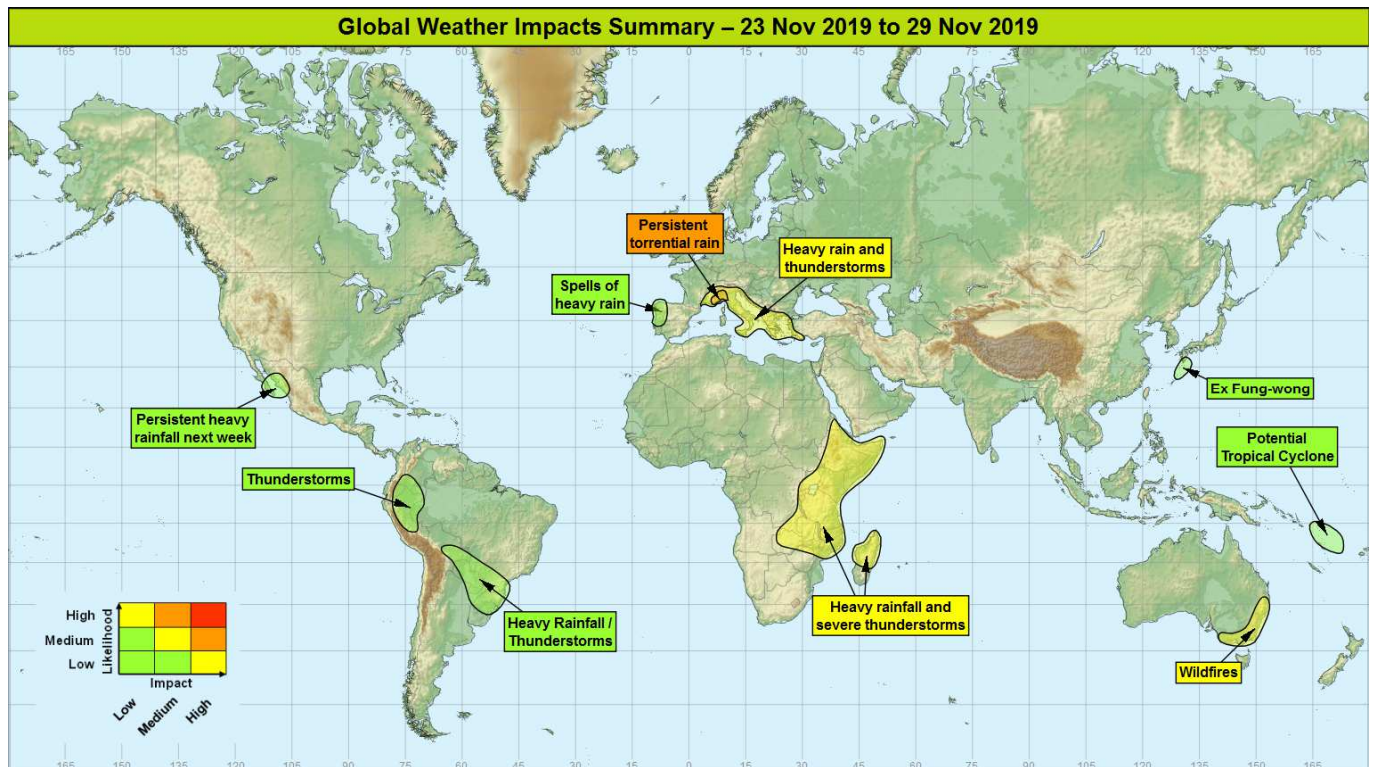


Global Weather Impacts – Saturday 23rd to Friday 29th November 2019

Issued on Saturday 23rd November 2019

HEADLINES

- Significant flooding expected for parts of south-east France and north-west Italy today.
- Remaining unsettled more widely across southern Europe over the next few days.
- Large parts of Eastern Africa seeing above average rainfall over the next week.
- Wildfires continue in south-east Australia, and conditions remain conducive to further fires.



