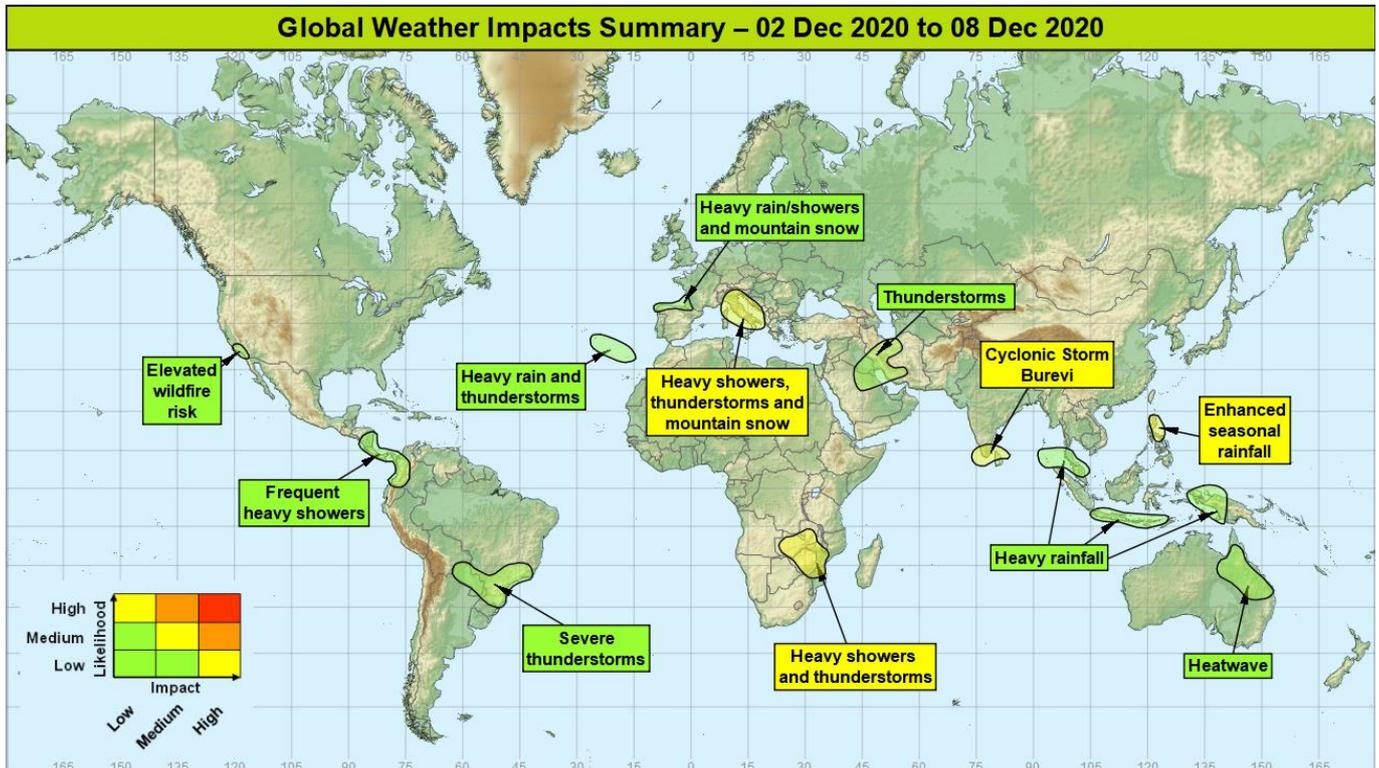


Global Weather Impacts – Wednesday 2nd to Tuesday 8th December

Issued on Wednesday 2nd December 2020

HEADLINES

- Cyclonic Storm Burevi affecting Sri Lanka and the far south of India over the next few days.
- Heavy rain leading to flash flooding across parts of the Mediterranean.
- Flash flood risk continuing across parts of Southeast Asia and increasingly in parts of southeast Africa.



DISCUSSION

Tropical Cyclones

Cyclonic Storm Burevi – Bay of Bengal

Weather

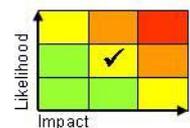
Cyclonic Storm Burevi formed during Tuesday and is located approximately 100 miles east of Trincomalee, Sri Lanka with sustained winds of around 50 mph this morning (Wednesday). Burevi is expected to move across northern Sri Lanka on later today, before affecting the far south of India during Thursday and Friday. Strong winds will affect areas close to the centre of the storm; however, the primary hazard will likely be heavy rainfall - 100-200mm is expected to fall in a couple of days along the path of the cyclone, with perhaps as much as 300-400mm in some locations. This is the wettest part of the year for this region and these higher totals are close to the typical monthly rainfall for December.

