44(0)1392 884319 VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)

## Southeastern Indonesia

### Weather

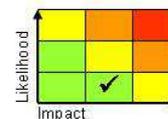
There is a reasonable probability that an area of showers and thunderstorms in the Banda Sea will develop into a weak tropical cyclone through the next few days. However, even if a cyclone does not develop, large rainfall amounts are expected (up to 600 mm, which is around double the average May rainfall in this region).

### Discussion

The southern portion of an ERW spawned from an active MJO moving through the region, is still associated with an area of showers and thunderstorms. This is signalled to become more organised in the next few days, with a low level circulation developing. Although there are still differences in model solutions, a number show a tropical cyclone developing in this region.

### Expected Impacts

The most likely impact will be flash flooding and landslides across some of the islands. However, there is a threat of disruptive winds and a modest storm surge if a cyclone develops.



## Melanesia

### Weather

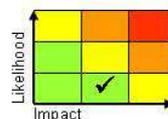
There is the potential for a tropical cyclone development this week close to the southern islands of the Solomon Islands, with this system likely to track southwest into the Coral Sea by the weekend. Up to 500 mm of rain could be produced from this system, but much of the rain will likely fall over the sea, rather than across the islands.

### Discussion

This development is the result of the southern portion of the ERW from the central Pacific MJO. All models track the system southwest into the Coral Sea.

### Expected Impacts

Flash flooding and landslides are possible, along with damaging winds and a storm surge if a cyclone does develop.



## Europe

### Eastern parts of Belarus and Ukraine along with western Russia

### Weather

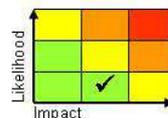
An area of organised heavy showers and thunderstorms will affect this region at times through the next week. Up to 25-50 mm of rain will fall within a few hours in places with perhaps up to 75 mm very locally. This will see some places receiving their average May rainfall in a few days. Large hail and frequent lightning strikes will be additional hazards.

### Discussion

A complex frontal zone and plume to the east will remain fairly slow moving due to frontal wave development, with upper trough forcing engaging the front and plume to produce areas of deep convection. Analysis of forecast profiles show up to 1500J/Kg of CAPE along with strengthening (slightly backing) flow with height, and 50kt+ at CB tops. This type of profile would produce forward or backward propagating storms and a threat of propagating MCS events.

### Expected Impacts

Heavy rain and thunderstorms will be associated with an increased likelihood of flash flooding and localised property/infrastructure damage. Aviation activities in the area are likely to be disrupted.

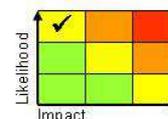


## North America

### Central and Southern USA Plains

### Weather

Further thunderstorms are expected across large parts of the USA through the coming week, but the most severe of these are likely to be across the Central and Southern Plains on Wednesday and Thursday. These storms are capable of producing very intense rainfall (75-150 mm) over short time period (less than 6 hours). Additional hazards are large hail, strong winds and tornadoes.



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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](mailto:ggu@metoffice.gov.uk)

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## Discussion

A rather complex upper vortex will move slowly across the Rockies from Tuesday drawing a warm, moist airmass up from the Gulf of Mexico. This warm plume will be the focus for severe convection. A combination of high CAPE, strong directional wind shear and a low-level jet will aid the development of severe thunderstorms and the potential for tornadoes.

## Expected Impacts

As well as flash flooding and the tornado damage threat, hail and wind damage are possible to property and crops.

## Central America and Caribbean

Nil significant.

## South America

### Paraguay, Uruguay, northeast Argentina, southern Brazil and Bolivia

#### Weather

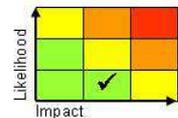
A prolonged spell of heavy showers and thunderstorms, potentially severe, will develop across this region, slowly transferring northwards out of northeast Argentina and Uruguay and into Bolivia and southern Brazil. Locally high rainfall accumulations of up to 150 mm in a few hours are likely, with some places perhaps seeing up to 300 mm during several days. The average rainfall in this region for May is 150-200 mm.

