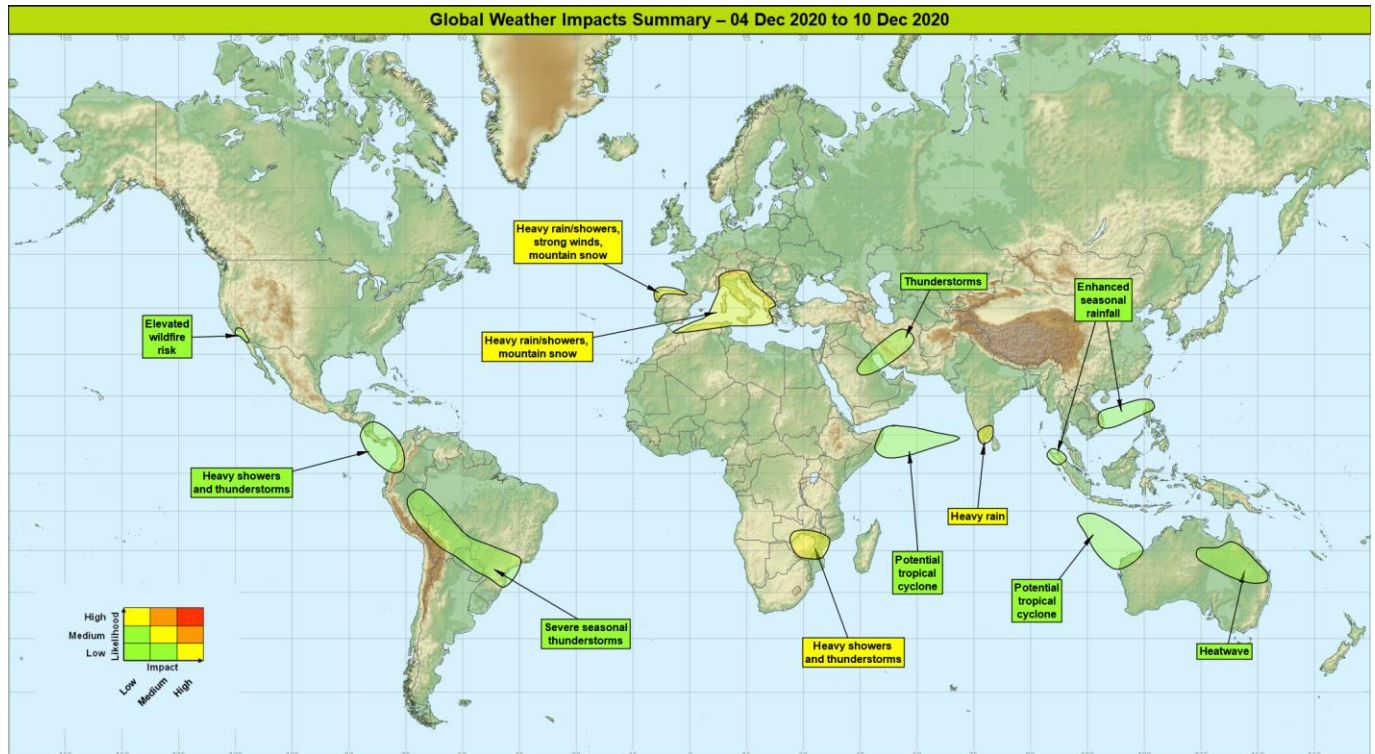


Global Weather Impacts – Friday 4th to Thursday 10th December

Issued on Friday 4th December 2020

HEADLINES

- Heavy rain associated with ex-Cyclonic Storm Burevi moving affecting the far south of India.
- Heavy rain leading to flash flooding across parts of the Mediterranean, heavy snow on mountains.
- Flash flood risk continuing across parts of southeast Africa.



DISCUSSION

Tropical Cyclones

No tropical cyclones are currently affecting land. The following areas are being monitored for tropical cyclone development that may affect land:

Eastern Indian Ocean and far NW Australia

Weather

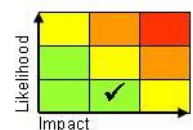
A tropical cyclone may develop in the eastern Indian Ocean during the middle part of next week. If it forms it may be steered towards the northeast coast of Australia.

