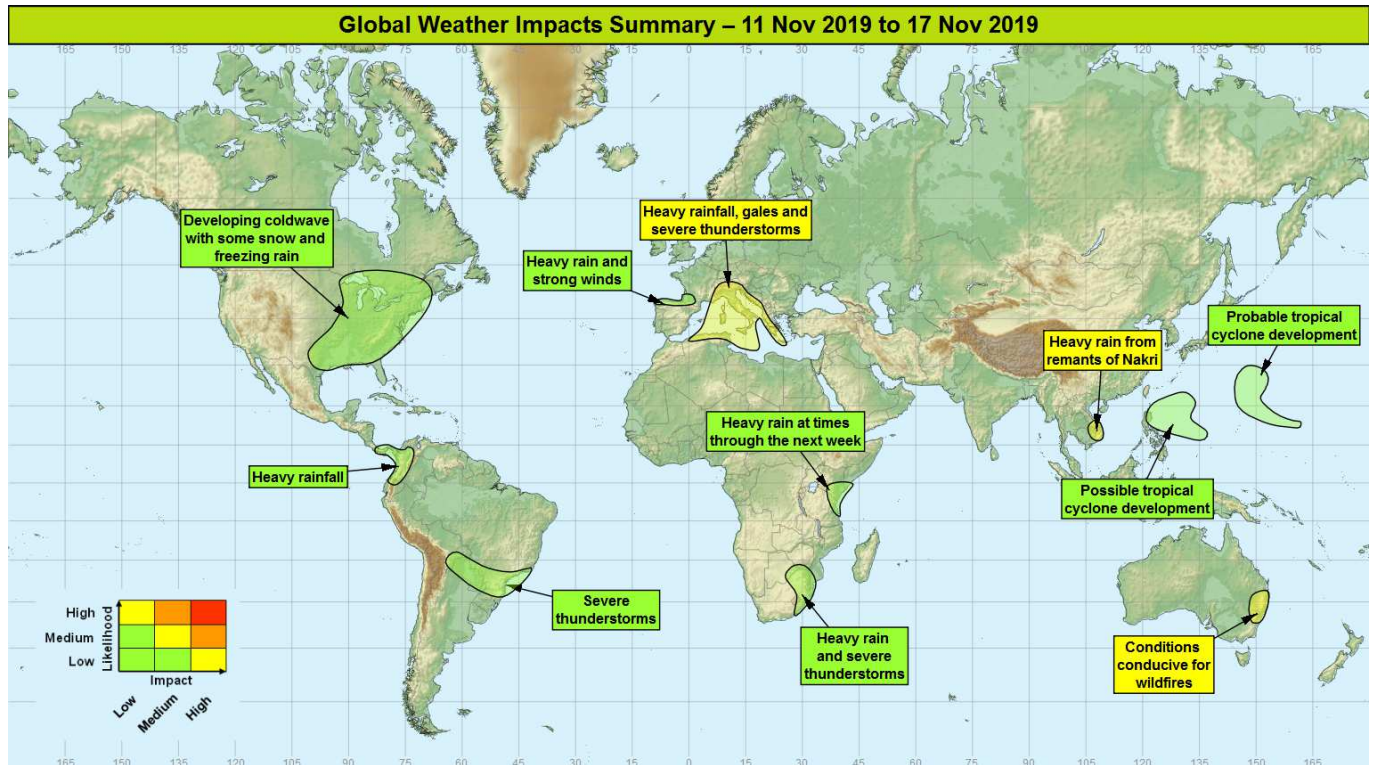


## Global Weather Impacts – Monday 11<sup>th</sup> to Sunday 17<sup>th</sup> November 2019

Issued on Monday 11<sup>th</sup> November 2019

### HEADLINES

- Remnants of Tropical Storm Nakri bring heavy rain to Vietnam and Cambodia today.
- Remaining extremely unsettled around the central Mediterranean this week.
- Weather conditions across eastern Australia remain conducive for wildfires.



### DISCUSSION

#### Tropical Cyclones

*There are currently no active tropical cyclones, but the following areas are being monitored for development potential impact to land over the next 7 days:*

#### Philippine Sea, Philippines

##### Weather

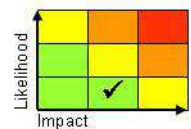
There is an increasing likelihood of a tropical cyclone development from on areas of organised thunderstorms in the Philippine Sea during the middle of this week, with any system that develops likely to bring very heavy rainfall to Luzon later in the week and the potential for over 500mm in some locations. It looks unlikely the system will develop into a typhoon during this period so significant impacts from strong winds are not anticipated.