Discussion

Cyclonic Storm Burevi formed from an Equatorial Rossby Wave crossing the Bay of Bengal. The cyclone will be steered gradually west-northwestwards across the warm northeast Indian Ocean (SSTs 29-30C) in a region of low vertical shear over the next few days. Strengthening of this system is signalled to occur prior to landfall across Sri Lanka later today (Wednesday).

Expected Impacts

An enhanced risk of flash and riverine flooding. Dangerous coastal conditions and damaging winds close to the centre of the storm may occur.



This forecast may be amended at any time

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

Southern Indian Ocean

There is the small chance that a tropical cyclone could form in the central southern or southeast Indian Ocean over the coming days. Any system that forms will remain well away from land and out over the open ocean before decaying.

Europe

Italy, Corsica and the Balkans

Weather

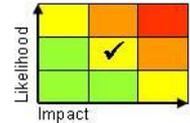
Spells of heavy rain and thunderstorms will affect this region through the rest of this week and into the weekend, bringing accumulations of up to 50-100mm in a few hours in places. By the beginning of next week 250 to 300 mm of rain could have built up in a few locations. Snow is likely across the Dinaric and Italian Alps with some large accumulations gradually building up here. Further heavy showers are possible at times next week, but overall conditions are expected to be drier.

Discussion

The upper pattern will become increasingly blocked this week as several trough extensions take place across central and western parts of Europe. Areas of deep convection and heavy, orographically modulated rainfall are likely to develop in the high WBPT plumes that are drawn north on the forward side of the extending upper trough(s). A couple of these type of events are expected before the weekend.

Expected Impacts

Significant risk of flash flooding, with fluvial impact increasingly likely by the weekend. Landslides are possible as well as avalanches with snow causing disruption to travel on higher routes.



Madeira and the Azores

Weather

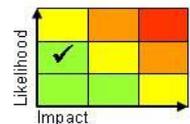
Storm Clement will bring heavy rain, showers and strong winds (gusting 50 mph) to southern parts of the Azores and Madeira during Wednesday, with conditions improving on Thursday. A further 30 to 50 mm of rain is possible.

Discussion

Storm Clement is now a mature feature and will slowly weaken over the next few days as an upper ridge builds from the northwest and pressure rises. Further heavy showers and rain are expected for a day or two with winds slowly easing.

Expected Impacts

Flash flooding and landslides in the mountainous terrain are the most probable impacts, with the additional of some strong winds generating some large waves and dangerous beach conditions that could disrupt travel across the region.



Northern Spain and southwest France

Weather

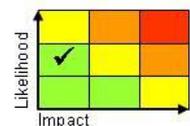
Frequent, heavy showers along with some longer spells of rain are expected to affect the region from Thursday onwards. Rainfall will vary somewhat, but on the wetter days 50-75 mm could fall and by early next week up to 150 mm is possible in places, especially over higher ground. Precipitation will fall as snow above 800 to 1200 metres, with some significant falls likely (50 to 100 cm) over parts of the Pyrenees.

Discussion

Cyclonic block developing over western Europe with a northwesterly surface wind will allow a near continuous feed of heavy showers off the Bay of Biscay. Some longer spells of rain and hill snow will occur in association with active frontal systems swinging southeast cross the region at times.

Expected Impacts

Main impact will be flash flooding with some disruption to travel likely, especially over mountainous regions where heavy snow will be an additional hazard.



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North America

California, USA

Weather

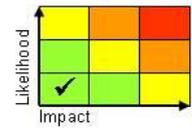
Santa Ana wind event is expected to develop this week across southern parts of California. Gusts of up to around 60 mph are possible during the peak of the event, likely to be Thursday, before winds ease by the weekend. Wildfire risk will become elevated.

Discussion

Another build of pressure to the east of the Sierra Nevada will induce a cross barrier MSLP gradient, once again encouraging strong gap and downslope winds including the Santa Ana across southern California.

Expected Impacts

Risk that any wildfires 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

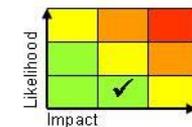
Enhanced heavy shower and thunderstorm activity will affect the region during this week. During this time 150-200 mm of rain is likely to build up across many parts of the region, with a few spots perhaps seeing as much as 400 mm by the end of the week – which is approximately twice the normal rainfall for this time of the 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 an increased likelihood of landslides.



South America

Colombia and Venezuela – See *Central America and Caribbean* section

Paraguay and southern Brazil

Weather

Severe thunderstorms are expected to affect the region at times this week. The most intense and widespread storms are likely during the period Thursday through to Saturday. As well as intense short period rainfall (50-75 mm), large hail and strong winds will be hazards associated with these storms and even a low chance of tornadoes.

