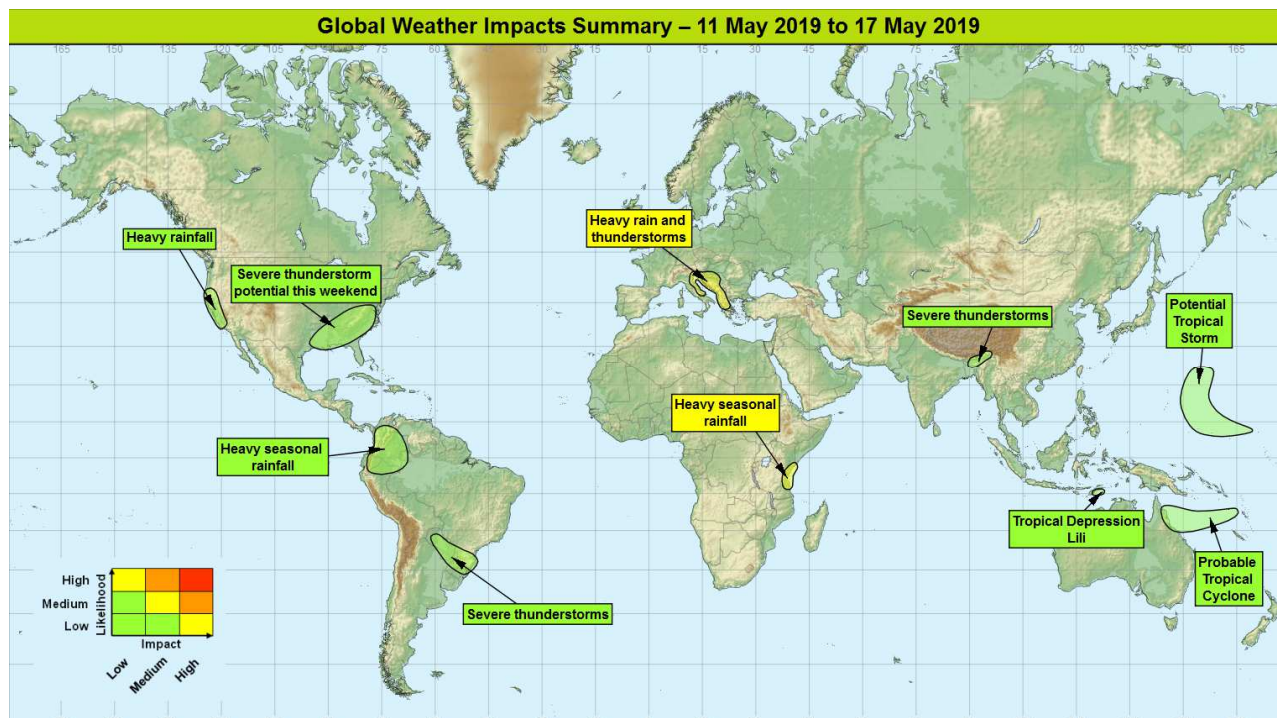


## Global Weather Impacts – Saturday 11<sup>th</sup> to Friday 17<sup>th</sup> May 2019

Issued on Saturday 11<sup>th</sup> May 2019

### HEADLINES

- Heavy seasonal rainfall continuing for parts of eastern Africa.
- Heavy, thundery rain affecting countries bordering the Adriatic Sea.



### DISCUSSION

#### Tropical Cyclones

##### Timor-Leste – Tropical Depression Lili

#### **Weather**

Lili has now weakened into a tropical depression and is expected to further decay as it moves across Timor-Leste over the next 24 hrs. This system will bring a further 50-100 mm of rain to the island over the weekend.

#### **Discussion**

The very compact Tropical Cyclone Lili formed from an Equatorial Rossby Wave (ERW) that was spawned in the wake of the MJO, when this wave moved through an area favourable for development. A combination of upper level convergence and entrainment of dry air has led to rapid weakening of this system and further weakening is anticipated.

#### **Expected Impacts**

Further flash flooding is possible, although the threat is reducing given that the system is now quite weak.

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

##### Micronesia

#### **Weather**

There is a chance that a weak tropical storm may develop in the southeastern part of Micronesia during the next few days, with any system likely to track northwest and remain over open ocean.



This forecast may be amended at any time

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## Discussion

This area of development emerges from the northern portion of an Equatorial Rossby Wave (ERW) pair, again spawned from the MJO. In the past 24 hours models have downgraded the potential for development of this system, although conditions appear marginally favourable.

## Expected Impacts

No impacts expected with the weak circulation expected to remain over open ocean.

## Coral Sea

### Weather

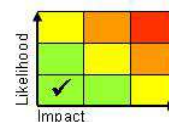
There is the potential for a tropical cyclone development over the coming days in the Coral Sea, south of the Solomon Islands. Any cyclone that does form is likely to weak and most probably track towards the northern Queensland coastline, bringing a heavy spell of rain here.

### Discussion

This development is the result of the southern portion of the ERW pair, again spawned from the central Pacific MJO. Model output generally develops a weak tropical cyclone over the coming days, and atmospheric and oceanic conditions appear favourable to support gradual development. Any system is likely to be quite weak as it moves west towards the coast of northeastern Australia.

### Expected Impacts

For much of the next week impacts are likely to be for rougher than usual seas in the region and dangerous beach conditions. In around a week's time if the track towards Queensland is realised, impacts from heavy rainfall and potentially strong winds are possible.



