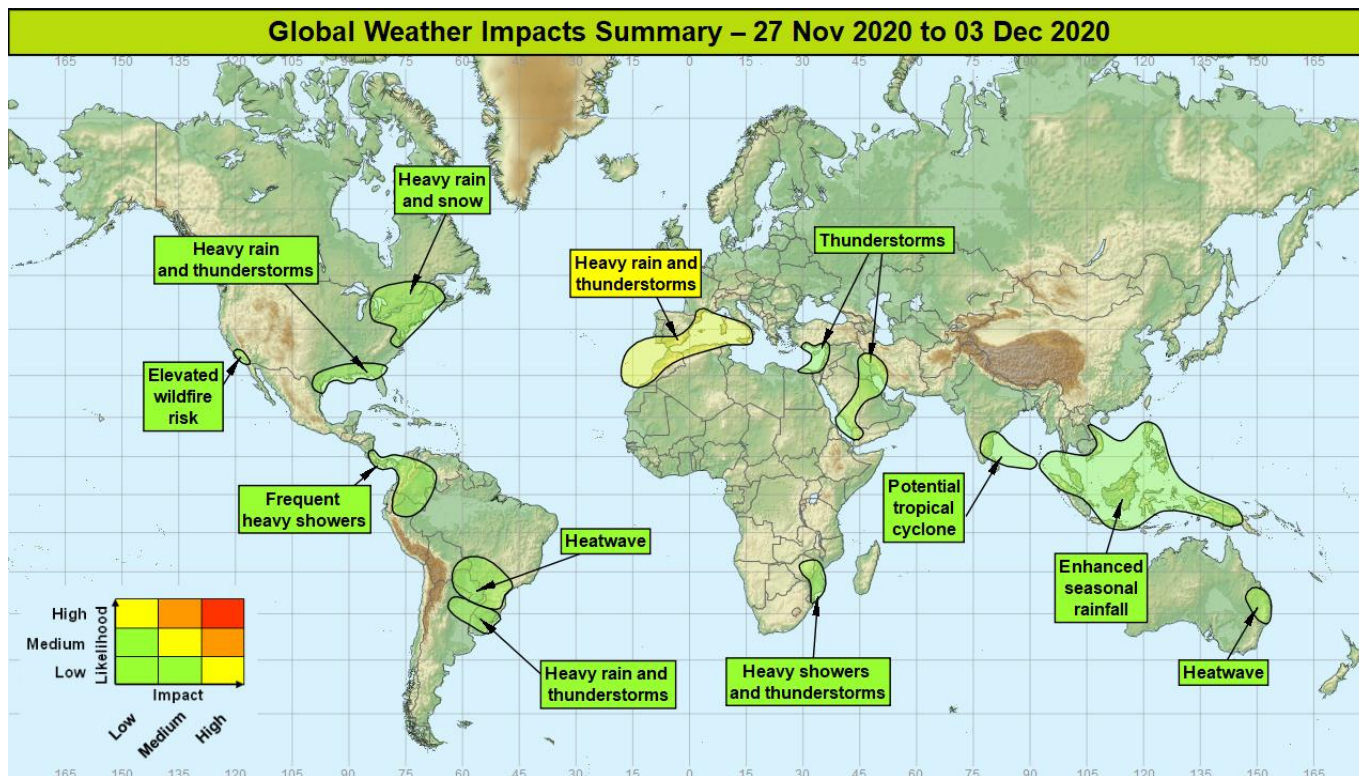


Global Weather Impacts – Friday 27th November to Thursday 3rd December

Issued on Friday 27th November 2020

HEADLINES

- Very unsettled across parts of the Mediterranean region and northeast subtropical Atlantic.
- There is the potential for a further tropical cyclone to form in the southern Bay of Bengal.



DISCUSSION

There are currently no active tropical cyclones but the following areas are being monitored for tropical cyclone development that may impact land over the next 7 days:

Bay of Bengal

Weather

There is a possibility of a further tropical cyclone developing in the Bay of Bengal by early next week. If this forms it will likely move toward northeast Sri Lanka and southeast India by midweek. Even if a tropical cyclone does not form heavy rainfall will affect the area with the potential for 100-200mm a couple of days, with this falling close to the region affected by Cyclonic Storm Nivar during the last couple of days.

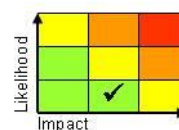
Discussion

There is good support amongst both deterministic and ensemble output for a tropical depression to develop early next week from an Equatorial Rossby Wave currently emanating from the Malay Peninsula, this will then be steered gradually northwestwards across the warm northeast Indian Ocean (SSTs 28-29°C) and then approach land around midweek.