DISCUSSION

Tropical Cyclones

Ex-Fung-wong - Japan

Weather

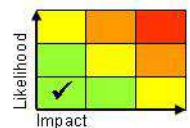
Fung-wong has now degenerated into a tropical depression, however the remnants are still likely to produce another 25-50mm across northern islands of the Ryukyu Arc and perhaps the far south of Japan today. The threat of damaging winds has now ended.

Discussion

Fung-wong has undergone extra-tropical transition and has quickly been swallowed up by an approaching trough and cold front – the system is evidently highly sheared now on satellite imagery. Models signal a general 25-50mm today, although convective and rather hit and miss given the small scale nature of the island chain. This follows around 100-125mm of rain on some of the islands further south over the past couple of days.

Expected Impacts

Low risk of significant flash flooding, perhaps most likely on the island of Naze which has already seen large rainfall totals over the previous 36 hours.



The following region is being monitored for possible impactful tropical cyclone development.

This forecast may be amended at any time

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South-western Pacific

Weather

The development of a tropical cyclone looks likely over the weekend, to the east of the Solomon Islands, and may go on to impact Vanuatu or perhaps Fiji next week, bringing an increased risk of strong winds and heavy rain.

Discussion

Models have consistently signalled tropical cyclogenesis from the mass of intense convection on the inner edge of the South Pacific Convergence Zone – this likely the result of enhancement due to the passage of an Equatorial Rossby Wave. Whilst the development and track is quite uncertain at this time, ensemble output highlights Vanuatu as the most likely area to experience an impact from this system. EC continues to produce quite an intense system, with other models less developed.

Expected Impacts

Increased risk of flash flooding, lower (but still increased) risk of damaging winds.



Europe

South-east France, North-west Italy

Weather

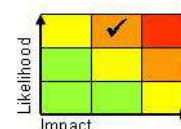
A spell of torrential rain, accompanied by strong winds and thunderstorms (predominantly coasts), is expected to affect this region today. The heaviest, most persistent rainfall is expected to fall on south facing hills and mountains, where as much as 200mm could fall today (Saturday). Major centres such as Genoa, Turin, Milan, Nice and Marseille are at risk of significant flooding. Heavy snowfall is likely above 1500m, and likely to settle above 1800m – some places seeing over 1 metre of fresh snow. This system will slowly clear eastwards through Sunday with a steady improvement in conditions.

Discussion

A major trough extension taking place today across Iberia will induce cyclogenesis in the Gulf of Genoa, generating a strong warm conveyor flow which will also be unstable to SST's. This will bring torrential, and persistent rainfall to this region, with areas downstream of the Alps and extension of the Apennines into Liguria most likely to see significant rainfall. Lightning and strong winds will also be an additional hazard, most likely in exposed coastal regions. As the trough disrupts, the resulting cut-off will swing away south and eastwards, allowing conditions to improve through Sunday.

Expected Impacts

Significant flash flooding in areas downstream of high ground, with a lower risk of impacts from lightning and strong winds near the Mediterranean coastline.

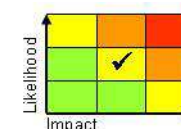


Much of southern and south-east Europe

Weather

A spell of heavy rain and strong winds, along with increasing frequency of thunderstorms (particularly coastal areas and more generally Greece/western Turkey) is expected to move steadily east/south-east through this region over the next few days, clearing early next week. Parts of western and southern Italy, Balkans, Greece and Turkey could see as much as 150mm of rain in 24-36 hours, mainly associated with frequent or severe thunderstorms. These will be accompanied by strong gusts of wind, and a localised threat of hail and tornadoes. Heavy snow is an increasing risk above 2000m.

