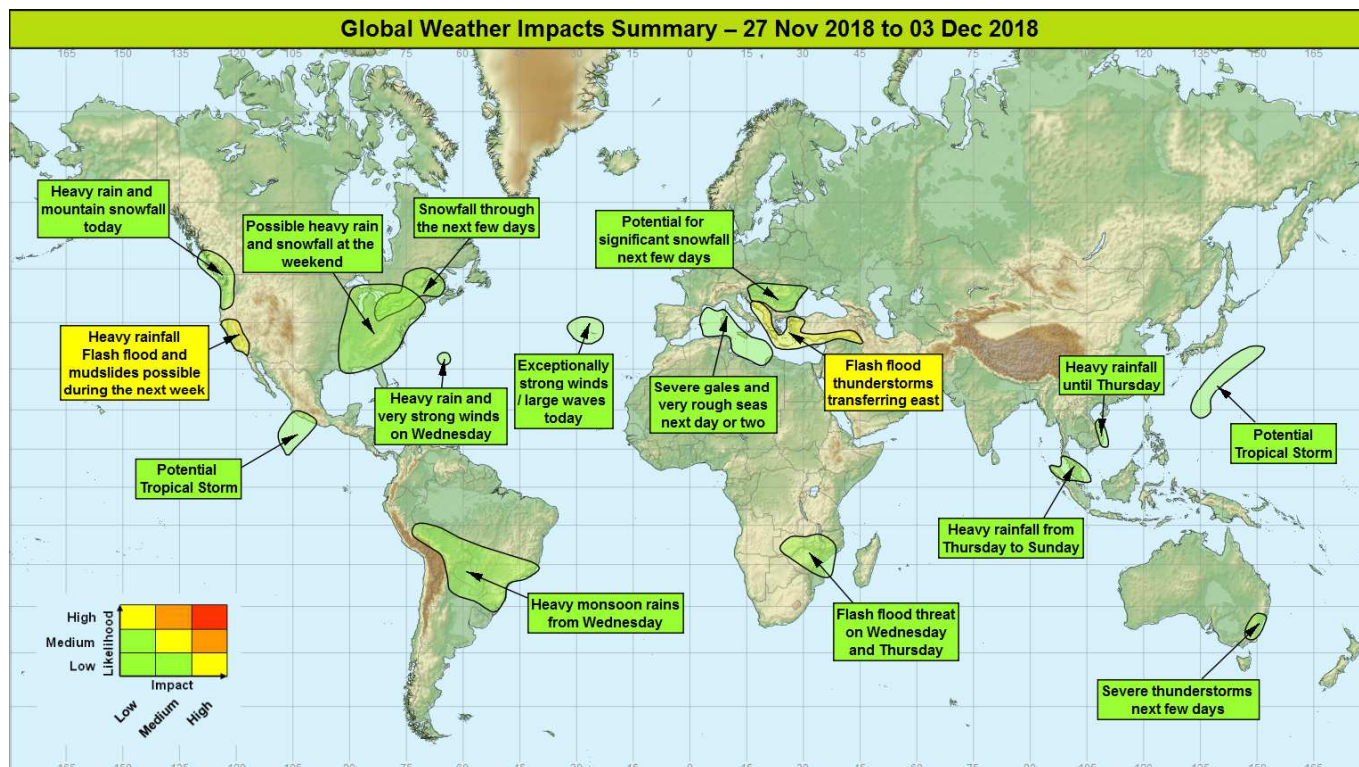


## Global Weather Impacts – Tuesday 27<sup>th</sup> November to Monday 3<sup>rd</sup> December 2018

Issued on Tuesday 27<sup>th</sup> November 2018

### HEADLINES

- Unsettled in the eastern Mediterranean with a threat of flash flooding.
- Flash flood and mudslides possible in California.
- Very strong winds and extremely large waves likely to affect western Azores today.



### DISCUSSION

#### Tropical Cyclones

There are no active tropical storms at present, with Tropical Storm Man-yi having been downgraded through Monday.