Expected Impacts

An enhanced risk of flash and riverine flooding. If a tropical cyclone develops there is also potential for dangerous coastal conditions, a modest storm surge, and damaging winds close to the centre of the storm.

The following areas are being monitored for tropical cyclone development that will remain over ocean:



This forecast may be amended at any time

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Southern Indian Ocean

There is the small chance that a tropical cyclone could form in the southeast Indian Ocean during today. However if a storm it will be steered southeastwards over cooler Sea Surface Temperatures (SSTs) and decay.

Europe

Spain (including the Canary Islands), Portugal (including Madeira), Morocco and many Mediterranean coastal countries (inc. N Africa)

Weather

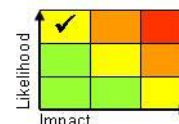
An area of heavy rain and thunderstorms across western parts of the highlighted area will gradually move east into the Mediterranean over the coming days. As much as 100mm of rain is possible each day in a few places, most likely for Mediterranean coasts. Thunderstorms will also bring frequent lightning and strong gusty winds. A further area of heavy showers, thunderstorms and strong winds will arrive across the west of the region over the weekend. This wet weather will be highly unusual across parts of the Canary Islands and western Morocco in particular.

Discussion

A major trough disruption has led to a cut-off upper vortex forming over western Iberia. This and an associated upper cold pool will slowly drift eastwards over the following days supporting areas of deep convection, especially over the sea and adjacent coasts with SSTs widely 18 to 20°C still. A number of convective modes are anticipated with the most severe convection (risk large hail and possible waterspouts/tornadoes) over the Med. At this stage confidence in details are low but the formation of a surface low may help to align deep convection into some coastal areas elevating the risk of very high rainfall totals and flash flooding. Parts of eastern and southern Spain, Corsica and Sardinia currently look most at risk. Following the initial upper vortex a further trough extension and disruption across the west of the highlighted region will bring renewed unsettled weather here over the weekend.

Expected Impacts

Flash flooding is the most likely impact, and perhaps minor river flooding later in the week. Lightning and strong winds may bring some localised damage. Strong winds around the periphery of the surface low could approach gale force, which could induce some large waves.



Cyprus, Turkey, Syria, Lebanon, Israel and Egypt

Weather

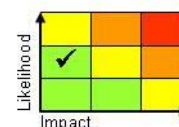
Fairly frequent and intense showers and thunderstorms will affect this region over the coming days. Whilst most areas are unlikely to see impactful rainfall, a few places could see 50-100mm in a few hours in association with the most intense storms, most likely in coastal areas.

Discussion

At least two periods of cyclonic upper level flow (and associated upper cold pools) will affect the eastern Mediterranean through the coming 7 days. Activity will be focused on slightly elevated WBPT plumes which may act as frontal like features, although the vast majority of precipitation is likely to be convective in nature (driven by the warm underlying seas). Where these showers are most frequently driven inland will the highest risk of impacts exist, with significant rainfall expected across Cyprus next week.

Expected Impacts

An enhanced risk of flash flooding, especially from early next week.



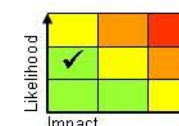
North America

Southern USA

Weather

Heavy rain and thunderstorms are likely to remain frequent in this region over the weekend. There is the potential for 150-200mm of rain over the course of 2-3 days, with the chance of some severe thunderstorms and associated hazards in the northwest of the region (central Texas). Early next week a deep area of low pressure is expected to develop and cause this area of heavy precipitation to spread northeast.

Discussion



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A slow moving cold front draped across this region, with a southerly flow to the south of this bringing abundant moisture from the Gulf of Mexico. During Saturday and into Sunday an upper trough arrives from the west, this creates mass ascent in the region and leads to a further blossoming of precipitation along the frontal zones, with some embedded thunderstorms. This system will then undergo cyclogenesis and move across NE'ern USA and SE Canada early next week (see areas below).

Expected Impacts

Flash flooding is the most likely impact.

Northeast USA and southeast Canada

Weather

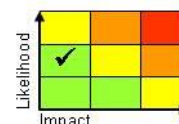
A deep area of low pressure will develop while moving northeast from the Gulf of Mexico and travel along the eastern seaboard of the USA. This will bring strong winds and heavy rainfall to this region with accumulations of 50-100mm possible across eastern States, where cold air undercuts the western flank of this low some heavy snowfall is expected with the potential for 30-50cm too fall in around 24 hours in an area from Tennessee to the Great Lakes on Monday and Tuesday.

