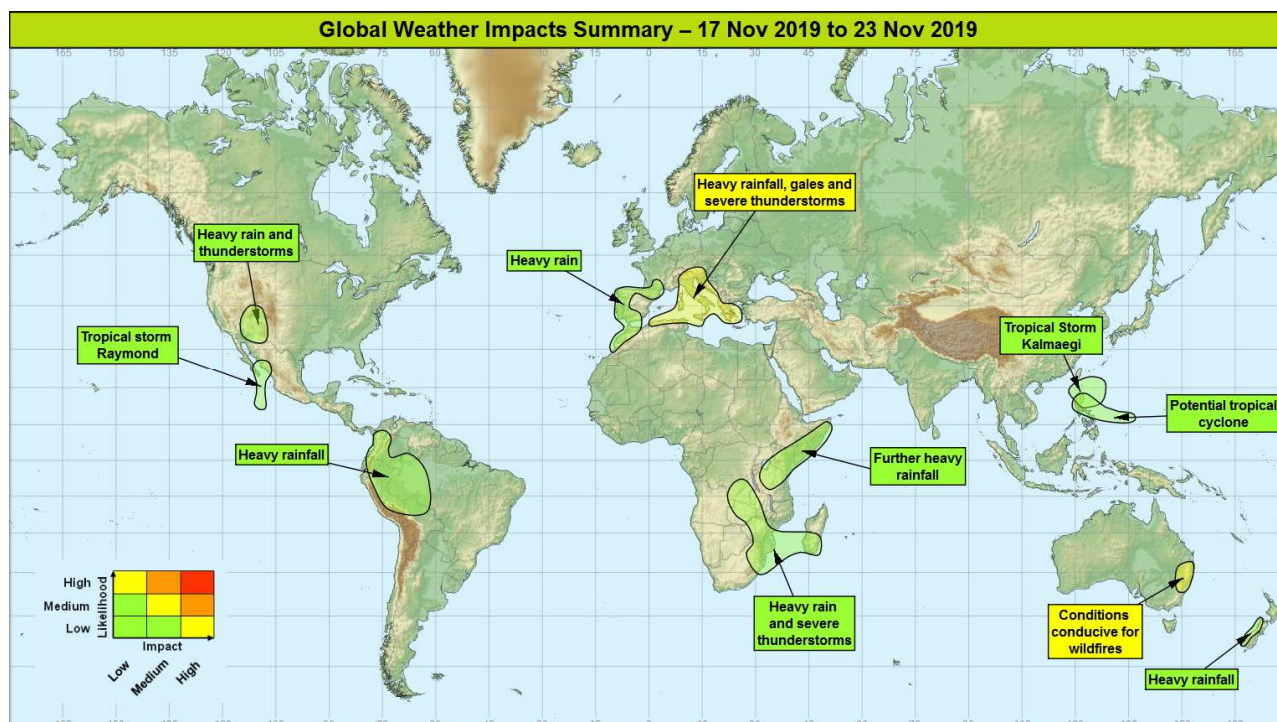


**Global Weather Impacts – Sunday 17<sup>th</sup> to Saturday 23<sup>rd</sup> November 2019**

Issued on Sunday 17<sup>th</sup> November 2019

**HEADLINES**

- Remaining extremely unsettled around the west and central Mediterranean.
- Ongoing elevated wildfire risk in eastern Australia.
- Tropical Storm Kalmaegi potentially impacting the northern Philippines in the next few days.



**DISCUSSION**

**Tropical Cyclones**

**Tropical Storm Kalmaegi, Philippine Sea**

**Weather**

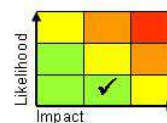
Tropical Storm Kalmaegi has been slow moving in the Philippine Sea for several days. Kalmaegi is forecast to slowly drift west or northwest over the coming days and is likely to become better organised and intensify. Official guidance and preferred evolution has Kalmaegi making landfall over the north of Luzon during Monday. However, this aspect is still uncertain and there is still a small probability that the system could turn away to the north and not make landfall at all. As well as the potential for damaging winds, very heavy rainfall (400-500mm) is expected in association with Kalmaegi.

**Discussion**

Environmental conditions are marginal for further intensification of Kalmaegi, with warm sea surface temperatures offset by strong shear and entrainment of dry air. At this point it is likely to become slow-moving close to the mountainous island of Luzon (northern Philippines). There remain significant spread in tracks emerging over the weekend leading to low confidence in amounts of rainfall and likely impacts for Luzon, though better agreement than previously.

**Expected Impacts**

Potential for flash flooding and landslides. Strong winds and dangerous seas for the north and east coasts of Luzon.



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)

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## **Tropical Storm Raymond, Baja Peninsula and northwest Mexico**

### **Weather**

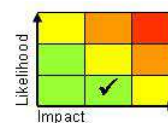
Tropical Storm Raymond is slowly weakening and by the time this cyclone makes landfall, across the Baja Peninsula on Monday, it is likely to be a depression. Regardless of this weakening, Raymond is expected to bring very heavy rainfall to region, with 100-200 mm of rain during Monday and into Tuesday.

