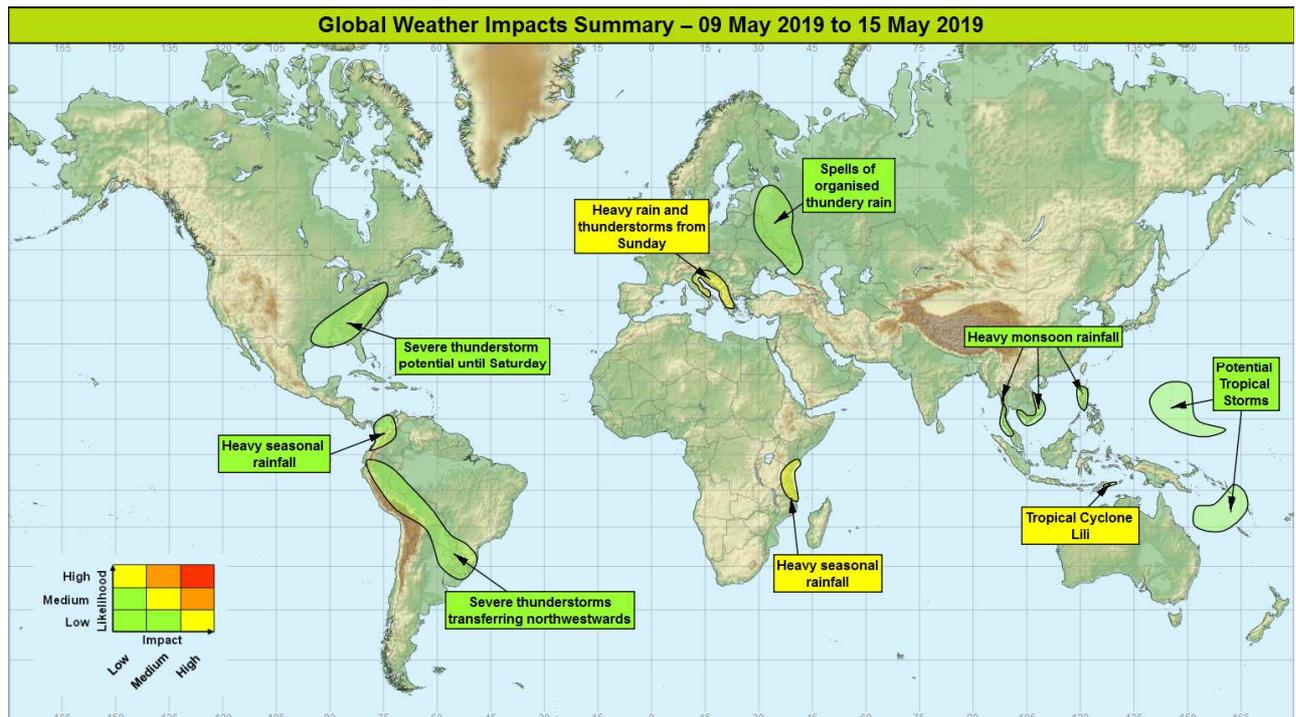


## Global Weather Impacts – Thursday 9<sup>th</sup> to Wednesday 15<sup>th</sup> May 2019

Issued on Thursday 9<sup>th</sup> May 2019

### HEADLINES

- Tropical Cyclone Lili may bring heavy rain to Timor-Leste and smaller islands in the Banda Sea.
- Heavy seasonal rainfall continuing over next few days for parts of eastern Africa.
- Heavy, thundery rain affecting areas adjacent to the Adriatic and Ionian Seas from Sunday.



### DISCUSSION

#### Tropical Cyclones

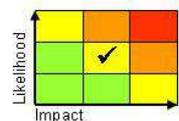
#### **Southeastern Indonesia and Timor-Leste – Tropical Cyclone Lili Weather**

A weak (in terms of wind) tropical cyclone has now developed, named Lili by the Indonesian Specialist Centre. Large rainfall amounts are expected, with up to 250mm possible in the extreme east of Timor-Leste and more especially the smaller Indonesian islands east of this over the next 48 hours. This system is most likely to decay over the weekend with conditions improving, but worth noting that the slow-moving track and rate of decay are subject to some uncertainty at this stage.

#### **Discussion**

The southern portion of an ERW spawned from an active MJO moving through the region, is associated with an increasingly organised area of showers and thunderstorms (Yamdena Island, now E of the current area of concern, has seen over 300 mm of rain the last 48 hours which is around their monthly average). This is signalled to remain organised through Thursday, with the potential for a strengthening low level circulation. Most models weaken this system by the weekend, although the 4.4km retains a stronger centre and heavier rain as the system tracks into Timor-Leste.

#### **Expected Impacts**



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The most likely impact will be flash flooding and landslides across some of the islands, which look to be fairly sparsely populated. However, there remains a minor threat of disruptive winds and a modest storm surge if a stronger cyclone were to develop.