#### Potential Tropical Cyclones

##### Northeast Pacific and southwestern Mexico

#### Weather

There is a 50% probability of a tropical cyclone forming just off the western Mexico coastline during the next few days, being steered northeast towards land, possibly bringing strong winds and very heavy rainfall (150 mm in 24-48 hours) to southwestern Mexico, including Acapulco, later this week.

#### Discussion

A tropical depression is likely to develop along the ITCZ during the next few days. This system could develop tropical storm force winds, with a low latitude upper trough likely to steer it into southwestern Mexico later in the week.

#### Expected Impacts

Flash flood possible in southwestern Mexico later this week, with a much lower likelihood of wind damage.



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

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**Western Pacific****Weather**

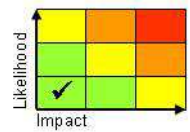
A tropical depression is located around 21N 132E well to the south of Japan. This system may strengthen enough to briefly become a named tropical storm. However it will then turn north east and remain well away from land.

**Discussion**

Currently in an area which favours modest development some strengthening is expected. However it is likely that the storm will be swept quickly north east and soon become extra-tropical with all models keeping it well away from land.

**Expected Impacts**

No significant impacts are expected.

**Europe****Western Balkans, southern Greece, southern and western Turkey, northern Syria and northern Iraq****Weather**

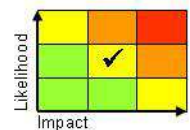
Further spells of heavy showers and thunderstorms are expected to gradually transfer east from the western Balkans to southern and western Turkey then northern parts of Syria and Iraq through the next 5 or 6 days. Up to 100 mm of rain could fall in a 24 hour period, with large hail and waterspouts or tornadoes also possible.

**Discussion**

A sharpening upper trough will gradually track eastwards through the eastern Mediterranean and through the Levant, destabilising a plume through the next 5 or 6 days to produce deep convection. Frequent thunderstorms are expected, with the potential to organise and upscale into MCS events at times, especially in the warmest plume across northern Iraq on Friday and Saturday.

**Expected Impacts**

There will be a threat of flash flooding, with additional hazards of large hail, frequent lightning and a tornado/waterspout. Aviation travel through the region may be disrupted.

**Central and western Mediterranean****Weather**

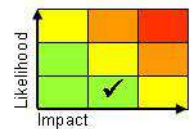
Gales or severe gales will extend from the western Mediterranean into the central Mediterranean during the next few days, building very rough seas. The winds and seas will ease later in the week.

**Discussion**

A sharpening upper trough has developed a depression that will sweep east across southern Italy through the next few days, with a 50kt gradient on the western and southwestern flank.

**Expected Impacts**

Dangerous marine conditions are expected through a large part of the western and central Mediterranean for much of this week, with small craft especially vulnerable.

**Parts of central and eastern Europe****Weather**

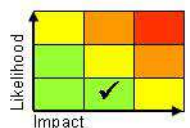
Some snowfall is expected to be associated with a frontal system as it gradually moves south across central and eastern Europe through the next few days. The snow should not amount to much across most of this area, but there is a possibility for some significant snowfall in places.

**Discussion**

Cold advection in the lower atmosphere is expected to undercut a cold front that will gradually move south across central and eastern Europe through the next few days.

**Expected Impacts**

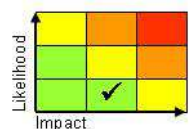
Potential for disruptive snow to transport networks, with a combination of wet snow accretion and strong winds posing a threat to power networks too.

**Azores, Portugal**

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## Weather

A deep area of low pressure will track northeastwards, to the northwest of the Azores today (Tuesday). On the southeastern flank of this low the 10 minute sustained wind speed may exceed 60 mph with gusts locally exceeding 80 mph. The Portuguese Meteorological Service (IPMA) have already issued orange wind warnings and red coastal warnings for the more northwestern of the Azores islands (Flores and Corvo) and named this system "Storm Diana". This is due to the extremely large waves they are expecting, with significant wave heights of 12 meters, and maximum wave heights of up to 21 meters. This storm will retain this name as it moves across northwest Europe on Wednesday and Thursday.

## Discussion

There is good model agreement for a series of upper troughs to engage a deepening low pressure area through the next few days, steering this system northeastwards across the Atlantic.