##### Discussion

An equatorial Rossby wave (ERW) currently tracking northwest across the Philippine Sea, will experience favourable environmental factors enabling it to likely develop into a tropical cyclone by the middle of next week. At this point it is likely to become slow-moving close to the mountainous island of Luzon (northern Philippines), this proximity to land, plus a cold surge just forward of the cyclone will likely inhibit the system from strengthening to a typhoon.

##### Expected Impacts

Potential for flash flooding, landslides, strong winds and dangerous seas in and around Luzon.



This forecast may be amended at any time

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## Northwest Pacific, Mariana Islands

### **Weather**

An organised area of thunderstorm activity will likely develop into a tropical cyclone over the next couple of days. This system will likely pass close to the Mariana Islands on Friday, before re-curling to the northeast and heading out into the open northwest Pacific Ocean where it will decay.

### **Discussion**

A very marked ERW already is surrounded by organised thunderstorms. As it track northwest over the next few days this system is expected to strengthen into a tropical storm, and perhaps a typhoon. However as it approaches the Mariana Islands, increasing southwesterly shear will weaken the system and also steer the system northeast away from land areas.

### **Expected Impacts**

The system may bring heavy rainfall, strong winds and rough seas to the mostly unpopulated Mariana Islands towards the end of this week.



## Europe

### Italy, Corsica, Malta, Greece, eastern parts of the Balkans, Tunisia and northern Algeria

### **Weather**

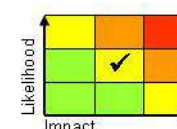
Following recent heavy rainfall in this region, further active weather systems are expected to move across this region over the next week bringing heavy rain, severe thunderstorms, gale force winds and some lifted dust (from North Africa). The heaviest rain is likely to be focussed on southwest facing high ground of Italy, the Balkan region where some locations could see as much as 200-300 mm of precipitation over the coming week. The Spanish Met Service (AEMET) has named one of the low pressure systems affecting this region *Bernardo*.

### **Discussion**

A strongly cyclonic upper pattern will dominate through much of the next 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 with precipitation modulated by orography and will act as a focus for the heaviest rainfall accumulations.

### **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. Lifted dust may produce some locally poor air quality. Some significant snowfalls are expected across the Alps, especially towards the end of the week.



## Southwestern France and northern Spain

### **Weather**

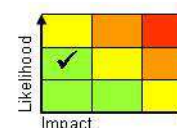
Conditions will also remain unsettled across this region at times over the next week with further spells of strong winds and heavy rain/thunderstorms. Up to 150-200 mm of precipitation may accumulate through the 7-day period (at times falling as snow at times over high ground). These totals are the equivalent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

### **Discussion**

South-shifted Atlantic mobility will steer a number of active Atlantic systems into southwestern Europe 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 down to 600-800 metres above sea level. Strong winds may bring impacts to travel and power supplies later in the week.



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**North America****Central & eastern USA and southeastern Canada****Weather**

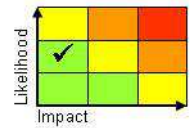
A marked cold air outbreak is underway and pushing southeast across the eastern parts of North America. Snow and freezing rain will be associated with the initial ingress of cold air across central and northern States. Temperatures will fall 10-15 °C below average for a time and remain below average through much of the coming week. In areas around the Great Lakes, lake effect snowfall may lead to some significant snowfall accumulations.

**Discussion**

An upper trough swinging southeast from the Canadian Rockies will drive an active cold front across this region. Air of Canadian arctic origin will follow post front, reaching the Gulf Coast by the middle of the week, bringing unseasonably cold conditions here for early to mid-November. The rearward sloping nature of the frontal system will allow a well-marked cold undercut to develop, with snow and freezing rain falling widely across central/northern regions.

**Expected Impacts**

Travel disruption is possible, with some significant disruption from snowfall in and around the Great Lakes. Locally ice accretion from freezing rain may disrupt power supplies. Damage to crops in the south is likely due to unusual and harsh overnight frosts this early in the winter season.

**Central America and Caribbean****Panama and Costa Rica** – See *South America* section.**South America****Panama, Costa Rica, western Colombia and northern Ecuador****Weather**

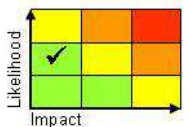
Continued enhanced shower and thunderstorm activity is likely across this region through much of the next week. Up to 100 mm of rainfall is possible each day, with some places seeing up to 400 mm in total by the early part of next week (equivalent to the average November rainfall), although these totals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

**Discussion**

The progression of the MJO (currently in phase 5/6) has allowed an uptick in convection across equatorial South America over the week. Each day, diurnal heating is able to release deep and energetic convection, leading to slow and locally severe storms each day. The driver behind the enhanced rainfall could be the passage of an African Easterly Wave across the southern part of Central America, with marked upper level divergence across evident across Colombia and Ecuador.

