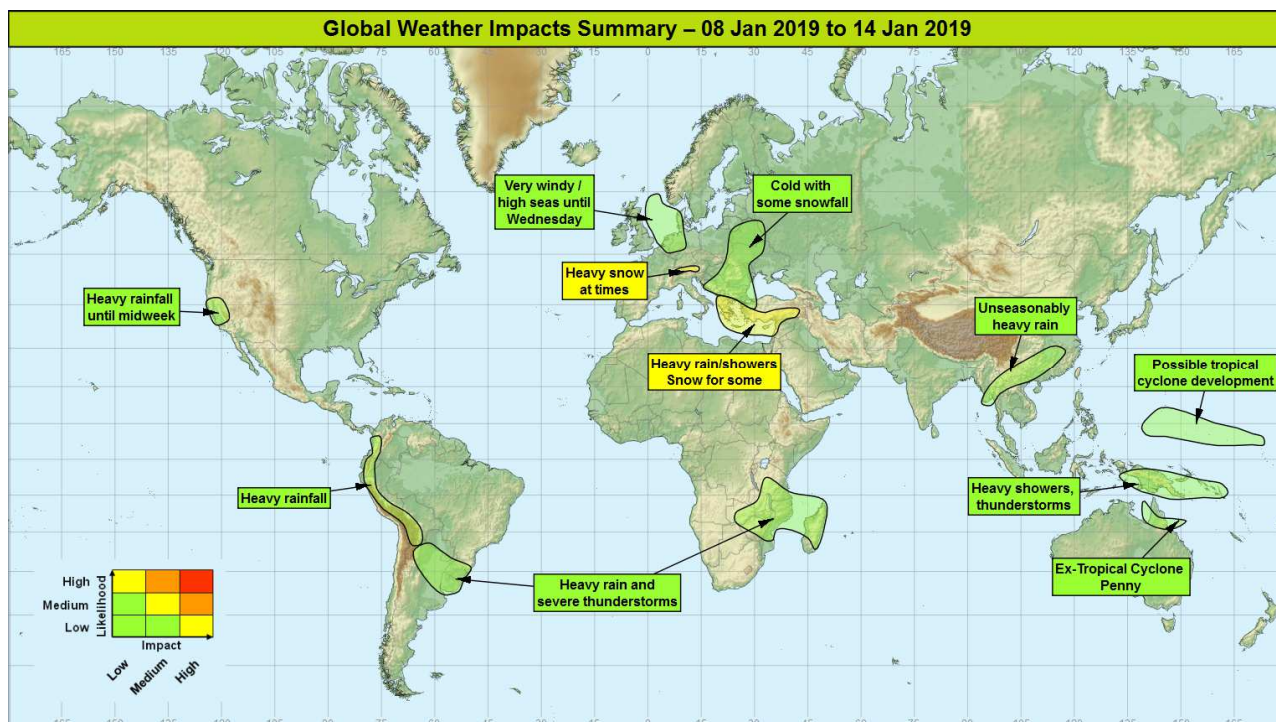


Global Weather Impacts – Tuesday 8th to Monday 14th January 2019

Issued on Tuesday 8th January 2019

HEADLINES

- Heavy snow expected to continue across the northern Alps at times in the next few days, further disrupting transport and maintaining a high risk of avalanches.
- Very unsettled across the eastern Mediterranean, Greece, Turkey and the Levant with heavy showers/thunderstorms, some snow and strong winds.



DISCUSSION

Tropical Cyclones

There are presently no named tropical systems globally, TC Mona (Fiji) having been downgraded to a remnant low within the past 24 hours and no longer expected to have any further impacts.

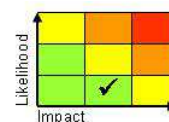
The following areas are being monitored:

Ex-Tropical Cyclone Penny (Northeastern Queensland, Australia)

Weather

Now a remnant low, Penny was located roughly 300 miles east of Townsville, Queensland at 0000 UTC on Tuesday and is expected to steadily track southwestwards towards the Queensland coast later today. There is a small chance of Penny re-forming into a weak tropical cyclone prior to landfall. 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 200-300, isolated 500 mm to parts of northeastern Queensland (almost 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



This forecast may be amended at any time

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter
Tel: +44(0)1392 884319 VPN: n6225 4319 Email: ggu@metoffice.gov.uk

© Crown copyright 2019 This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

There remains some uncertainty in the evolution of this system, although the most likely scenario is for a tropical low to impact the central coast and Whitsundays of Queensland late Tuesday UK time. The remnants of Penny are expected to cross Cape York toward the Gulf of Carpentaria by the weekend.

Expected Impacts

Significant risk of flash and river flooding as the remnants of Penny make landfall on the Queensland coast between Alva Beach and Yeppoon, the worst effects now likely to the south of main centres such as Townsville and Cairns. Lower risk of damaging winds from this system.