Discussion

Whilst low confidence at this lead time, extended range NWP output suggests that a tropical storm may develop in this region. This is likely to be a result of development of a tropical Rossby wave, of which there are a number of candidates currently identifiable on imagery and across model products.

Expected Impacts

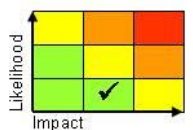
An enhanced risk of flash and riverine flooding. Hazardous winds near to any storm centre that forms.



Arabian Sea and Somalia

Weather

The remnants of Cyclonic Storm Burevi emerge into the Arabian Sea on Sunday. As they move westwards through the course of next week there is a chance that they may redevelop into a tropical cyclone. Any system that forms is likely to be moving toward Somalia by the latter half of next week.



This forecast may be amended at any time

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Discussion

As the remnants of Burevi move into the Arabian Sea they will encounter high SSTs (26-28C) and relatively weak vertical shear, these conditions conducive for development. The main deterministic models all produce a system by the middle of next week, taking it on a similar track to Gati that impacted Somali in late November.

Expected Impacts

An enhanced risk of flash and riverine flooding. Hazardous winds near to any storm centre that forms.

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

Southern Indian Ocean

There is a 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, Southern Alps, the Balkans and coasts of Morocco, Algeria and Tunisia

Weather

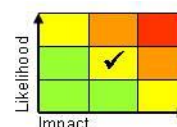
Spells of heavy rain and thunderstorms will affect this region today and over the weekend, bringing accumulations of up to 50-100mm in a few hours in places. By the beginning of next week 250-400 mm of rain could have built up in a few locations. Snow is likely across the Dinaric and Italian Alps with some large accumulations gradually building up here. Showers across Algeria and Tunisia may not be as heavy as those farther north, although given typically lower rainfall amounts here flooding impacts may occur, particularly in urban areas. Further heavy showers are possible at times next week. Gales are likely in the Adriatic Sea, although these are not unheard of at this time of year.

Discussion

The upper pattern will remain blocked as a major trough extension take place across western 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.

Expected Impacts

Significant risk of flash flooding, with fluvial impacts increasingly likely. Landslides are possible as well as avalanches, with snow causing disruption to travel on higher routes. Hazardous sea conditions at times.



Northern Iberia

Weather

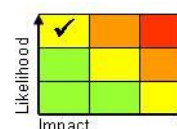
Frequent, heavy showers along with some longer spells of rain are expected to affect the region in the next few days. Rainfall will vary somewhat, but on the wetter days 50-75 mm could fall and by early next week 150-200 mm is possible in places, especially over higher ground. Precipitation will fall as snow above 800 to 1200 metres, with some significant falls likely (50 to 100 cm) over the far west of the Pyrenees. In addition to this, northerly gales or severe gales will develop by the weekend, leading to some very large waves in the Bay of Biscay which will not only cause dangerous sea conditions, but has the potential to damage sea defences.

Discussion

A cyclonic block developing over western Europe, with a northwesterly surface winds, will allow a near continuous feed of heavy showers off the Bay of Biscay. Some longer spells of rain and mountain 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. Hazardous sea conditions at times, with potential for sea defences to be damaged.



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North America

California, USA

Weather

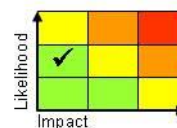
A Santa Ana wind event is expected today before easing over the weekend across southern parts of California. This brings strong (gusts 50-60 mph), warm and very dry (RH less than 10%) winds to the area with a heightened risk of uncontrolled wildfires. Winds are expected to ease over weekend.

Discussion

High pressure to the east of the Sierra Nevada bring a cross barrier MSLP gradient, encouraging strong gap and downslope winds including the Santa Ana across southern California.

Expected Impacts

Potential that any wildfires could rapidly grow and spread bringing a risk to property and life.



Central America and Caribbean

Nicaragua, Costa Rica, Panama, Colombia and Ecuador

Weather

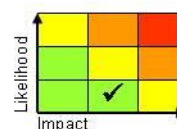
Enhanced heavy shower and thunderstorm activity will affect the region during the next few days, before easing later in the weekend. During this time 150-200 mm of rain is likely to build up across many parts of the region, with a few spots perhaps seeing as much as 400 mm by the middle of next week – 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.