**Expected Impacts**

Increased threat of flash and river flooding with landslides increasingly likely in mountainous areas. In recent days, 1000 people were affected when the San Jose river burst its banks in north western Colombia and there have been other reports of flooding in this region.

**Paraguay, southeast Bolivia, northwest Argentina and southeast Brazil****Weather**

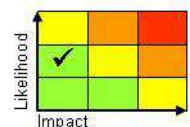
From Wednesday, areas of heavy rain and locally severe thunderstorms are forecast to become fairly frequent across this region. Rainfall totals of 50-100 mm in 24 hours are possible in places, with locally frequent lightning, large hail and strong wind gusts being additional hazards.

**Discussion**

The South Atlantic Convergence Zone will remain active during this period, enhanced by a southward extension of tropical air over central South America engaged by a shortwave trough in the subtropical jet. This will allow a mixture of heavy dynamic precipitation (with some elevated convection elements), and also surface based. Severe thunderstorms are most probable towards the northeast edge of the zone of convection; these could bring large hail and a strong, gusty wind threat.

**Expected Impacts**

Flash flooding possible, especially if any severe storms affect large urban areas. A threat of property damage from frequent lightning, hail and strong wind gusts.



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## Africa

**Northern Algeria and Tunisia** – See *Europe* section.

## **South Africa, Lesotho, Eswatini, Botswana, Zimbabwe and Mozambique**

### **Weather**

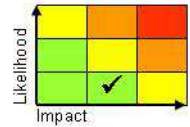
Heavy showers and severe thunderstorms are expected to affect this region through much of the next week, producing frequent lightning, large hail and strong, gusty winds. 50-100mm of rain could fall in a day (equivalent to the November average), with some significant totals in a few hours.

### **Discussion**

An upper trough in the sub-tropical jet will disrupt across southern Africa and then edge slowly northeast. As this occurs it will engage the resident high WBPT plume across the southeast of the continent and promote 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.



## **East Africa, including parts of Somalia, Kenya and Tanzania**

### **Weather**

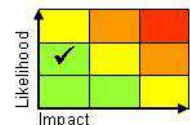
Further above average rainfall is expected in this small region of East Africa over the coming week. Although the anomalies are fairly subtle with 100-150mm expected over the coming week on around 50mm above normal, the recent wet weather in this region will make it highly susceptible to impacts from additional rainfall.

### **Discussion**

The MJO is currently in phase 5/6, which would usually result in below average precipitation across the region. However the strong Indian Ocean Dipole that remains present will negate this and still allow above average shower and thunderstorm activity across this region over the coming week.

### **Expected Impacts**

Both flash and some minor river flooding is possible over the coming week, with an enhanced risk of landslides in regions where the terrain is steep.



## **Middle East**

Nil.

## **Asia**

**Philippines and Mariana Islands** – See *Tropical Cyclone* section.

## **Vietnam and Cambodia**

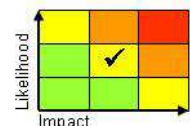
### **Weather**

The remnants of Tropical Storm Nakri will bring one further day of heavy rainfall to parts of central Vietnam and northern Cambodia. A further 150-200 mm could fall through the next 24 hours, coming on top of recent very wet days in this region. Into Tuesday, the remnants of Nakri clear away to the west of this region, with shower and thunderstorm activity returning to near normal.

### **Discussion**

The moisture plume associated with the decaying circulation of Nakri will provide one further day of enhanced shower and thunderstorm activity in this region. Precipitable water associated with this plume exceeds 60mm. Convection will be moist with skinny CAPE meaning that heavy rainfall will be the primary hazard.

### **Expected Impacts**



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Flash and river flooding is likely in the region, with an enhanced risk of landslides in areas where terrain is steep.

## **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 week along with likely strong wind events at times, the wildfire threat will remain very high in the region.

#### **Discussion**

This early season wildfire event has already claimed a number of lives, with good model agreement for dry and at times windy conditions to continue through the next week. Tuesday and Friday in particular look to be high impact in this region, when high temperatures and likely to combine with strong and dry northwesterly winds promoting the rapid development and expansion of fires.

#### **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 region possible this week.



## **Additional Information**

Nil.

**Issued at:** 110745 UTC    **Meteorologists:** Nick Silkstone / Matthew Lehnert    **Global Guidance Unit**

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