Discussion



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The major trough extension described above is expected bring a strong S'y flow through the Rhone valley, perhaps leading to frequent thunderstorms here at first. As the pattern continues to extend and eventually cut off, frequent thunderstorms are expected to develop over the Mediterranean and Adriatic, impinging on Italy and the Balkans due to the flow resulting from the Gulf of Genoa cyclogenesis, whilst an amalgamation of the frontal plume with a plume drawn N from Africa is likely to lead to MCS development which will propagate east across S Italy and into Greece/Turkey in tandem with the resulting cut-off vortex which will elongate eastwards on the north side of the sub-tropical jet. Precipitation will also be modulated by orography, and with WBFL generally above 2300m the main snow risk will be confined to elevations above 2000m.

Expected Impacts

Increased likelihood of flash flooding causing damage to property and infrastructure. Frequent lightning strikes, large hail and tornadoes/waterspouts could also produce localised significant damage.

Portugal, north-west Spain

Weather

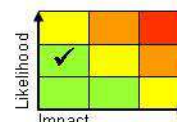
Following the clearance of yesterday's rainfall, further bands of rain are expected to push through this region from the Atlantic on Sunday and Tuesday, each of which could deliver 40-60mm in a few hours, and could be accompanied by coastal gales.

Discussion

A continuation of south shifted mobility and storm track will lead to a succession of Atlantic developments affecting this region and bringing above average rainfall for the time of year. Rainfall totals may be sufficient to cause some localised issues, with antecedent conditions also wetter than normal.

Expected Impacts

Increased risk of localised flash flooding, and minor coastal impacts from strong winds.



North America

North-east United States, far south-east of Canada

Weather

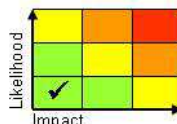
A strong area of low pressure, bringing strong winds and heavy rain, with snow on its north-western flank, is expected to run north-east bringing a risk of significant snow and freezing rain to states New York north-eastwards on Sunday. There is potential for a further, larger and more potent storm which could bring heavy snow and strong winds/gales to a much wider area during the middle of next week.

Discussion

There is good model agreement for an area of low pressure to run up the Eastern Seaboard on Sunday, with snow developing on its north-western flank – some areas could see 20-25cm along with strong winds bringing potential for local blizzard conditions. Much less good agreement for the second development, but EC and GFS both indicate potential for a larger, more potent development which has the potential to bring more widespread snow and a significant cold plunge following.

Expected Impacts

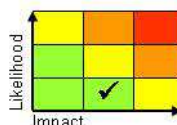
Where the heavy snow falls, temporary travel disruption (particularly roads/aviation), along with power cuts and loss of other utilities.



Central America and Caribbean

North Mexico

Weather



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A spell of heavy and persistent rain looks likely to develop during the middle of next week, many areas seeing 100mm of rain in the space of a couple of days, with potential for around 500mm of rain over some prone, mainly high ground areas. Major urban areas such as Culiacan are at greatest risk of significant impacts.

Discussion

A marked, low latitude trough extension this weekend over the Eastern Pacific will induce the northward extrusion of a tropical plume towards Baja California Sur. Early next week, a major pattern amplification over the Pacific looks likely to sweep up both the cut-off vortex, and low-level plume generating heavy and persistent rainfall over this region – the extending trough backing the flow and allowing this to become slow moving for a couple of days. Global models highlight some spots of 500mm of rain over higher ground in 48 hours.

Expected Impacts

Should this system develop as forecast, flash flooding is highly likely, with an increased risk of landslides in steeper terrain too.

South America

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

Weather

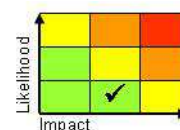
Further heavy showers are expected in this region over the next couple of days, with activity steadily declining back to normal levels through next week. 50-100mm is likely to fall in a few places on each day, whilst this region has generally seen much wetter than normal conditions over the past 7 days.

Discussion

A combination of enhanced convection signalled by the models, and wetter than normal antecedent conditions, have helped to identify this region as the most likely to see impacts. Overall, activity is declining, with ensemble output indicating a relatively dry spell developing in this region from early next week.