## Europe

### Countries surrounding the Adriatic Sea

### Weather

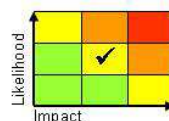
Further spells of heavy rain and thunderstorms are expected to affect this part of southern and central Europe from Sunday through to Wednesday. Up to 100 mm of rain could fall in a 24 hour period, with some areas, particularly in the northern parts of the Adriatic perhaps having around 250-300 mm in total. This would be close to a month's worth of rain in one day.

### Discussion

A marked trough extension will take place across central Europe this weekend, culminating in formation of an upper vortex in the central Mediterranean. A high WBPT plume will drawn north on the eastern flank of the vortex and widely destabilise, with intense and organised thunderstorms developing, along with areas of heavy dynamic ppn.

### Expected Impacts

Flash flooding is likely in places, with areas in the northern Adriatic perhaps most prone, along with the threat of frequent lightning. Strong winds could cause some disruption to marine transport in the region.



## North America

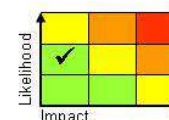
### Southern and Eastern USA

### Weather

Heavy showers and thunderstorms are likely to continue the region over the weekend, although these are expected to be less severe, with a lower risk of hazards such as tornadoes and large hail. These storms will still be capable of producing very intense rainfall (75-150 mm) over a short time period (less than 6 hours).

### Discussion

Further heavy showers and thunderstorms will develop in the high WBPT plume lying through the southeastern states, with the main hazard intense rainfall. On Sunday, the risk of severe thunderstorms increases again a little as an upper trough approaches from the west and deep layer shear increases. Combined with an increase in low-level flow associated with the formation of a depression, suggests that isolated severe storms, with the usual hazards of large hail, strong winds and tornado risk are possible across the Carolinas' and Georgia. The cold front will clear east by Monday, lower the threat of severe convection substantially.



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## Expected Impacts

Flash flooding will be the major hazard. There is still a risk, albeit lower than earlier in the week, of isolated tornados, large hail and wind damage, mainly on Sunday.

## California

### Weather

Heavy rain is likely to affect the state during Thursday and Friday next week. Around 50 to 100 mm of rain could fall quite widely, even in major west coast cities. Whilst not an exceptional amount of rain, it is unusual for the time of year, when conditions are often predominately dry. The average rainfall for May in Los Angeles is around 6 mm.

### Discussion

Increasing model support for a mid-latitude upper trough to extend unusually far south, given the time of year, and interact with a well-defined baroclinic zone to produce an active frontal system. This system is then expected to cross the state later next week bringing a spell of heavy rain.

### Expected Impacts

Flash flooding is possible, especially in urban areas. Heavy rain falling onto the melting snow pack on the Sierra Nevada could eventually lead to a fluvial response.

## Central America and Caribbean

Nil significant.

## South America

### Paraguay and southern Brazil

#### Weather

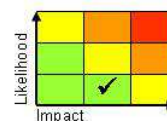
An area of heavy showers and thunderstorms, potentially severe, will affect the region during Saturday, then easing on Sunday, before conditions become largely dry through next week. Locally high rainfall accumulations of up to 75 mm in a few hours are likely, with some places perhaps seeing up to 150 mm. The average rainfall in this region for May is 100-200 mm.

#### Discussion

The South Atlantic Convergence Zone will remain active as it is driven northwards over the next two days. The most intense and severe convection is likely to be on Saturday as an upper trough sweeps eastwards across the region to engage the low level tropical moisture plume. Into next week activity along the plume should weaken markedly.

#### Expected Impacts

Localised flash flooding and 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. Parts of this region have seen a wetter than usual rainy season, and so further rainfall could result in river flooding.



### Colombia, Venezuela, Ecuador, Peru and Northwest Brazil

#### Weather

Heavy seasonal rainfall is expected across this region next week (from Monday), with daily rounds of frequent heavy showers and thunderstorms. Where the showers occur most frequently a further 250-350 mm of rain could accumulate, 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 is likely to be due to the passage of a fairly active MJO across the region.

#### Expected Impacts

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



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**Africa****Eastern parts of Tanzania and Kenya****Weather**

Very heavy seasonal rainfall has fallen through the past few days, with Zanzibar seeing their usual May rainfall (around 290 mm) in a 2 day period earlier this week.

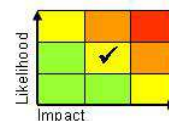
Above average shower and thunderstorm activity is expected to continue across eastern parts of Tanzania and southern Kenya until the end of the weekend, with activity then expected to gradually reduce into the early part of next week. A further 50-75 mm of rainfall is possible per day, but some locations could receive as much as a further 200 mm of rain by early next week.

**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 across eastern Tanzania and the extreme southeast of Kenya. Increasing southwesterly flow to the south of the ITCZ, associated with developing monsoonal flow in the Indian Ocean Basin, will also contribute to the enhancement of showers and thunderstorms in this region.

**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.

**Middle East**

Nil significant.

**Asia**

**Southeastern Indonesia, Timor-Leste and Micronesia** – see *Tropical Cyclones* section.

**Northeast India, Bhutan and northern Bangladesh****Weather**

Severe thunderstorms are likely to affect the region over the next 7 days. As well as intense rainfall (up to 150mm daily), large hail and strong winds are possible.

**Discussion**

An slow-moving upper trough over northern India and Nepal will lead to destabilisation of the air mass and the development of diurnal thunderstorms. High levels of CAPE and decent amounts of vertical wind shear will aid the development of severe, long-lasting storms, with hail and strong winds additional hazards.

**Expected Impacts**

Localised flash flooding and 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.

**Australasia**

**Northern Queensland, Australia** – see *Tropical Cyclones* section.

**Additional information**

Nil.

**Issued at:** 110700 UTC **Meteorologists:** Brent Walker / Laura Ellam

**Global Guidance Unit**

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