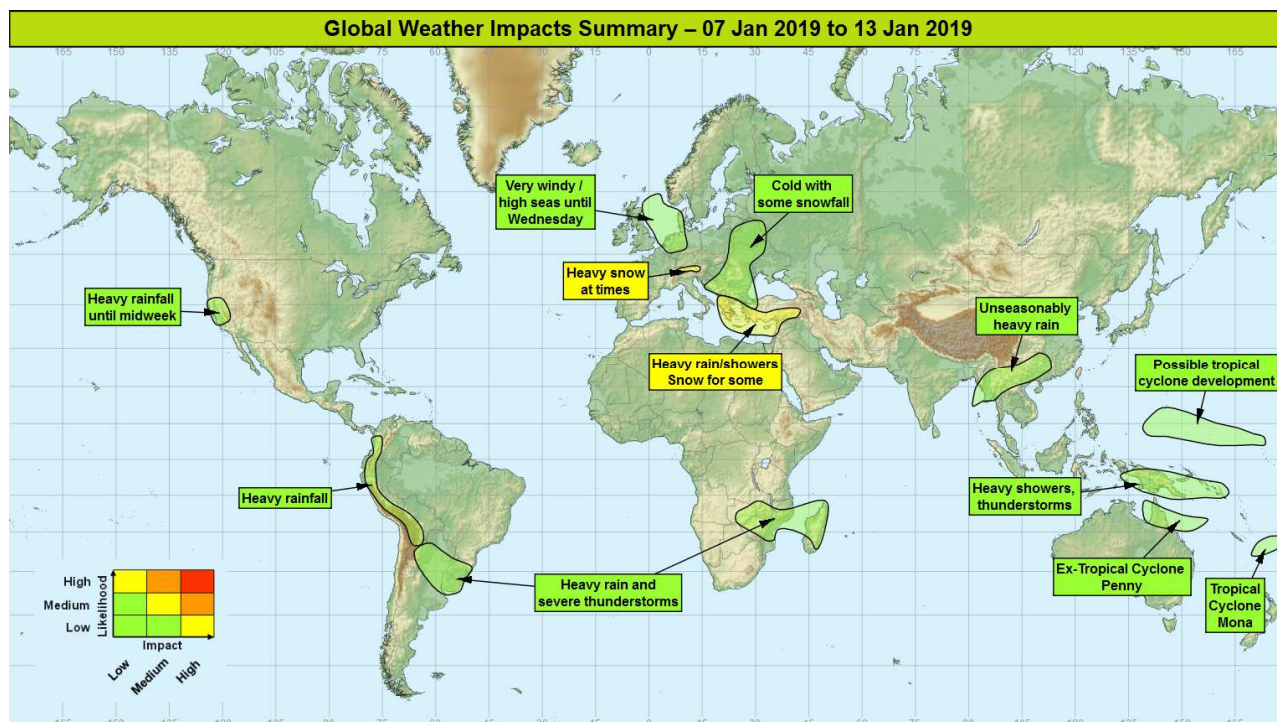


Global Weather Impacts – Monday 7th to Sunday 13th January 2019

Issued on Monday 7th January 2019

HEADLINES

- Heavy snow expected across the Alps at times in the next few days, disrupting transport and increasing avalanche threat.
- Very unsettled across the eastern Mediterranean, Greece, Turkey and the Levant with heavy showers/thunderstorms, some snow and strong winds.



DISCUSSION

Tropical Cyclones

Tropical Cyclone Mona (Fiji, Tonga)

Weather

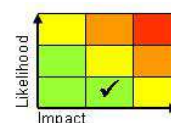
Tropical Cyclone Mona was centred approximately 520 km east-southeast of Suva, Fiji at 0300 UTC on Monday, maintaining category 1 cyclone status (sustained winds of 39-54 mph). Mona is expected to dissipate in the next 24-36 hours as it tracks south then southwest. This track keeps it well away from the main Fijian islands during the next few days. There is high confidence for this track which is likely to keep the heaviest rain away from the two main islands in Fiji, although up to 50-100 mm of rain could affect Tonga.