Expected Impacts

Some further flash and river flooding with landslides possible in mountainous areas. This follows on from a recent wet period across the region with significant river flooding reported over the last couple of weeks.



Bolivia, Paraguay, Northern Argentina, Southern Brazil

Weather

Heavy showers and embedded thunderstorms are likely to develop early next week. 50 to 75 mm of rainfall in a few hours is possible with a few places perhaps seeing 150-200 mm over a period of a couple of days. Frequent lightning, large hail and a risk of tornadoes will also be present.

Discussion

Lee cyclogenesis to the east of the Andes over the weekend will draw a plume of tropical air anomalously far south, which will then be engaged by an upper trough leading to the development of heavy rain and deep embedded convection. This is likely to be a relatively short lived burst of activity however with a cold front expected to sweep north-eastwards by midweek.

Expected Impacts

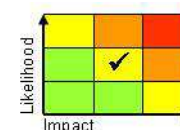
Risk of flash flooding.



Africa

Parts of eastern Africa, including Madagascar

Weather



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Showers and thunderstorms will be heavier than normal through the next week. The heaviest rainfall is expected to be across the Kenyan Highlands, western Tanzania, Rwanda, Burundi and eastern DRC. 200-300 mm of rain could accumulate through the next week (over a month's worth of rain). Elsewhere, rainfall accumulations will be lower, but still above average. Conditions are likely to improve across the far north of this region (Kenya, Somalia) early next week.

Discussion

A combination of the MJO moving across Africa and the positive IOD phase continuing, will promote above-average rainfall across this region in the coming week. Across the south of the region (including Madagascar), a warm plume will be the focus for further deep convection. Serious multi-year droughts have affected parts of this region, and to a degree this rain will be welcome; however the short duration over which large amounts of precipitation are likely to accumulate may well cause some serious localised issues, with wetter than average conditions already experienced in parts of Tanzania and Madagascar in particular.

Expected Impacts

An increased risk of flash flooding and landslides in the region, with further river flooding possible in Somalia. This is also true of regions in the south of the area which have been experiencing drought conditions. Frequent lightning is also likely, along with large hail and strong wind gusts.

Asia

Japan – See *Tropical Cyclones* section.

Australasia

Parts of eastern and south-eastern Australia

Weather

Numerous significant wildfires continue across parts of New South Wales, SE Queensland, Victoria and into SE South Australia as hot and generally dry conditions continue. Temperatures are however coming down across Victoria with some showers expected here early next week, whilst further east and north temperatures remain high but with an increasing threat of thunderstorms which could initially ignite further fires but the chances of meaningful rain helping to put fires out looks likely to increase, albeit temporarily through this weekend.

Discussion

This early season wildfire event, reminiscent of conditions more typical in mid austral summer, has already claimed a number of lives and burned over 2.5 million acres of land. Much of these areas are sparsely populated, but more than 600 homes have been destroyed in the New South Wales alone. Multiple monthly temperature records have been broken, with maxima into the low to mid 40's of Celsius. A cold front has pushed through much of Victoria and into New South Wales, allowing temperatures to fall, and introducing a cooler, eventually more showery airmass and further fronts follow on a more mobile stream. The warm plume ahead of the initial cold front looks likely to become fairly stationary over NSW and Queensland, with daily round of thunderstorms developing. Profiles indicate an increasingly moist BL through the weekend with more meaningful rain likely to reach the ground, but more than once through the period higher-based TS are indicated which could lead to further wildfire ignition too.

Expected Impacts

Fires will bring a danger to life and environmental damage across a wide area. Smoke will bring dangerously poor air quality to densely populated urban centres, such as Brisbane, Sydney and Melbourne.

Additional Information

Nil.



Issued at: 230600 UTC **Meteorologists:** D J Harris / Mark Sidaway

Global Guidance Unit

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