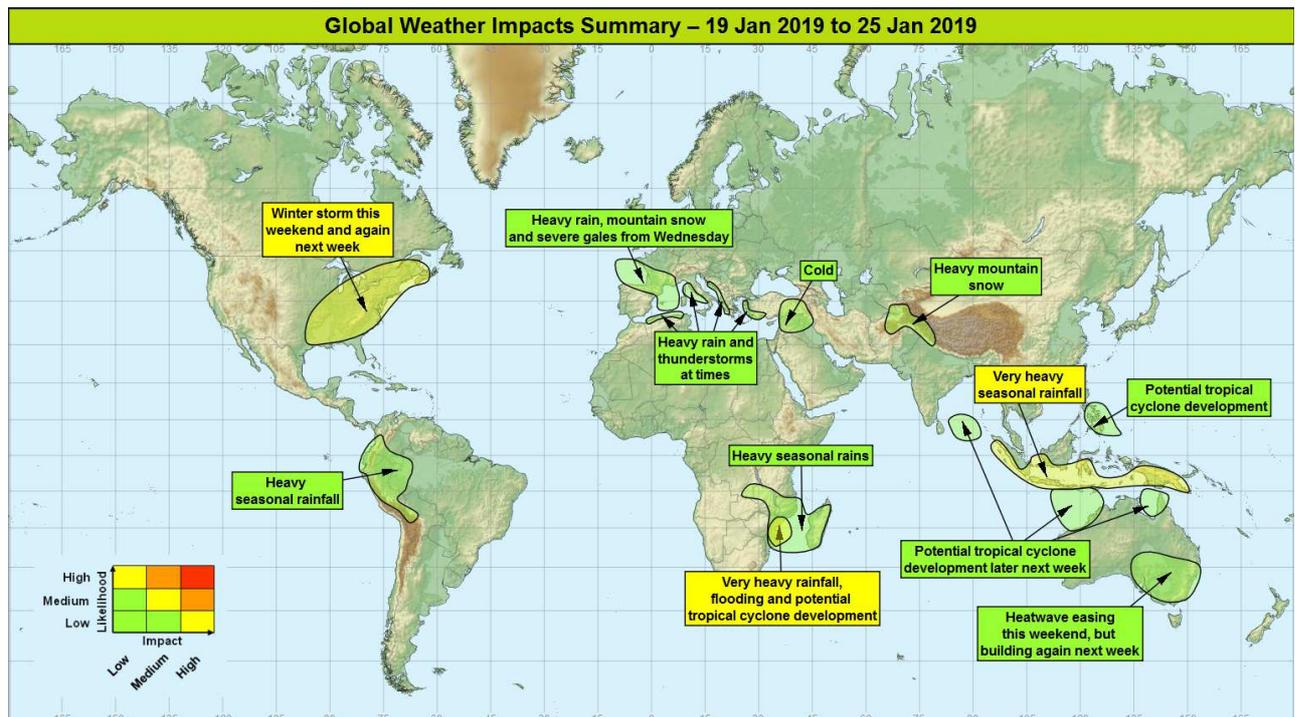


Global Weather Impacts – Saturday 19th to Friday 25th January 2019

Issued on Saturday 19th January 2019

HEADLINES

- Potential for the development of a tropical storm impacting Mozambique.
- Lower likelihood for tropical storm developments for the Philippines, northern Australia and Bay of Bengal.
- Major winter storm likely to affect central and eastern USA this weekend.
- Much heavier than usual rainfall enhancing the threat of flooding in parts of Indonesia this coming week.
- Australian heatwave easing this weekend, but returning next week.



DISCUSSION

Tropical Cyclones

There are currently no named tropical cyclones. The following areas are being monitored:

Mozambique Channel (Mozambique)

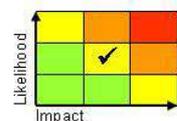
Weather

There is a growing probability of a tropical cyclone developing in the southern Mozambique Channel and Mozambique later this weekend and into next week, forming within a broader region of frequent heavy shower and thunderstorm activity affecting Madagascar, Mozambique, Malawi and Zambia. Should a tropical cyclone develop, it would bring strong winds to some coastal areas in the Mozambique Channel, in addition to the very heavy rainfall (possibly up to 500 mm (which is twice the average January rainfall in the region)).