Northwest Pacific (Micronesia)

Weather

An enhanced area of thunderstorms is expected to track west from the Marshall Islands in the next few days through Micronesia. 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 affecting some of the tiny Micronesian Islands, with a much lower likelihood of wind-related impacts.



Europe

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

Weather

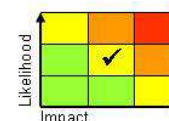
A repetitive pattern of weather systems over the eastern Mediterranean will lead to further spells of heavy showers and thunderstorms affecting the region. Western Greece, southern and western Turkey appear to be the focus for the most frequent showers through the period with Cyprus and the Levant likely to see something of an improvement later this week. 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 couple of 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 over 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

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 may lead to impacts, mainly to travel.



This forecast may be amended at any time

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: ggu@metoffice.gov.uk

© Crown copyright 2019 This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

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 air mass is expected to push southeast across this region through Tuesday and Wednesday, bringing temperatures back to average levels for January but also with some snow. However, another cold air mass 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 air mass eastwards, allowing for a recovery in temperature back to average levels. Another colder air mass 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

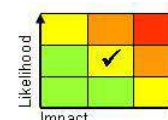
Frontal systems will move south across continental Europe in the next few days, leading to further significant snowfall across the Swiss, southern German and especially the Austrian Alps. The heaviest snowfall is signalled for Tuesday and Wednesday. During this time the higher Austrian Alps are likely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

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 bringing 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. Risk of some flood impacts at lower elevations this weekend.



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 Tuesday and Wednesday, building high seas.

Discussion

A deep depression will track southeast across Denmark into northern Poland today. 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

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.



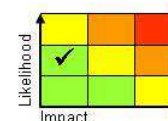
North America

California

Weather

Further wet and, in the north, windy weather is expected to affect California Tuesday and Wednesday. Locally a further 100-150 mm of rainfall is possible, some of this falling across the Sierra Nevada where heavy snowfall is expected.

Discussion



This forecast may be amended at any time

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: ggu@metoffice.gov.uk

© Crown copyright 2019 This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

The last in a series of active Pacific low pressure systems is expected to affect this region through the next 24 to 48 hours. Behind this an upper ridge should provide some respite. However the signs are that unsettled weather will return to the state by the weekend.

Expected Impacts

Flash flooding has already affected California, Washington and Oregon in recent days so further rainfall will add to the problems. Mudslides are a significant threat in burn scar regions of California in particular. 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

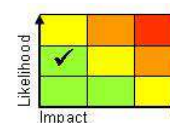
Further episodes of frequent heavy showers and severe thunderstorms are expected to affect this area through the coming week, producing a combination of torrential, short-period rainfall, large hail, damaging wind gusts and a tornado threat. Storms will develop during most afternoons, persisting well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

Discussion

Successive rounds 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 further flash flooding from heavy rainfall is likely similar to that seen in Rocha, Uruguay on Monday following 162 mm of rainfall in a few hours which equates to around 150% of the city's average January rainfall. 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

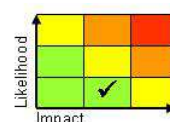
Enhanced rainfall, in association with frequent showers and thunderstorms, is expected this week across the region. There is the potential for up to 400 mm of rain across part of the Andes this week. This is likely to equate to the average January rainfall.

Discussion

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

Expected Impacts

Increased likelihood of flooding and landslides.



Africa

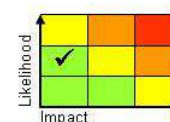
Mozambique, Zimbabwe, Zambia, Malawi, Madagascar and Tanzania

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.

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.



This forecast may be amended at any time

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: ggu@metoffice.gov.uk

© Crown copyright 2019 This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.

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 in parts of what would be across a usually dry region at this time of year.

Discussion

The sharp upper trough responsible for earlier snowfall further west is now engaging with the remnant warm plume of Ex-Tropical Cyclone Pabuk to produce an area of out of season very heavy rainfall. The heaviest rainfall will move east through the next couple of days before a more zonal upper flow brings a return of the more usual dry weather before the weekend.

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

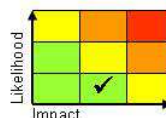
Heavy showers and thunderstorms will bring above average rainfall to the region over the next few days. Up to 100 mm could fall in any one location in a 24 hour period, but many places will remain dry. 350 mm could accumulate in some places by the end of this period, which is roughly a month and a half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

Discussion

The MJO now moving through 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 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 200-300 mm over the next 5 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**

Queensland, Australia – see *Tropical Cyclone* section.

Additional information

Nil.

Issued at: 080800 UTC **Meteorologist:** Mark Sidaway

Global Guidance Unit

This forecast may be amended at any time

Global Guidance Unit, Operations Centre, Met Office, FitzRoy Road, Exeter

Tel: +44(0)1392 884319 VPN: n6225 4319 Email: ggu@metoffice.gov.uk

© Crown copyright 2019 This information is for use by UK government only. It does not replace the advice and guidance provided by the official meteorological service for this region. Where there is a requirement to share this information with non-UK government agencies, please contact the Met Office to discuss.