Discussion

As a upper trough engages a thermally strong cold front just inland from the Gulf coastline this weekend a major cyclogenesis event will occur with the low pushing northeast along the Eastern Seaboard. Very moist air tropical origins within the warm conveyor will mean the system produces significant rainfall, however the snowfall where the cold air undercuts the western flank of the depression may be the most impactful weather, with significant snowfall falling across a wide region as people travel after the Thanks Giving weekend.

Expected Impacts

Flash and minor riverine flooding is possible in places in the east. But snowfall across the west of the region will likely bring significant disruption to transport and utilities.



Southwestern USA

Weather

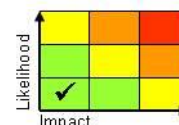
Santa Ana (strong, very dry and warm easterly) winds are expected in this area over the next few days bringing a heightened risk of any wildfires rapidly growing and spreading, however there are currently no ongoing large wildfires in the region.

Discussion

An ongoing cold air outbreak across the central USA has led to a build of pressure to the east of the Sierra Nevada. This has induced a cross barrier MSLP gradient, and encouraging string gap and downslope winds including the Santa Ana.

Expected Impacts

Risk if any wildfires do ignite they could rapidly grow and spread bringing a risk to property and life.



Central America and Caribbean

Nicaragua, Guatemala, Costa Rica, Panama, Colombia and Venezuela

Weather

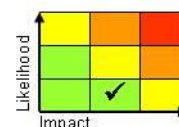
Enhanced heavy shower and thunderstorm activity will affect this region over coming week. During this time 150-200mm of rain is likely to build up across many parts of the region, with a few spots perhaps seeing as much as 400mm in the coming week – which is (very roughly) more than twice the normal rainfall for this time of year.

Discussion

An active period in the ITCZ will see strengthened northeasterly winds in the northern part of this area, and southwesterlies in the south of the area. The associated low-level convergence of very high PWAT air will bring an increased frequency of showers and thunderstorms, especially into areas exposed to these winds, i.e. coastal parts with onshore winds. This all aided by upper level divergence associated with a weak mid-latitude trough that extends southwest from the upper vortex currently southeast of Bermuda.

Expected Impacts

Flash and further riverine flooding, with increased likelihood of landslides.



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South America

Colombia and Venezuela – See Central America and Caribbean section

Paraguay, northern Argentina, eastern Bolivia and southern Brazil

Weather

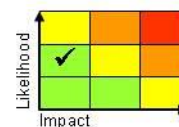
Temperatures are expected to rise into the low 40's of Celsius most days this week, even reaching the mid 40's in some locations with very warm overnight temperatures too. The hot, dry conditions will be conducive to the maintenance/regeneration of wildfires, of which there are numerous across this region.

Discussion

Paraguay is in the grip of a drought and has been experiencing multiple hot spells over the past few months. Persistent low pressure to the east of the Andes continues to advect hot, dry air from areas further N – the warming process further aided by orographic descent and forced subsidence due to upper ridging aloft. Temperatures in excess of 40C are not unprecedented in this region at this time of year, although it is likely that a few local station records for November will be broken, with temperatures around 5-8°C above the average. Meanwhile, Paraguay and Bolivia in particular is suffering with numerous wildfires, with these conditions conducive to increasing spread and frequency of these.

Expected Impacts

The longevity of the heat is likely to impact on vulnerable demographics, combined with the drought conditions will increasingly stress national resources/agriculture etc. Poor air quality associated with wildfire smoke will also impact on human health.



Northern Argentina, Uruguay, far southwest of Brazil

Weather

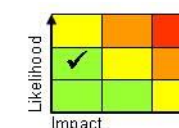
A marked frontal zone will affect the region for several days. Partly helped by the very warm air to the north (see section above), a sharp boundary exists between this and the relatively cold airmass to the south. This is likely to lead to some prolonged and heavy rain at times, and in the north of this area the additional threat of thunderstorms. Totals of rain will be 100 to 150 mm quite widely, and up to 200 to 250 mm in some parts.

Discussion

The marked baroclinic zone (the South Atlantic Convergence Zone) will be overrun by a succession of upper troughs associated with the nearby jet. Pulses of heavy rain are expected as a series of frontal waves develop and cross a similar area, as well as some severe thunderstorms developing in the warm airmass to the north. High PWAT and largely skinny-CAPE will lead to some large totals of rainfall building up in the coming days.

Expected Impacts

Increased likelihood of flash and river flooding, with potential for landslides in steeper terrain.