Discussion

There is good and increasing agreement between models and EPS output in the last few days for the track of Mona, which builds confidence in the advice given in this assessment.

Expected Impacts

Strong winds, high seas and locally torrential rainfall are likely to cause some disruption to road, sea and air travel across region; possibly affect utilities; with a heightened threat of flash flooding and landslides. However, these impacts are not particularly unusual given the time of year.



This forecast may be amended at any time

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Ex-Tropical Cyclone Penny (Northeastern Queensland, Australia)

Weather

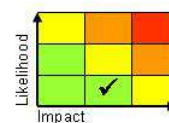
Ex-Tropical Cyclone Penny is now a tropical depression, and was located 350 miles east-northeast of Townsville, Queensland at 0000 UTC on Monday and is expected to steadily track south-westwards towards the Wooroonooran National Park by Tuesday. Thereafter it will likely become slow-moving and decay somewhat in situ. However, during this time widespread thunderstorm activity could produce event rainfall totals of up to 600 mm to parts of northeastern Queensland (around 200% of the January average rainfall). Towards the weekend, the remnants of Penny are expected to track west into the Gulf of Carpentaria and lead to heavy rainfall across parts of Cape York.

Discussion

Good model agreement for the remains of Penny to tracks towards Townsville and become slow moving. Less so for the track towards the Bay of Carpentaria.

Expected Impacts

Significant risk of flash and river flooding as the remnants of Penny make landfall on the Queensland coast, likely affecting Townsville to Cairns.



Potential Tropical Cyclones

Northwest Pacific (Micronesia)

Weather

An enhanced area of thunderstorms is expected to track west from the Marshall Islands in the next few days towards the southern Mariana Islands. There is a low risk that the convective activity within a tropical depression could become organised to form a tropical storm. This system could produce up to 250 mm of rain in a few days along the track, which is close to the average rainfall through the whole of January.

Discussion

An equatorial Rossby Wave developed a tropical low level circulation in the last few days, and this is expected to track westward track across Micronesia through the coming week.

Expected Impacts

Possibility of local flash flooding, with a much lower likelihood of wind impacts.



Europe

Greece, Cyprus, Levant, Turkey, northern Syria and northern Iraq

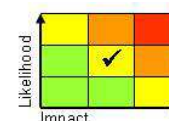
Weather

A repetitive pattern of weather systems over the Eastern Mediterranean will lead to spells of heavy showers and thunderstorms affecting the region. Western Greece, southern and western Turkey and the Levant coastline appear to be the focus for the most frequent showers, though Cyprus, Crete and the Aegean islands are also prone. Up to 50-100 mm could fall in some locations on any particular day, with up to 300 mm in some places building up over the course of the next few days. The precipitation will produce snowfall across parts Greece and more especially Turkey in the next 2 or 3 days.

Discussion

The remarkably persistent planetary scale ridge near to the meridian will continue to feed trough extensions south towards the eastern Mediterranean. This will create an environment which develops a series of waves/lows resulting in widespread showers and thunderstorms across the region. On the northern edge of the systems cold air will result in snowfall across parts of Greece and more especially Turkey in the next 2 or 3 days. Initially the main focus of the heaviest rain looks to be on the western facing slopes of the Levant, and southern facing slopes of southern Turkey. However in response to a change in the orientation of the upper trough this changes to Greece and western Turkey by midweek, with drier weather further east.

Expected Impacts



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Further heavy rainfall will lead to an enhanced threat of flash flooding and landslides in the region, more especially as this follows previous wet weather in recent weeks and months. In addition strong winds and below average temperatures are likely to affect vulnerable populations in parts of southern Turkey and the Levant region. Significant snowfall in parts of Turkey will likely disrupt transport, perhaps cause utility outages and impact vulnerable populations. Also some further snow across parts of western Greece following some disruption following some heavy snow in the area in the last day or so may lead to further impacts, mainly to travel.