### **Discussion**

Raymond is now in a high shear environment and will continue to weaken over the next 24 to 36 hrs prior to making landfall. The track of Raymond has fairly high confidence.

### **Expected Impacts**

Flash flooding and landslides are likely.



*The following have been identified as areas where tropical cyclones could develop*

## **Western Pacific**

### **Weather**

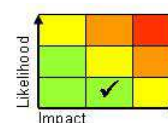
An area of thunderstorms across the western Pacific may develop into a tropical cyclone in the next few days and then move towards the Philippines later in the week. This system has the potential to bring very heavy rainfall and damaging winds to a similar region of Luzon, which is expected to be impacted by Tropical Storm Kalmaegi in the next few days.

### **Discussion**

There is an increasing signal for the development of a tropical depression across the western Pacific in the next few days. This could then strengthen further to become a tropical cyclone or typhoon by mid-week as it tracks towards the central or northern Philippines. There are significant uncertainties for this evolution, track and intensity at this time, but this system could impact a similar region that is expected to be affected by Tropical Storm Kalmaegi.

### **Expected Impacts**

Impacts possible in the Philippines later this week. Potential for flash flooding and landslides. Strong damaging winds, storm surge and rough seas.



## **Europe**

## **Italy, the southern Alps, Corsica, Greece, western parts of the Balkans as well as northern Tunisia and Algeria**

### **Weather**

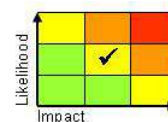
The prolonged very unsettled conditions look set to continue through the first parts of the coming week with further active weather systems moving across this region bringing further bouts of heavy rain, severe thunderstorms and gale-force winds. The heaviest rain is likely to be focussed on south-facing high ground of Italy and the southern Alps (especially across northeastern Italy) where some locations could see as much as 250-350 mm of precipitation over the coming week (twice the average November rainfall). Becoming less disturbed from midweek and although some further rain is possible at times, conditions overall will turn drier.

### **Discussion**

A strongly cyclonic upper pattern will dominate, at least through the early part of the coming week, leading to a continuation of very unsettled conditions as significant upper forcing engages warm plumes drawn northwards across the region. Upscale growth of thunderstorms into one or more MCS is expected. In addition, precipitation will be modulated by orography and will act as a focus for the heaviest rainfall accumulations, especially in the next few days. From midweek, the centre of gravity of the persistent trough/vortex is expected to move further west, with conditions over Iberia becoming much more unsettled.

### **Expected Impacts**

Increased likelihood of flash flooding causing damage to property and infrastructure. Lightning strikes, large hail and tornadoes/waterspouts could also produce localised significant damage. Dangerous marine conditions are also expected in the region. Some significant snowfalls are expected across the Alps at times, especially which could disrupt transport. Further coastal flooding is possible for parts of the Adriatic Coast until midweek.

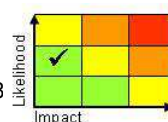


## **Northern Spain, parts of Portugal, far southwest of France and northern Morocco**

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Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 8

VPN: n6225 4319 Email: [ggu@metoffice.gov.uk](mailto:ggu@metoffice.gov.uk)



## Weather

Conditions will also remain unsettled across this region over the coming week with further spells of strong winds and heavy rain/thunderstorms. Up to 150-200 mm of precipitation may accumulate through the 7-day period (falling as snow at times over high ground). These totals are the equivalent to a month's worth of rain in November.

## Discussion

South-shifted Atlantic mobility and then a marked amplification of the Atlantic pattern will steer a number of active Atlantic systems into south-western Europe and northwest Africa through the coming week.

## Expected Impacts

Increased threat of flash and river flooding in association with heavy rain. Risk of landslides in steep terrain, and snow falling over higher parts of the Pyrenees.

## North America

### Southwest USA

#### Weather

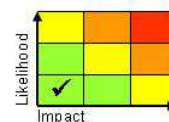
The remnants of Tropical Storm Raymond are likely to affect southwestern parts of the USA, especially Arizona and New Mexico from midweek. This decaying system of tropical origin will bring heavy rainfall to this desert region, with around 50-75 mm of rain falling quite widely and up to 150 mm in places. This is several times more than the November average, which for Phoenix is around 15mm.

#### Discussion

A plume of tropical air, associated with the remnants of Tropical Storm Raymond, is expected to interact with a low-latitude upper trough to produce heavy showers and severe thunderstorms. The trough could disrupt over the region into a cut-off upper vortex leading to a prolonged spell of disturbed weather in the region. This is desert region of the USA, with typically very low rainfall at this time of year.

#### Expected Impacts

Flash flooding is likely.



## Central America and Caribbean

Baja peninsula and northwest Mexico – See tropical storm section.