Africa

Morocco, Algeria, Tunisia, Libya– See Europe section

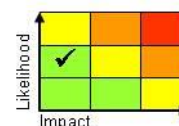
Egypt – See Europe section

Eswatini, the extreme east of South Africa, Zimbabwe and Mozambique

Weather

Severe thunderstorms are expected to develop in this area over the weekend and continue during next week. Frequent lightning and large hail is likely in places, with potential for torrential rain to bring 50-100mm in a couple of hours. Despite the region is entering its wettest period of the year (December to February) these totals are above what would normally be seen in late November and early December.

Discussion



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A very warm tropical airmass lies across this region with profiles indicating deep instability and the potential for severe convection and associated hazards. A sub-tropical low develops off the southeast coast of South Africa by Sunday, with the cold front emanating from this moving northwards and assisting the development of the storms.

Expected Impacts

Threat of flash flooding. Damage to infrastructure from lightning and hail.

Middle East

Levant coastline – See *Europe* section

Parts of Saudi Arabia, Northwest Yemen, Southeast Iraq, Kuwait, southwest Iran
Weather

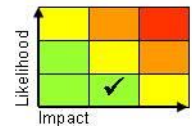
Potential severe thunderstorms will develop across these areas through the coming few days. Frequent lightning and strong gusty winds are likely in places. Torrential downpours are possible too with 50-75 mm falling in a few hours, lightning, hail (in elevated regions), and some strong and gusty winds which will lift some sand and dust plumes

Discussion

A shortwave upper trough (the same feature bringing heavy showers and thunderstorms to the Levant earlier this week) will engage an Arabian high WBPT plume to generate areas of high-based showers and thunderstorms. The high PWAT airmass (which contains the remnants of Cyclonic Storm Gati) will support some locally intense downpours, but often high cloud bases will be supportive of frequent lightning, locally strong, gusty winds, which could cause local damage and is likely to lift areas of dust.

Expected Impacts

Small likelihood of isolated flash flooding, which should this impact urban areas could cause significant disruption. Frequent lightning could cause isolated issues, and lifted dust could cause disruption to transport.

**Asia**

Southeast India and northeast Sri Lanka – See *Tropical Cyclones* section

Philippines, Vietnam, Cambodia, Thailand, Malaysia, Indonesia, Papua New Guinea, and The Solomon Islands
Weather

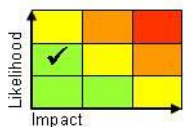
There is likely to be enhanced convective activity in the coming week with heavy showers and thunderstorms affecting large parts of this wider region at some time or another. There will be some drier interludes as well in all areas, but when the showers do come along they are likely to be torrential, with a risk of frequent lightning. Windward coasts and mountainous areas are likely to see the worst of the storms. There is a minimal risk that within this zone a tropical depression could attempt to develop in the Gulf of Thailand in the middle of next week.

Discussion

Several factors are contributing to this potentially very wet spell in the region. Even though it is not unusual at this time of year, effects are still likely to be felt, given antecedent wet conditions and the anticipated frequency and intensity of the rains. The MJO is moving into Phase 4, which will bring large-scale upper divergence. A train of Rossby waves to the east will also likely enhance the convection in pulses. And finally, La Niña will also contribute as SSTs are well above average over this part of the world, with a large area of >28°C

Expected Impacts

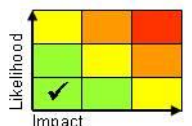
Increased likelihood of flash and river flooding, with potential for landslides in the higher terrain. Impacts from gusty winds, while not widespread, could be impactful - as could lightning strikes.

**Australasia****Northeastern New South Wales and southeastern Queensland**
Weather

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This area of Australia is likely to see some very high temperatures in the coming days, with temperatures quite widely in excess of 40°C – and reach the mid 40s°C inland. Many November maximum temperature records likely to be broken. Though heatwaves are not uncommon in this area, it is particularly early this year and is likely to produce conditions favourable for wildfires to spread as the winds also pick up during the coming days.

Discussion

A trough extension across central/western Australia will be associated with a northeast moving cold front. Ahead of this feature hot air from the warm northern interior of the continent will be drawn southeastwards across this region. A combination a warm advection and strong sensible heating will lead to an upper anticyclone developing across this region, this will slow the cold fronts northeast progress and lead to hot conditions persisting across this area through into the middle part of next week.

Expected Impacts

Heat health impacts for older and more vulnerable members of the population and animals. An enhanced risk of some wildfire activity.

Additional Information

Northern India, Pakistan, Afghanistan and parts of SE China: Urban pollution, combined with crop burning, will continue to generate high levels of air pollution in this area over the coming months. Very unhealthy air quality has continued to be reported in cities in the area including Delhi, Lahore and Kabul.

Issued at: 270800 UTC Meteorologist: Nick Silkstone / Tony Wardle

Global Guidance Unit

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