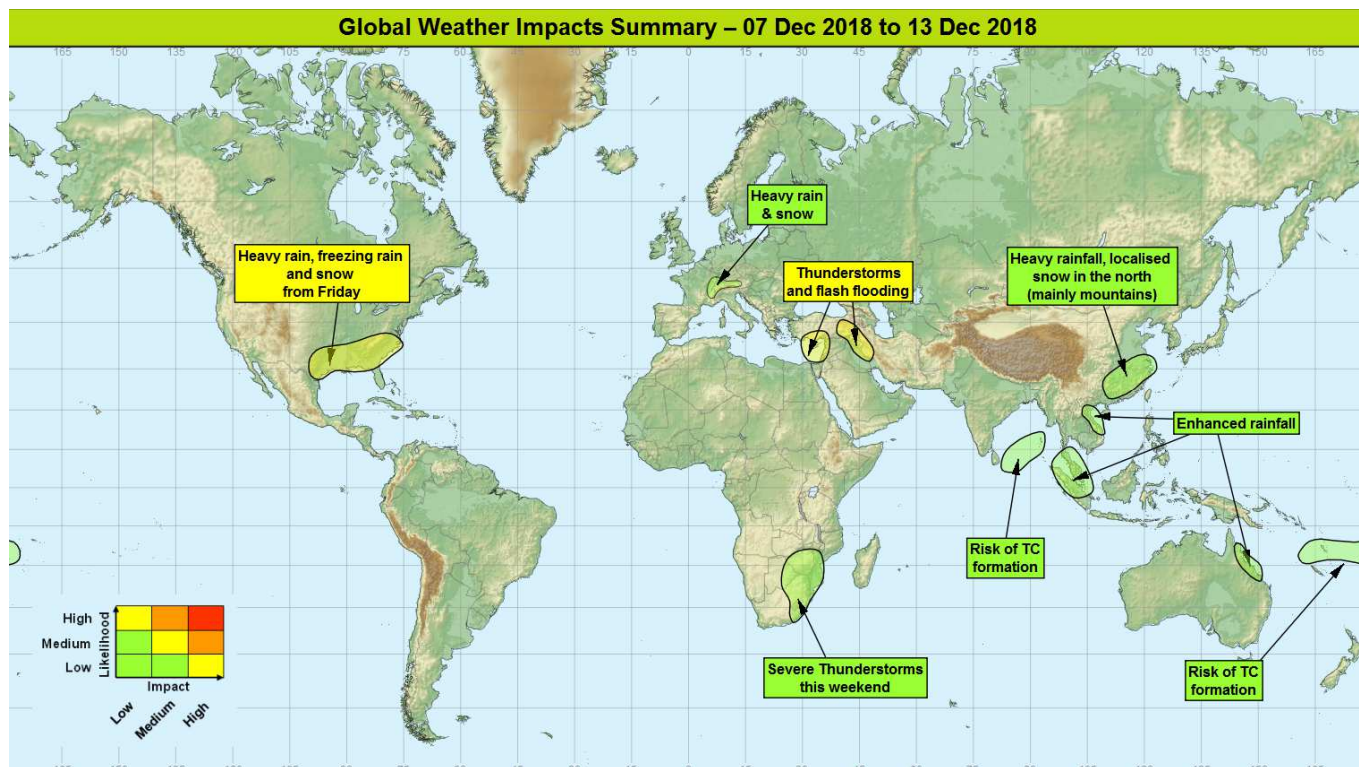


Global Weather Impacts – Friday 7th December to Thursday 13th December 2018

Issued on Friday 7th December 2018

HEADLINES

- Further heavy rain and thunderstorms across the eastern Mediterranean and parts of the Middle East.
- Heavy snow and freezing rain is likely across the central/southern USA from this weekend.
- Severe thunderstorms possible across parts of south-eastern Africa.



DISCUSSION

Tropical Cyclones

There are no active tropical cyclones at this time.

Potential development in the Bay of Bengal **Weather**

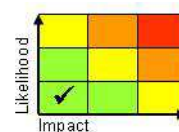
Conditions should become more conducive for the development of tropical cyclones in southern parts of the Bay of Bengal next week. Should a system develop, there is a low chance of it affecting Sri Lanka and/or the Andaman Islands. Regardless of development heavy rainfall is expected at times in this region next week.

Discussion

As the MJO moves from the Indian Ocean and into the Maritime Continent, conditions become more favourable for tropical cyclone genesis in the Bay of Bengal during next week. MOGREPS-G and the ECMWF ensemble both suggest the potential for a tropical storm to develop from around midweek.

Expected Impacts

Should a storm develop, the most probable impacts are from heavy rain and therefore flash flooding and landslides.