#### Discussion

Pulses of activity along the South Atlantic Convergence Zone are expected over the coming week. The most intense convection is likely to be on Friday and Saturday as an upper trough sweeps eastwards across the region to engage the low level tropical moisture plume.

#### Expected Impacts

Localised flash flooding increased chance of landslides in mountainous areas. Large hail, strong winds and frequent lightning are additional hazards which may cause damage to property and disruption to transport and utilities. This region has seen a very wet rainy season, and so further rainfall could result in river flooding.



## Western Colombia

#### Weather

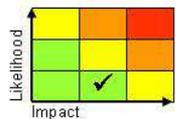
Further heavy seasonal rainfall is expected across the northern Andes region of South America, coming after an active start to the rainy season in Colombia. A further 300 mm of rain could accumulate in the next week, which is close to the average for the whole of May in the wetter Colombian sites.

#### Discussion

Good model agreement for another spell of heavy seasonal rainfall that will increase the threat of further flood and landslide events in the region. This active period of weather could be associated with the El Nino type SST anomalies offshore, but also the influence of easterly waves moving across the north of South America.

#### Expected Impacts

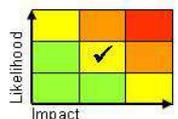
Further flash flood and landslide events seem increasingly likely through the next week, threatening transport infrastructure and settlements in the region.



## Africa

### Eastern parts of Tanzania and Kenya, along with the far northeast of Mozambique

#### Weather



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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](mailto:ggu@metoffice.gov.uk)

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Very heavy seasonal rainfall has fallen through the past few days, with Zanzibar seeing their usual May rainfall (around 290 mm) in just the last 2 days.

Above average shower and thunderstorm activity is expected to continue across eastern parts of Tanzania and Kenya over the next week. Up to 150 mm of rainfall is possible per day, but some locations could receive as much as a further 300-400 mm of rain by the start of next week. From Thursday to Saturday there is the potential for the heavy rainfall to extend south into the far northeast of Mozambique, possibly bringing as much as 100 mm of rain here.

#### **Discussion**

Whilst the remnants of Tropical Cyclone Kenneth have dissipated, the inter-tropical convergence zone will maintain the focus for frequent heavy showers and thunderstorms through the next week across eastern Tanzania and the extreme southeast of Kenya, enhanced by an Equatorial Rossby Wave that could extend the heavy rainfall south across the border into northeast Mozambique for a time.

#### **Expected Impacts**

Further flash flooding and damage to property and infrastructure in large cities like Dar es Salaam and Mombasa, plus the popular tourist destinations of Zanzibar. The far northeast of Mozambique, still recovering from the impacts of Tropical Cyclone Kenneth, could see an increased threat of flooding from a period of heavy rainfall later this week. This would be unseasonably late heavy rainfall here.

#### **Middle East**

Nil significant.

#### **Asia**

#### **Southern parts of Myanmar, Thailand, Cambodia and Vietnam along with the west of Luzon (Philippines)**

#### **Weather**

Increasingly widespread heavy rainfall is expected across this part of Southeast Asia through the coming week with daily rainfall accumulations of 75-100mm possible, and cumulative rainfall of 300-400mm in some places. This is the start of the Southwest Monsoon season in this part of Asia, but the rainfall falling this week is likely to be equivalent of the average for the whole of May.

#### **Discussion**

A deep layer strong southwesterly flow will develop across this region through the next week, perhaps as a consequence of Cyclone Fani. This is a sign that the Summer Southwest monsoon season has commenced in this part of Southeast Asia.

#### **Expected Impacts**

Although May marks the start of the wet season for this part of southeast Asia, this pre-monsoon rainfall may lead to some areas seeing more than a month's worth of rainfall in 5-6 days. This is probably the first spell of heavy rainfall this year and will likely to lead to some localised flash flooding – particularly in urban areas.

**Southeastern Indonesia and Micronesia** – see *Tropical Cyclones* section.

#### **Australasia**

**Melanesia** – see *Tropical Cyclones* section.

#### **Additional information**

Nil.

**Issued at:** 080700 UTC **Meteorologists:** Paul Hutcheon / Nick Silkstone

**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](mailto:ggu@metoffice.gov.uk)

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