## South America

### Western Colombia, Ecuador, Peru, western Brazil and northern Bolivia

#### Weather

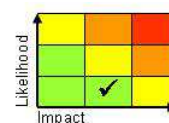
Continued enhanced shower and thunderstorm activity is likely across this region through much of the coming week. Up to 100 mm of rainfall is possible each day, with some places seeing as much as 400-500 mm in total by the early part of next week (equivalent to the average November rainfall), although these totals are likely to be very localised.

#### Discussion

The progression of the MJO (currently in phase 8) has allowed on uptick in convection across equatorial South America. Each day, diurnal heating is able to release deep and energetic convection, leading to slow and locally severe storms each day. Marked upper level divergence is evident across tropical regions of South America, which will aid the longevity of severe convection across the region.

#### Expected Impacts

Increased threat of flash and river flooding with landslides increasingly likely in mountainous areas. This follows on from a recent wet period across the region with significant river flooding reported over the last couple of weeks.



## Africa

Northern Algeria, Tunisia and northern Morocco – See *Europe* section.

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Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

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## Eastern South Africa, Eswatini, parts of Mozambique, Zimbabwe, Zambia, Malawi, southern Democratic Republic of Congo and Madagascar

### **Weather**

Heavy showers and severe thunderstorms will continue to affect this region at times through the next week. Thunderstorms will produce frequent lightning, large hail and strong, gusty winds. 50-100mm of rain could fall in a day, with some significant totals in a few hours.

### **Discussion**

A major upper vortex will gradually edge slowly northeast towards southern Madagascar over the weekend. A further upper trough crosses South Africa mid week. These will engage the resident high WBPT plume and strengthen the ITCZ to the north, promoting the development of heavy showers and severe thunderstorms through much of the coming week. Serious multi-year droughts have affected parts of this region, and to a degree this rain will be welcome, however the short duration over which large amounts of precipitation are likely to accumulate will likely cause some serious localised issues.

### **Expected Impacts**

Although drought conditions are affecting this region and rainfall in-part welcome, the intensity of rain over a short period will likely cause flash flooding, with a risk of property damage from frequent lightning, large hail and strong wind gusts (including in association with tornadoes which have been reported in South Africa).



## Somalia, southern Ethiopia, Kenya and western Tanzania

### **Weather**

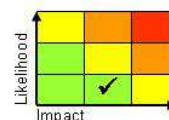
Heavy showers and thunderstorms will become heavier and more widespread this week. The heaviest rainfall is expected to be across the Kenyan Highlands and Tanzania where 50-100 mm could fall in days, with some locations having up to 200 mm through the week. Elsewhere, rainfall accumulations more modest, but could still generate impacts, given that the region has already had above-average rainfall in the last few weeks.

### **Discussion**

A combination of the MJO moving across Africa and the positive IOD phase continuing, will promote above-average rainfall across this region in the coming week.

### **Expected Impacts**

An increased risk of flash flooding and landslides.



## Middle East

Nil.

## Asia

Philippines – See *Tropical Cyclone* section.

## Australasia

### Parts of eastern Australia

### **Weather**

Numerous wildfires are already affecting parts of New South Wales and Queensland, between Sydney and Brisbane. With no significant rainfall expected through the next few days, along with likely strong wind events at times, the wildfire threat will remain very high in the region. There is the potential for some rain on Sunday which could help the situation, but the associated thunderstorms could also spark new wildfires due to dry lightning events.

### **Discussion**

This early season wildfire event has already claimed a number of lives, with good model agreement for predominantly dry and at times windy conditions to continue through the next week. A transient upper trough could bring thunderstorms to the affected areas, but it is unclear whether these storms will bring much needed rainfall or just dry lightning events.



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Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter, Tel: +44(0)1392 884319

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### Expected Impacts

Fires will bring a danger to life and environmental damage across a wide area. Smoke could bring poor air quality to densely populated urban centres, with a risk of some impacts in the Sydney and Brisbane region possible.

### New Zealand Weather

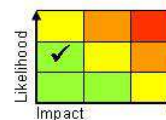
Successive bands of heavy rain and strong winds will continue to move east across New Zealand over the next few days. The most unsettled conditions focused on the South Island. 100-150 mm will build up quite widely on western parts of the Southern Alps with more isolated totals of 300-400 mm possible. Whilst these amounts of rainfall are not particularly unusual in these areas this follows on from a wet period making impacts more likely. Conditions turning drier from midweek.

### Discussion

A mobile pattern will see a succession of active frontal zones run east across New Zealand maintain unsettled conditions. As is normally the case, orographic enhancement of rainfall over western parts of the Southern Alps will see high rainfall totals build up here.

### Expected Impacts

Increased threat of flooding and landslides which could primarily cause transport disruption.



### Additional Information

Typhoon Fengshen lies over the north-western Pacific Ocean but poses no threat to land.

**Issued at:** 170600 UTC    **Meteorologists:** Brent Walker / Tony Wardle.

**Global Guidance Unit**

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