Eastern Europe

Weather

Cold air is well established across a large part of Eastern Europe, bringing bitterly cold temperatures as well as some snowfall. A less cold airmass is expected to push southeast across this region through the first part of the week, bringing temperatures back to average levels for January. However, another cold airmass is expected to return from the north by the end of the week.

Discussion

The southeastward track of a depression into Eastern Europe by midweek will displace the cold airmass eastwards, allowing for a recover in temperature back to average levels. Another colder airmass may follow south as this depression clears eastwards across Ukraine later in the week.

Expected Impacts

Severe cold will stress vulnerable sections of the population across a wide area. In additional snowfall will likely lead to some localised disruption of travel.



Alps, Switzerland, Austria and southern Germany

Weather

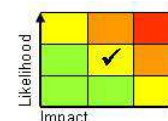
Frontal systems will move south across continental Europe in the next few days, leading to further significant snowfall across the Swiss, southern German and especially the Austrian Alps. The heaviest snowfall is signalled for Tuesday and Wednesday. During this time the higher Austrian Alps are likely to see a further 1.5 metres or so of fresh snowfall, bringing a high likelihood of avalanches.

Discussion

Frontal systems arriving from the north or northwest, bringing higher WBPT/moister air, combined with brisk northerly flow will generate significant orographically enhanced ppn, including snow to above approximately 600 metres. Weather systems are expected to move from the north in the coming few days brining further snow to the area, especially in Tuesday and Wednesday. Rising and falling freezing levels associated with the passage of systems will make the snow pack more unstable than usual, increasing the risk of avalanches.

Expected Impacts

Even in a region so well prepared for such weather, this amount of snowfall is likely to cause disruption to air and land based transport. Additional snow will also increase the threat of avalanche in the region.



North Sea and adjacent coastlines

Weather

Severe gale force winds (sustained winds of 47-54 mph) northwesterly or northerly winds will transfer across the North Sea during Monday to Wednesday, building high seas.

Discussion

A deep depression will track southeast from the Faroe Islands towards Denmark in the next 48 hours. Gradient winds of 65 knots are associated with this feature. This will lead to very rough seas, plus produce a significant surge south across increasingly shallow North Sea.

Expected Impacts

Significant disruption to marine and offshore activities is expected. Wind damage is possible across Denmark, northern Germany and the Netherlands, with these coastlines seeing the threat of storm surge flooding.



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North America

California

Weather

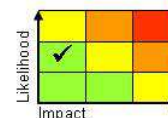
Further spells of wet weather is expected to affect California until midweek. Up to 250 mm are expected during this time, with 24 hour totals as much as 100 mm on Wednesday. Much of this falling across the Sierra Nevada where heavy snowfall is expected.

Discussion

A series of active Pacific frontal systems will run across California in the next few days.

Expected Impacts

Flash flooding is likely in more mountainous parts of California. Mudslides are a significant threat in burn scar regions of the State. Heightened avalanche threat is also likely in the Sierra Nevada.



Central America and Caribbean

Nil significant.

South America

Northern Argentina, far south of Brazil, south Paraguay, and Uruguay

Weather

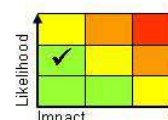
Further pulses of frequent heavy showers and severe thunderstorms are expected to affect this area through much of the coming week, producing a combination of torrential, short-period rainfall, large hail, damaging wind gusts and a tornado threat. Storms will develop during most afternoons, persisting well into the night time.

Discussion

Successive episodes of severe convection are expected as the seasonal warm plume is drawn south and engaged by shortwave upper troughs crossing South America. A combination of large CAPE and vertical wind shear will support the development of persistent MCS and discrete supercells.