Discussion

A combination of high WBPT and a weakly cyclonic pattern aloft will encourage the destabilisation of the atmosphere and deep convection to form most days this week. High CAPE (locally reaching 2500+J/kg) and moderate vertical wind shear could lead to supercell formation, with the typical hazards associated with these storm probable.

Expected Impacts

Flash flooding likely bringing disruption to travel. Large and strong winds could bring some damage to crops and property.

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Africa

Zambia, Zimbabwe and Mozambique

Weather

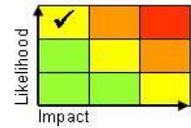
Frequent showers and thunderstorms are expected to develop in this area from the middle of this week and continue for several days. During that time precipitation accumulations across a reasonable part of this area are expected to be 100 to 150 mm, but locally 200 to 400mm is signalled across central Mozambique. Despite the region entering its wettest period of the year (December to February) these totals are above what would normally be seen in early December.

Discussion

A mid-latitude cold front progresses up the eastern coast of South Africa before stalling close to central Mozambique on Wednesday. A surface high builds to the rear of this generating a strong southeasterly flow, this meeting the northeasterly Indian Ocean trade winds and generating strong low level wind and moisture convergence. This will lead to the generation of widespread deep, moist convection which is highly efficient at producing heavy rainfall.

Expected Impacts

Increased threat of widespread flash flooding, with lightning being an additional hazard.



Middle East

Northern Saudi Arabia, Southeast Iraq, Kuwait, and western Iran

Weather

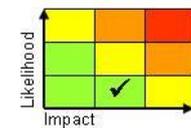
There is the potential for severe thunderstorms to develop across these areas over the coming days. Torrential downpours are possible with 50-75 mm falling in a few hours, hail (in elevated regions) and some strong and gusty winds (which may lift some minor dust plumes).

Discussion

A trough extensions extending southwards across northern Saudi Arabia this week will draw northwards and then engage high WBPT plumes (sourced from Africa/Red Sea) to generate areas of high-based showers and thunderstorms. The high PWAT airmass will support some locally intense downpours and high cloud bases will be supportive of frequent lightning, locally gusty winds.

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 eastern Sri Lanka – See Tropical Cyclones section

Philippines and parts of Indonesia

Weather

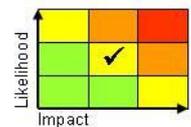
Heavy showers and thunderstorms will be more widespread and intense than usual across parts of southeast Asia through this week. There will be some drier interludes as well, but when the showers do come along they are likely to be torrential, with a risk of frequent lightning. Windward coasts and mountainous areas are likely to see the worst of the storms.

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 from Phase 4 into Phase 5, which will bring large-scale upper divergence. A train of Rossby waves to the east will also likely enhance the convection in pulses, a Kelvin wave can be seen propagating eastwards, and finally La Niña will also contribute as SSTs are well above average over this part of the world, with a large area of >28C.

Expected Impacts

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



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Southern Thailand, Wet Malaysia and Nicobar Islands**Weather**

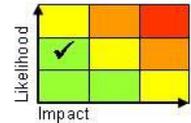
Heavy showers and thunderstorms, associated with a tropical depression, will move slowly west across the region over the next few days. 75 to 150 mm expected to widely fall with up to 350 mm possible in a few locations.

Discussion

A tropical depression will move west through the Gulf of Thailand over the next few days bringing enhanced convection to the region. Further development into a tropical cyclone is plausible, especially once the system moves into the Bay of Bengal, but is currently not expected.

Expected Impacts

Flash flooding likely.

**Australasia****Queensland, Australia****Weather**

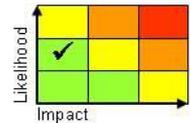
Intense heat has now become confined, mostly, to Queensland. Nevertheless, major cities such as Brisbane are likely to see temperatures into the mid-30s and in excess of 40°C is still expected across the interior, around 5 to 8°C above-average. Though heatwaves are not uncommon in this area, it is particularly early this year and is likely to produce conditions favourable for wildfires to spread as the winds increase for a time in southern Queensland.

Discussion

Persistent upper level anticyclone will continue to produce large-scale subsidence, maintaining very hot conditions persisting through the rest of the week. Cold front approaching from the southwest likely to bring an end to the heat wave early next week, or at least confined it to a smaller region of Queensland further north.

Expected Impacts

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

**Additional Information**

Northern India, Pakistan, Afghanistan and parts of eastern 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, with the US Embassy describing it as hazardous in Kabul currently.

Issued at: 020830 UTC

Meteorologist: Brent Walker / David Oliver

Global Guidance Unit

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