This forecast may be amended at any time

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Potential development in the South Pacific

Weather

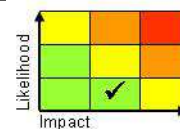
Two clusters of heavy showers and thunderstorms in the southwest Pacific Ocean have the potential to become better organised and develop into tropical cyclones next week. Vanuatu and Fiji are the most likely islands chains to be affected should a storm develop. Regardless of development heavy rainfall is expected across the region over the next 3 days, with up to 250 mm of rain possible, before becoming mostly dry from the south early next week.

Discussion

Conditions will become briefly more favourable for tropical cyclone genesis (i.e. low wind shear, high SSTs and deep layer moisture) over the weekend. There is considered to be low to moderate chance of formation.

Expected Impacts

Even without tropical storm development, flash flooding is likely across parts of Vanuatu and possibly Fiji over the weekend. Should a tropical cyclone form, then the typical impacts of coastal flooding and wind damage would apply.



Europe

Eastern Mediterranean

Weather

Further spells of heavy showers and thunderstorms are likely to continue across this region. The heaviest rainfall will be across parts of Cyprus and the Levant coastline, transferring into the interior of Syria and Iraq on Saturday, before conditions turn somewhat drier on Sunday. The drier interlude will be brief, with further heavy showers and thunderstorms developing once again next week, although the focus perhaps a little further north over Turkey and northern Iraq.

Discussion

A cut-off vortex over the eastern Mediterranean is being repeatedly reinforced by further trough extensions to its rear. A combination of this upper forcing and fuelling of convection from warm seas will result in a surface low forming within the broad area of deep convection. The vortex will relax away to the east over the weekend with a brief period of quieter weather expected. However, next week a mobile westerly pattern should become established with embedded upper troughs driving areas of showers and thunderstorms through the region.

Expected Impacts

Thunderstorms will lead to a continued threat of flash flooding, with additional hazards from a combination of strong winds, large hail, frequent lightning and a few tornadoes/waterspouts. Landslides are also possible across more mountainous parts of southern Turkey and Cyprus. Although showers next week are likely to be less severe, given the already wet ground they could produce further flash flooding. Strong winds next week likely to impact marine transport.



Northern Alps

Weather

Occasional spells of heavy rain and mountain snow will continue to affect the region, probably reaching a peak later this weekend, with 150-200 mm through the coming week. Over the weekend, snow will begin to fall to lower-levels and may affect more populated areas in the region while at higher levels some significant falls are likely. Turning much drier from the middle of next week.

Discussion

A succession of active frontal systems will move southeast across central and western Europe, with relatively high WBPT and strong low-level flow leading to marked orographic enhancement to the precipitation. Initially most of the precipitation will fall as rain, but over the weekend snow will fall to begin to fall to lower-levels (800 metres or so) as colder air sinks south across Europe.

Expected Impacts

Cumulative effect of repeated heavy rainfall may lead to an increased risk of flooding by the weekend. Snow may begin to affect more populated areas of the region by the weekend, leading to disruption to travel. Strong winds likely to lead to blizzard conditions at higher levels.



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North America

Southern USA

Weather

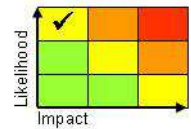
A potent winter storm is expected to form and run east across the southern and south-eastern USA this weekend. Over 200 mm of rainfall is possible in some locations along its path; however along the northern boundary of the precipitation, quite extensive snowfall (up to 20-30cm) is possible. There is also the potential for a narrow swathe of freezing rain (rain which freezes instantly onto surfaces causing a glaze of ice).

Discussion

Cold air of Arctic origin is entrenched across the continental United States. This will result in the polar front (and polar front jet) being located at unusually southern latitudes in close proximity to a plume of very warm air bring drawn north from Mexico. Within this jet a sharp upper trough will quickly run east across the region and induce cyclogenesis along the polar front. This will produce an area of heavy precipitation, along the northern boundary of which will fall into cold air and bring both freezing rain and unusual early season snowfall to some southern and central states.

Expected Impacts

This is likely to become a multi-hazard event. Very heavy rainfall is likely to cause some flash flooding from southeast Texas across to Georgia. However, the early season snowfall has the potential to bring utility outages and travel disruption to a region where snowfall is less than routine such as in Oklahoma, northern Texas, Arkansas and Tennessee. Where freezing rain occurs, travel disruption and power/utilities outages are likely to be more widespread and significant.



Central America and Caribbean

Nil significant.

South America

Nil significant.

Africa

Eastern South Africa, Lesotho, eSwatini, S Mozambique, eastern Botswana, Southern Zimbabwe

Weather

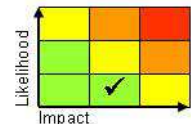
Enhanced and locally severe thunderstorm activity is expected across this region this weekend and into the early part of next week. The storms could produce 75 to 100 mm of rain in a short period, with gusty winds and hail possible.

Discussion

A sharpening upper trough is expected to drive a cold front across South Africa this weekend. As the trough encounters a warm plume to the east, it will trigger some locally severe thunderstorm activity. Forecast profiles show in excess of 2000 J/kg CAPE, with decent shear through the column supporting some organised and long lasting storms.