Expected Impacts

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



South America

Colombia and Ecuador – See Central America and Caribbean section

Paraguay, Bolivia, northern Peru and southern and southwestern Brazil

Weather

Severe thunderstorms are expected to affect the region at times over the next week. The most intense and widespread storms are likely today and over the weekend before a gradual reduction next week. As well as intense short period rainfall (50-75 mm over a few hours), 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 storms probable.

Expected Impacts

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



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**Africa****Morocco, Algeria and Tunisia** – see *Europe section***Malawi, Mozambique Zambia and Zimbabwe****Weather**

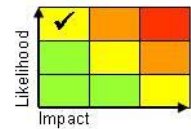
Frequent showers and thunderstorms are expected to continue in this area until around the middle of next week. During that time precipitation accumulations across many part of this region are expected to be 100-150 mm, with localised totals of 200-400mm possible across central Mozambique and parts of Zimbabwe. Despite the region entering its wettest period of the year (December to February) these totals are well above what would normally be seen in early December.

Discussion

A slow moving mid-latitude cold front lies across eastern South Africa to Madagascar. A surface high to the south of this generates 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 and moist convection across the region, with the GM highlighting parts of Mozambique for some particularly heavy rainfall, with CAPE values locally in excess of 2500 J/kg.

Expected Impacts

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

**Middle East****Northern Saudi Arabia, Southeast Iraq, Kuwait, and central Iran****Weather**

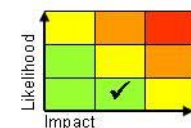
There is the potential for severe thunderstorms to develop across these areas over the coming weekend. Torrential downpours are possible with 50-75 mm falling in a few hours, hail (in elevated regions) and some strong and gusty winds (which may lift some minor dust plumes).

Discussion

An upper trough moving eastwards across northern Saudi Arabia will engage a high WBPT plumes lying across the region 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****Southern India****Weather**

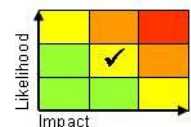
The remnants of Cyclonic Storm Burevi are currently across the far south of India, the storm itself having made landfall over southeast Tamil Nadu on Thursday before rapidly losing intensity. Heavy rainfall remains a significant hazard with 150-250mm expected to fall in a couple of days across much of the region, with perhaps as much as 300-500mm in some locations. This is the wettest part of the year for this region and these higher totals are close to the typical rainfall for the entirety of December, in an area which has been consistently wetter than normal in recent months.

Discussion

Burevi was downgraded by the India Meteorological Department on Thursday as frictional effects as it moved inland caused a rapid reduction in wind speed. However, very heavy and persistent rain will continue to affect Tamil Nadu well into the weekend as the low-level moisture footprint only slowly moves westward.

Expected Impacts

An enhanced risk of flash and riverine flooding.



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**Parts of The Philippines, Vietnam and Indonesia****Weather**

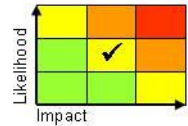
Heavy showers and thunderstorms will be more widespread and intense than usual across some parts of southeast Asia through this week. There will be some drier interludes as well, but when the showers do come along they are likely to be torrential, with a risk of frequent lightning. Windward (east-facing)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

Discussion

A combination of factors is leading to enhanced seasonal rains in this region. The MJO is moving from Phase 4 into Phase 5 (across the Maritime Continent) bringing large-scale upper divergence with a train of Rossby waves moving east to west which will enhance the convection in pulses. La Niña will also contribute as SSTs are well above average over this part of the world, with a large area of >28°C. Even though heavy rainfall 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.

Expected Impacts

Increased likelihood of flash and river flooding, particularly in areas exposed to the northeasterly flow, with potential for landslides in the higher terrain.

**Australasia****Northeast, Australia****Weather**

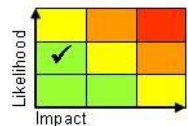
Intense heat has now become confined, mostly, to Queensland. Nevertheless, major cities such as Brisbane are likely to see temperatures into the mid-30s and in excess of 40°C is still expected across the interior, around 5 to 8°C above-average. Though heatwaves are not uncommon in this area, it is particularly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

Discussion

Persistent upper level anticyclone will continue to produce large-scale subsidence, maintaining very hot conditions into the first part of the weekend. A cold front approaching from the southwest is likely to bring an end to the heat wave by the start of next week, or at least confine 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.

Issued at: 040830 UTC**Meteorologist:** David Oliver / Mark Sidaway**Global Guidance Unit**

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