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

### **Micronesia**

#### **Weather**

There is a small chance that a tropical cyclone will develop in the southeastern part of Micronesia during the next few days, with any system likely to track northwest, possibly reaching Guam early next week.

#### **Discussion**

This development is 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 the Northern Mariana Islands.

#### **Expected Impacts**

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



### **Melanesia and Coral Sea**

#### **Weather**

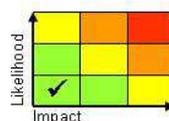
There is the potential for a weak tropical cyclone development this week over the Coral Sea, south of the Solomon Islands. Despite producing prodigious amounts of rain (possibly over 500 mm by the end of the weekend), this system is expected to remain over open water and poses little to no threat to land.

#### **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**

This system is expected to remain over open water with negligible impacts expected.



### **Europe**

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

#### **Weather**

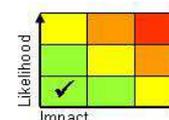
Areas of organised heavy showers and thunderstorms will affect this region at times through the next week. Up to 25-50 mm of rain will fall within a few hours in places with perhaps up to 75 mm very locally. This will see some places receiving their average May rainfall in a few days. Large hail and 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 have shown 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 long lived 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 could also be disrupted.



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## Countries surrounding the Adriatic Sea and adjacent to north-east Ionian Sea.

### **Weather**

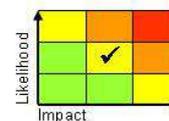
Areas of showers and thunderstorms are expected to affect this part of southern/central Europe from Sunday into the start of next week, following some pre-conditioning from heavy rain associated with a weather system today. Up to 100 mm of rain could fall in a 24 hour period, with areas abutting the Adriatic and north-eastern Ionian Seas most prone. This would be close to a month's worth of rain in one day. Strong winds are also likely in places as a low pressure area develops.

### **Discussion**

There is good model agreement for a marked upper trough disruption across central Europe later this weekend, resulting in the formation of a cut off vortex. The marked forcing will engage a plume to produce a threat of deep convection.

### **Expected Impacts**

Flash flooding is likely in places, along with the threat of frequent lightning.



## North America

### Central/southern USA

#### **Weather**

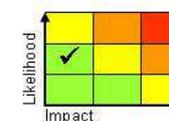
Further severe thunderstorms are possible across some eastern parts of the USA over the next couple of days. These storms would be capable of producing very intense rainfall (75-150 mm) over short time period (less than 6 hours). Additional hazards are large hail, strong winds and tornadoes. Heavy, thundery showers are likely to continue across parts of the south over the weekend, although these are expected to be less severe.

#### **Discussion**

An upper trough will continue to engage a warm, moist airmass across central/southern parts of the USA on Thursday, being a 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. The upper trough will continue east and relax, pushing a cold front east and decreasing the severe storm threat through Friday and into the weekend when upper ridge conditions develop.

#### **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**

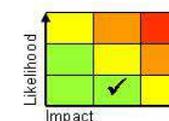
An area of heavy showers and thunderstorms, potentially severe, affecting parts of northeast Argentina, Uruguay and Paraguay will gradually transfer northwestwards through the next 3 or 4 days into parts of Bolivia, Peru and southern Brazil. Locally high rainfall accumulations of up to 150 mm in a few hours are likely, with some places perhaps seeing up to 250 mm during several days. 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 through the next 4 or 5 days. 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 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. This region has seen a very wet rainy season, and so further rainfall could result in river flooding.



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## Colombia, Venezuela, Ecuador and Peru

### **Weather**

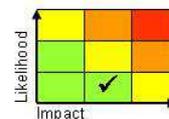
Heavy seasonal rainfall is expected across this region through the coming week, with daily rounds of frequent heavy showers and thunderstorms. Many places will see little or possibly even no rain, but where the showers occur most frequently a further 250-350 mm of rain could accumulate, which is close 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 could be associated with the El Nino type SST anomalies offshore in the west of the region, but also the influence of easterly waves moving across the north of South America through the ITCZ.

### **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**

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.

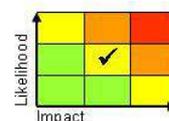
Above average shower and thunderstorm activity is expected to continue across eastern parts of Tanzania and southern Kenya over the next week. Up to 150 mm of rainfall is possible per day, but some locations could receive as much as a further 300-400 mm of rain by the start of next week. From Thursday 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. Increasing SW'ly flow to the S 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. 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.

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

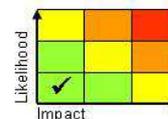
Increasingly widespread heavy rainfall is expected across this part of Southeast Asia through the coming week with daily rainfall accumulations of 75-100mm possible, and cumulative rainfall of 200-300mm in some places. This is the start of the Southwest Monsoon season in this part of Asia, but the rainfall 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, Timor-Leste and Micronesia** – see *Tropical Cyclones* section.

**Australasia**

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

**Additional information**

Nil.

**Issued at:** 090850 UTC **Meteorologists:** Paul Hutcheon / D J Harris

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