## Expected Impacts

Very strong winds and dangerous seas will likely disrupt air and sea travel as well as cause significant damage in low lying coastal areas. If the winds reach the speeds quoted above damage to property and infrastructure would be expected, with loss of electrical power and other utilities.

## North America

### Central plains of the USA, Great Lakes, northeast USA and southeast Canada

## Weather

The system that produced disruptive snowfall across parts of the Mid-west will continue to transfer northeast to bring significant snowfall to parts of southeastern Canada (affecting Montreal) through the next day or two, possibly affecting the far northeast of the USA (north of Boston).

Through the next few days 'lake effect' snowfall will affect parts of the Great Lakes coastline, mainly affecting the far northeast of the USA.

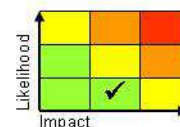
## Discussion

An upper trough will drive an occluding frontal system and associated depression northeast from the Great Lakes across southeastern Canada and the far northeast of the USA through the next few days, with the northern side of the precip envelope engaging the cold Arctic airmass.

A strong northwesterly flow will follow, which will destabilise across the relatively warm Great Lakes to produce frequent snow showers downwind of the lakes. The 'lake effect' snowfall could build up in places, producing severe local disruption.

## Expected Impacts

Transport disruption has already taken place with around 1200 flights cancelled because of the snowfall. Further air and land transport disruption looks likely, with the potential for power network disruption.



## California

## Weather

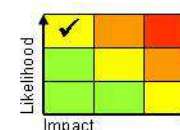
A Pacific frontal system will sweep across the northern half of the state today (Tuesday), producing heavy rain and mountain snowfall. Some elevated locations are likely to see over 50 mm of rain.

A more active Pacific system will follow on Thursday, and up to 100-150 mm of rain could fall with heavy mountain snowfall. This rainfall will extend south to affect much of California, with strong winds likely too.

Another significant Pacific system is likely to run across California through the weekend with further heavy rains.

Up to 200-250 mm of rain could fall on higher ground, with significant snowfall accumulating in the Sierra Nevada mountains.

## Discussion



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A southwards displaced polar front jet will continue to bring unsettled weather to California over the coming week. Rainfall at lower levels will be a mixture of dynamic and convection precipitation, and at higher levels heavy snowfalls are expected over the Sierra Nevada Mountains. The Camp fire is 100% contained now.

## **Expected Impacts**

In the regions affected by recent disruptive wildfires heavy rainfall will bring a high likelihood of ash and mud flows emanating from areas laid bare by the recent fires. The heavy rainfall and strong winds are likely to adversely impact some of the displaced population that are living in tented settlements, and are adding to the difficulties for the authorities sifting through ash to try and find the remains of unaccounted people.

## **Southwestern British Columbia and western Washington State**

### **Weather**

An active Pacific frontal system (same one that will bring heavy rain to northern California today) will continue to produce very heavy rainfall today (up to a further 50 mm on low ground and 150 mm on high ground), falling as heavy snowfall on mountains through with the potential for freezing rain too.

### **Discussion**

A marked upper trough will drive an active Pacific frontal system into this region today (Tuesday), with a deeply unstable airmass following. There have been reports of up to 100 mm of rain through Monday along parts of the southern British Columbia coastline.

### **Expected Impacts**

Dangerous coastal conditions, with flash and river flooding likely. Heavy snowfall and ice from freezing rain will affect key mountain routes.



## **Bermuda**

### **Weather**

A rapidly deepening low pressure area will track northeastwards between Bermuda and the USA on Wednesday, pushing a band of heavy, thundery rain (possibly 50-75 mm in 12-24 hours) across Bermuda followed by gales or severe gale westerly winds. Winds will ease on Thursday.

### **Discussion**

A marked upper trough will engage a frontal wave to the southwest of Bermuda, resulting in explosive cyclogenesis (the MSLP is likely to fall 40hPa in 24 hours). The marked upper forcing will also result in a very active cold front with embedded thunderstorms possible, followed by a 50kt westerly gradient.

### **Expected Impacts**

Localised flash flooding is possible, with gales or severe gales winds creating dangerous sea and beach conditions and possibly impacting on aviation transport.