Discussion

A low level circulation is currently located just off the Mozambique coast, and is expected to develop further through the weekend. All models produce a tropical storm strength system by the end of this weekend, although there is uncertainty about the evolution through next week. Some models take it inland and markedly weaken it, while others keep it offshore for a few days longer before a track inland.

Expected Impacts



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Very high rainfall accumulations will result in a heightened flood threat, with a lower likelihood of wind damage. However, strong winds and very rough seas may cause some disruption to shipping through the Mozambique Channel.

Northwest Pacific (Southern Philippines, Palau and Yap Islands)

Weather

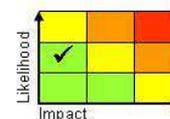
Disorganised heavy shower and thunderstorm activity in southern Philippine Sea continues to move west and may redevelop into a tropical depression over the next few days as it moves towards the southern Philippines. Irrespective of development, frequent showers and thunderstorms are likely to produce locally 100-200 mm of rain in 24 hours and up to 400 mm in places during the next 3 days. This amount of rain is close to the average rainfall for the whole of January.

Discussion

The area of convection just west of the island of Palau continues to move slowly westward and gradually develop in an environment with low to moderate vertical wind shear and very warm sea surface temperatures. There is much better model agreement for a weak tropical system to affect parts of the southern and central Philippines this weekend and early next week. This system will be prevented from moving further north and west by a strong cold surge moving southwards down the East China Sea, with this event likely to weaken the tropical system.

Expected Impacts

Flash flooding is the most likely impact, with a heightened likelihood of landslides. This region of the Philippines was adversely impacted in late December by the system that went on to become Tropical Storm Pabuk.



Timor Sea and Gulf of Carpentaria (Northern Australia)

Weather

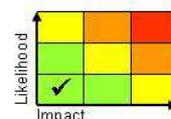
There is a low likelihood of one or more tropical cyclones developing through the second half of next week, most likely in the Timor Sea. Irrespective of development, above average rainfall is expected to affect Far North Queensland, Christmas Island, southern Indonesia and Timor Leste.

Discussion

A pair of equatorial Rossby waves moving slowly westward may become foci for development, enhanced by the arrival of the MJO across the region later next week.

Expected Impacts

Localised flash flooding and strong winds affecting coastal areas of the Gulf of Carpentaria and Timor Sea should a tropical cyclone development.



Southern Bay of Bengal

Weather

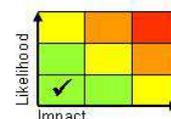
There is a low probability of a weak tropical cyclone forming in the southern part of the Bay of Bengal for a time next week. If a system does develop it is likely to remain offshore, just west of Sri Lanka.

Discussion

The GM is the most developed of the main models for a tropical cyclone event. The likely cause of such a development would be the westward transfer of an Equatorial Rossby Wave or the influence of the nearby MJO.

Expected Impacts

None since any development is expected to remain offshore.



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Europe

Eastern Adriatic and Aegean coastlines, northern Algeria and western Italy

Weather

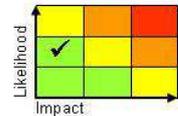
Unsettled conditions that have affected the eastern Mediterranean over recent weeks are expected to be more focussed into the central Mediterranean over the coming week bringing spells of heavy rain and thunderstorms. The heaviest rainfall is expected to be in coastal and mountainous areas of western and southwestern Turkey, northern Algeria and the Adriatic and Tyrrhenian Seas. These are likely to produce localised rainfall accumulations of 50 to 100 mm over a few hours, falling as snow on higher ground.

Discussion

A slight retrogression in the hemispheric pattern has resulted in a westward shift in the storm track across the Mediterranean. Instead, systems are now tracking across the central Mediterranean with the heaviest rainfall affecting windward coastal regions and mountain chains.

Expected Impacts

Localised flash flooding leading to damage to property and infrastructure. Some temporary transport disruption is also possible. Further snowfall over mountains is expected to maintain an increased risk of avalanches.



Bay of Biscay, northern Spain, southern France, Andorra and the Western Mediterranean

Weather

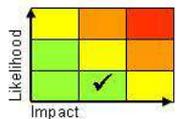
Severe gales (sustained winds of 47 to 54 mph) and high seas will develop in the Bay of Biscay by Wednesday. The system responsible for this will also produce heavy rain (up to 100 mm in 24 hours) to parts of northern Spain and southern France on Wednesday (especially the Pyrenees, including Andorra where very large snowfall of up to 100 cm could be seen). Significant snowfall could be seen as low as 500 m above sea level. By Thursday the severe gales and very rough seas, along with thunderstorms and mountain snowfall, will transfer into the Western Mediterranean, with this very disturbed weather continuing to extend eastwards on Friday.