Expected Impacts

Impacts will be fairly localised given the nature of showers, but flash flooding from heavy rainfall is likely. Additionally, large hail, frequent lightning and strong winds/tornadoes are likely to cause some damage to property and utilities infrastructure, as well as pose a threat to life.



Western Colombia, Ecuador, Peru and Bolivia

Weather

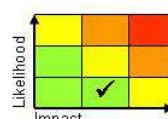
Enhanced rainfall, in association with frequent showers and thunderstorms, is expected this week across the region. There is the potential for up to 400 mm of rain across part of the Andes this week. This is likely to equate to the average January rainfall.

Discussion

The MJO will be moving through tropical South America during the coming week, which is likely to enhance convection across the Andes region.

Expected Impacts

Increased likelihood of flooding and landslides.



Africa

Mozambique, Zimbabwe, Zambia, Malawi, Madagascar

Weather

Enhanced seasonal rains are expected to continue through much of the coming week in the form of more frequent thunderstorms. These could locally bring 50-100 mm of rainfall in 24 hours, with some significant totals perhaps falling in a short period. Some locations could see 200-250 mm this week, with these values close to the January average. In addition to heavy rainfall, these will likely produce frequent lightning, strong downdraughts and possibly large hailstones too.



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Discussion

Enhanced seasonal rainfall associated with monsoon plume is forecast to continue over the next week, with significant rainfall anomalies being generated by the models. Showers will mainly be focussed by the (at times diffuse) axis of high WBPT.

Expected Impacts

The majority of the area highlighted is sparsely populated; however there are a few large densely populated cities within it. Impacts will be fairly localised given the nature of showers, but flash flooding from heavy rainfall is possible. Additionally, large hail, frequent lightning and strong winds are likely to cause some damage to property, crops and infrastructure, as well as posing a threat to life. The likelihood of a populated area being significantly affected is rather low.

Middle East

Syria, Iraq and Levant – See *Europe* section.

Asia

Myanmar, northern parts of Thailand, Laos and Vietnam, and southern China

Weather

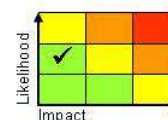
Unseasonable heavy rain is expected to transfer northeast across this region from the Bay of Bengal during the next few days. 100-200 mm of rain is expected to fall quite widely across what would be across a usually dry region at this time of year.

Discussion

The sharp upper trough responsible for earlier snowfall further west will continue to track east, engaging with the remnant warm plume of Ex-Tropical Cyclone Pabuk to produce an area of out of season very heavy rainfall.

Expected Impacts

This region deals with these sorts of rainfall totals regularly through the summer monsoon season. However, with this being the dry season there is the possibility that flash flooding and landslides could surprise populations in this region, disrupting transport and agricultural activities.

**Eastern Indonesia, Papua New Guinea, Solomon Islands****Weather**

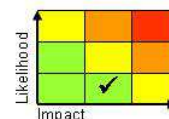
Heavy showers and thunderstorms will bring above average rainfall to the region over the next 4 or 5 days. Up to 100 mm could fall in any one location in a 24 hour period, but many places will remain dry. 350 mm could accumulate in some places by the end of this period, which is roughly a month and a half to two month's worth of rain.

Discussion

The MJO now moving into Phase 8 is taking the deepest convection gradually further E, with this region of enhanced rainfall gradually shrinking back from the west through the period. The presence of the Phase 7-8 MJO, along with equatorial Rossby Wave activity, is expected to maintain a greater than average shower frequency and intensity, with models suggesting peak totals in the region of 200-400 mm over the next 5-7 days. Higher ground will tend to be favoured for the largest rainfall totals.

Expected Impacts

Flash flooding and particularly enhanced risk of landslides are the most likely impacts, leading to damage to homes and businesses, local transport disruption, and risk to life.

**Australasia**

Fiji, Tonga and northeastern Australia – see *Tropical Cyclone* section.

Additional information

Nil.

Issued at: 070820 UTC **Meteorologist:** Tony Wardle

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