Expected Impacts

Impacts are likely to include flash flooding and an enhanced landslide risk in mountainous areas. Disruption to travel to and through the region is possible, with the risk of some disruption to power supplies.



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Middle East

Iraq, Syria and western Iran

Weather

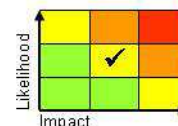
Frequent thunderstorms are forecast to affect this region over the next few days. Each day precipitation totals could reach 25-50mm in a few locations, with this often falling over an hour or so. Over the period some of the wettest locations such as the Zagros Mountains could see in excess of 100mm of precipitation.

Discussion

The upper vortex and subsequent troughs responsible for the unsettled weather in the eastern Mediterranean will draw a plume northeast from tropical Africa and the Red Sea across this region. As the vortex engages this plume heavy and locally severe thunderstorms are expected to break out, with storms being a mixture of surface and medium level rooted cells. A gradual decrease in activity looks likely this weekend as a zonal upper pattern becomes established.

Expected Impacts

Thunderstorms will lead to a continued threat of flash flooding, with additional hazards from a combination of strong winds (locally lifting dense dust plumes), large hail, frequent lightning. Landslides are also possible across more mountainous parts of the region.



Asia

Sri Lanka & Andaman Islands – see *Tropical Cyclones* section

Southern China

Weather

An active cold front is likely to remain slow moving across this region through the next few days. Pulses of heavy rainfall and thunderstorms are likely to move north-east, with some strong and gusty winds and large hail likely. Up to 75 mm of rain is possible per day in places. Towards the northern limits of the precipitation band snowfall is increasingly likely; whilst much of this is likely to be across the mountains some snowfall to lower levels is possible. Early next week, conditions are expected to become much drier.

Discussion

A strong thermal gradient exists across this region between the frigid, Siberian air to the north, and the moist tropical air to the south. A strong jet aloft will induce waves along the front, bringing pulses of intense rainfall and thunderstorms. These waves will keep the front in a similar location for several days, allowing some large rainfall/snowfall totals to accumulate.

Expected Impacts

Flash flooding, large hail and gusty winds could lead to disruption to travel, including the busy shipping lanes through this region. Towards the north of the region snowfall is likely to locally cause additional impacts on transport, utilities and businesses.



Viet Nam

Weather

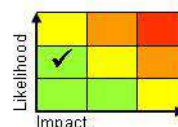
Heavy showers and thunderstorms will become more intense, frequent and long-lived across northern parts of the country over the next 5-7 days. Typical daily rainfall accumulations of 50-100mm are expected, with up to 400 mm possible in some places by the middle of next week.

Discussion

Repeated, but relatively modest, cold surges over central China will lead to an enhanced northeast monsoon flow across the South China Sea. The strong low-level flow will drive large amounts of moisture into northern parts of Viet Nam, with heavy rainfall developing.

Expected Impacts

Flash flooding and an enhanced landslide risk will be the main impacts.



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Malay Peninsula and Sumatra**Weather**

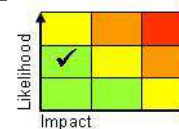
Enhanced rainfall is likely to affect this region through the next few days. 50 to 75 mm per day is possible, some places seeing over 200 mm through the period.

Discussion

A cold surge across SE Asia has resulted in a tight thermal gradient and a strong NE flow into this region. The result is enhanced rainfall, especially along east facing coasts and hills. The likely advance of the MJO into the region next week may further enhance rainfall.

Expected Impacts

Flash flooding and an enhanced landslide risk will be the main impacts. This region has been fairly wet for the past few weeks, and so may be more susceptible than usual to such impacts.

**Australasia****Queensland, Australia, Vanuatu, New Caledonia****Weather**

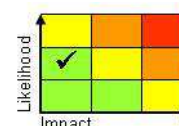
Enhanced, but largely welcome rain is possible across much of eastern Queensland through this weekend as the remnants of tropical cyclone Owen move erratically onshore. Along the coast 100-150mm seems likely to fall quite widely, perhaps up to 300mm in a few locations. Further inland, rainfall amounts are much more uncertain due to erratic behaviour of Ex-Owen, but 50-10mm of rain is probable in places.

Discussion

The track of Ex-Owen continues to be fairly uncertain, although the vast majority of solutions now take the feature slowly and erratically westwards in the direction of Australia where its moisture will enhance rainfall further.

Expected Impacts

Enhanced rainfall may lead to some localised flash flood impacts. In general though the rainfall across Queensland should bring welcome relief from the heat and wildfires which have affected this region recently.



Fiji & Vanuatu – see *Tropical Cyclones* section

Additional information

Nil.

Issued at: 070845 UTC **Meteorologist:** Brent Walker

Global Guidance Unit

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