Discussion

All models produce an extending upper trough that disrupts across Central Europe next week. This will result in the formation of a deep depression in the Central Mediterranean or across Italy.

Expected Impacts

Disruptive snowfall will affect Andorra, parts of northern Spain and southern France. There is also the potential for flash flooding, with coastal flooding also a possibility. Dangerous sea conditions will pose a threat to marine transport.



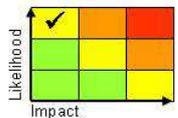
North America

Central and eastern USA and southeast Canada

Weather

A major winter storm is developing across the Midwest of the USA and will transfer northeastwards through the rest of the weekend. Heavy snow has already begun over the Central Plains and will then progress eastward over the weekend with the heaviest snowfall expected from northern Ohio to New England (likely including Boston) where widely 30-60 cm of snow is expected. Major cities such as Chicago, Washington DC, Philadelphia and New York are likely to receive smaller amounts (up to 5-15 cm). Some areas will likely see freezing rain for a time, particularly across Ohio, the central Appalachian Mountains and parts of New York where up to 5mm of ice is possible. In the milder air to the south, heavy rain is expected to affect many southern and eastern states, with locally severe thunderstorms affecting the Gulf Coast. Another winter storm is likely to affect a similar region from Tuesday night through to Thursday or Friday with further disruptive snow, ice and rain impacts possible.

Discussion



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The residual frontal plume that brought the latest spell of heavy rain to California on Thursday will be engaged by an upper trough extending southeast across the Rockies. The resultant area of low pressure is expected to track east-northeast with a very strong temperature gradient developing along it. This will result in an expanding envelope of precipitation containing a mixture of phases (snow, ice pellets, freezing rain and rain). There remain some very small differences in the track of the low, with a sharp gradient in snowfall accumulations across populous parts of the Northeast Corridor (Washington DC to New York).

Expected Impacts

Significant transport disruption is expected this weekend across the northeast USA with difficult travel conditions expected across parts of the Plains, Great Lakes, Ohio Valley and northeast USA. Snow and ice on trees and power lines is likely to result in power disruption and make roads and pavements very slippery. Heavy rain may cause some localised flash flooding and damage to property and infrastructure, most likely across portions of the Tennessee and Ohio Valleys. Coastal flooding is also possible in some Eastern Seaboard locations due to the very strong southerly winds.

Central America and Caribbean

Nil significant.

South America

Western Colombia, Ecuador, Peru, northern Bolivia and northwestern Brazil

Weather

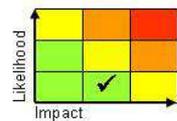
Above average rainfall in association with frequent showers and thunderstorms is expected through the next week. As seen in recent days, localised accumulations of 50-100mm of rain can be expected in a few hours, with many areas seeing 200-300mm of rain by the middle of next week. This is expected to equate to close to the January average in places.

Discussion

In line with the developing El Niño, the southeasterly trade winds in the southeast Pacific are weaker than usual, this prevents the upwelling of cold water along the coastline and allows the build up of warm Pacific waters along the coastline (currently positive SST anomalies of 1 to 3°C). These weaker trades allow heating of the South American Continent to setup strong sea breezes along the coastline, drawing in this moist low-level air and allowing heavy showers and thunderstorms to form over the Andes, and also in the usually very dry areas to the west of the mountains.

Expected Impacts

Increased likelihood of flash flooding and landslides from heavy rainfall.



Africa

Mozambique Channel (Mozambique) – See *Tropical Cyclones* section.

Algeria – See *Europe* section.

Mozambique, Madagascar, Malawi and northern Zambia

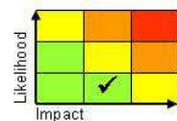
Weather

The seasonal rains will continue to be stronger than normal through the next 4 or 5 days, with up to another 100-200 mm of rainfall in places. This is in addition to the 100-200, locally 350 mm of rainfall that has fallen in the past 7 days. As context, most of this region should typically receive around 100-200mm of rainfall over the course of January, with 300-400mm over northern Madagascar. Shower and thunderstorm activity should gradually decrease in spatial extent from midweek. For details of the likely tropical cyclone development see the Tropical Cyclones section

Discussion

A continued cold surge is expected to enhance the low level convergence along the ITCZ in this part of Africa through the next 4 or 5 days.