## **Central and eastern USA and southeast Canada**

### **Weather**

Another active spell of weather is expected to affect many parts of this region this weekend. The more southern parts of the region will see heavy rain and thunderstorms (up to 150 mm of rain in 24 hours), with more northern areas at risk of significant snowfall and freezing rain.

### **Discussion**

All models show an upper trough engaging a warm plume to produce a developmental scenario across central and eastern parts of North America this weekend. However, there are significant differences regarding how far north this system will influence, and so confidence is not high for details at present.

### **Expected Impacts**

Flash flooding in the south with significant snowfall and ice in the north is possible. Severe storm impacts of frequent lightning, large hail and tornadoes are also possible in the south.



## **Central America and Caribbean**

### **Southwestern Mexico – see Tropical Cyclone section.**

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**South America****Southeast Peru, Bolivia, Paraguay, southern Brazil and far north of Argentina****Weather**

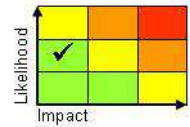
An active pulse of heavy monsoon rainfall is expected to transfer northwards across this part of South America from Wednesday through to the weekend. Severe thunderstorms are likely to affect northern Argentina, and perhaps Paraguay during this time.

**Discussion**

An active phase of the South Atlantic Convergence Zone is expected to progress northwards from midweek, producing a possibility of severe thunderstorms in the south of this region and intense rainfall further north.

**Expected Impacts**

Flash and river flooding possible, along with frequent lightning, large hail and tornadoes in severe thunderstorms.

**Africa****Mozambique, Zimbabwe, Malawi and Zambia****Weather**

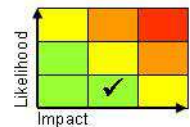
An area of thunderstorms will transfer north across this region during Wednesday and Thursday, producing intense rainfall (up to 75 mm in a few hours). Frequent lightning and large hail are also possible

**Discussion**

A marked upper trough will push a cold front north from South Africa, enhancing low level convergence to produce deep convection.

**Expected Impacts**

Flash flooding is likely to be the main impact, but frequent lightning will pose a threat to life and power networks, with damaging large hail possible.

**Middle East****Northern parts of Syria and Iraq – see Europe section.****Asia****Eastern Vietnam, the Malay Peninsula and northern Sumatra****Weather**

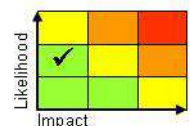
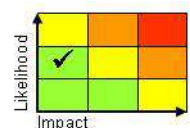
Heavy rainfall is expected to affect some eastern parts of Vietnam during the next 2 or 3 days, with up to 100 mm of rain accumulating here. The focus will then turn to the Malay Peninsula and northern Sumatra where heavy rainfall is expected from Thursday to Sunday, with up to 150 mm accumulating here. The rainfall will be in the form of thunderstorms that could produce intense bursts of rainfall.

**Discussion**

An enhanced pulse of Northeast monsoon winds (perhaps associated with the recently decayed Tropical Storm Usagi) will bring enhanced deep convection to eastern Vietnam, with this enhanced northeasterly then transferring southwestwards across the South China Sea.

**Expected Impacts**

Flash flooding is a threat, with a lower likelihood of landslides in mountainous regions.

**Australasia****Southeastern Australia****Weather**

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Heavy showers and thunderstorms are expected to affect parts of southeastern Australia through the next few days. Severe thunderstorms are also possible, producing up to 150-200 mm of rain in 24 hours, with a threat of large hail and frequent lightning. Sydney (average November rainfall around 90-100 mm) looks likely to see these storms during this period. There is also a threat of very strong winds for a time.

**Discussion**

A disrupting upper trough will engage a warm plume to develop a deepening depression and produce an area of deep convection during the next few days.

**Expected Impacts**

Flash flooding is likely to be the main impact, but frequent lightning will pose a threat to life and power networks, with damaging large hail possible. Wind damage is also possible to coastal regions, with dangerous marine conditions likely for a time.

**Additional information**

Nil.

**Issued at:** 270820 UTC    **Meteorologist:** Paul Hutcheon

**Global Guidance Unit**

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