Expected Impacts



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Flash flooding and an increased likelihood of river flooding is a threat. Heavy rain in addition to large hail, frequent lightning and strong winds are likely to cause some damage to property, crops and infrastructure.

Middle East

Eastern Turkey, Lebanon, Syria and northern Iraq

Weather

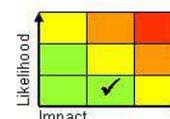
Below average temperatures have become established across the region with widespread frost expected overnight away from coastal areas this weekend and early next week. Temperatures will gradually recover to nearer normal through next week.

Discussion

An incursion of low WBPT airmass has become slow-moving under a developing anticyclone across the region. With clearer skies and decreasing winds, this will lead to some low overnight minima before in-situ heating allows temperatures to recover to nearer normal from the west during early next week.

Expected Impacts

Adverse health impacts on vulnerable populations exposed to below average temperatures.



Asia

Southern Philippines, Indonesia, Timor-Leste – See *Tropical Cyclones* section.

Much of Indonesia and Papua New Guinea

Weather

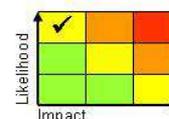
Seasonal rainfall is expected to be more intense and widespread than is usual over the next week. Up to 100 mm of rain could fall in a few hours, combined with locally strong winds or even a tornado. Rainfall totals of up to 300 mm could accumulate in places which is equivalent to around the average January rainfall in this region.

Discussion

A combination of a Kelvin wave recently moving through the region, a strengthening cross-equatorial northerly, enhanced low level ITCZ convergence and an emerging active MJO phase in the Indian Ocean has resulted in and will maintain enhanced seasonal rainfall through the coming week.

Expected Impacts

Localised flash flooding with some wind damage possible near severe thunderstorms. With the wet season progressing, there will be an increasing threat of landslides and river flooding as soil becomes increasingly saturated.



Afghanistan, Tajikistan, northern Pakistan and northwest India

Weather

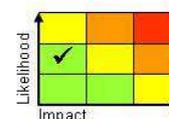
A further spell of snow is affecting Afghanistan and Tajikistan, and will extend east into northern Pakistan today (Saturday), transferring east into the far northwest of India on Sunday as the snow eases further west. Many places are likely to see a further 20-40 cm of snow, with isolated accumulations of a metre or more over the Kashmir region of Pakistan and India. Once drier conditions follow, cold overnight temperatures are expected to become widespread, with minima as low as -20°C possible.

Discussion

An upper trough will extend transfer eastwards across southwest Asia through the coming 3 or 4 days, engaging a series of high WBPT plumes. This will lead to widespread snow on the abundant elevated topography of the region.

Expected Impacts

This follows another snowfall event last week affecting a similar region. Fresh snowfall is expected to disrupt air and land-based transport networks in the region whilst power supplies could be interrupted. Cold temperatures may also have adverse impacts on human and animal health. Given the mountainous nature of these regions, there will also be an increased likelihood of avalanches.



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Australasia

Northern Australia – See *Tropical Cyclones* section.

Southeastern Australia

Weather

The historic heatwave that has affected much of southern and eastern Australia is cooling off this weekend. However, temperatures will rise again next week, quite likely reaching similar levels as this recent heatwave. On Thursday night, a new all-time Australian overnight heat record was recorded in Noona, NSW with a minimum temperature of 35.9°C.

Discussion

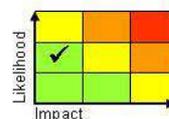
High temperatures are not unusual for Australia in the last decade. The Bureau of Meteorology recently announced that 2018 was the 3rd warmest year on record. These heatwaves tend to develop over NW Australia, where the town of Marble Bar has now exceeded 41 °C for over a month, then spread south and east across the interior, then on to affect the more populous areas of southeastern Australia.

Expected Impacts

Extreme heat can impact the health of the more vulnerable people and can adversely impact on the availability of water and the power network. High temperatures can also damage transport networks, including the melting of tarmac and buckling of railway tracks. The heat, combined with prolonged dry weather will also lead to an increased risk of wildfires.

Additional information

Nil.



Issued at: 190800 UTC **Meteorologist:** Paul Hutcheon

Global Guidance Unit

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