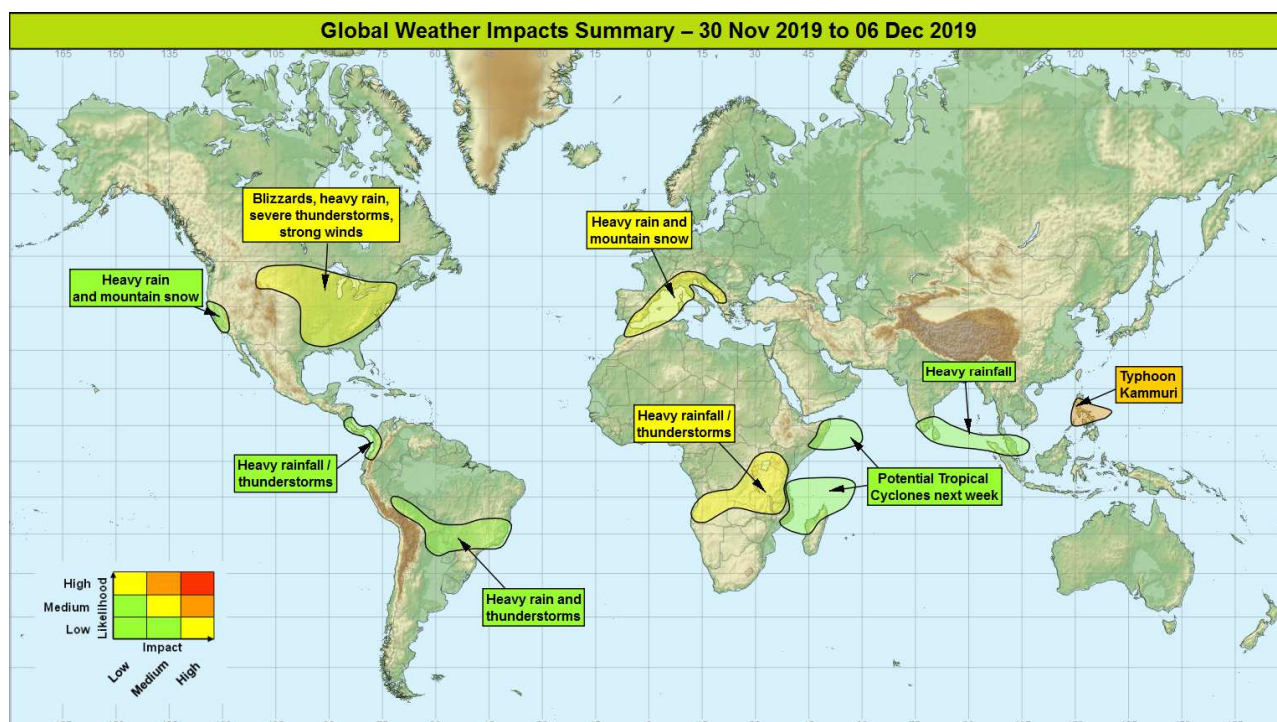


Global Weather Impacts – Saturday 30th November to Friday 6th December 2019

Issued on Saturday 30th November 2019

HEADLINES

- Typhoon Kammuri expected to reach the Philippines early next week as a very strong typhoon.
- Wetter than normal conditions over Eastern/Central Africa, perhaps enhanced by tropical cyclone development next week.
- Further severe weather affecting the northern / eastern USA this weekend.



DISCUSSION

Tropical Cyclones

Typhoon Kammuri

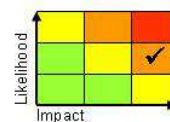
Weather

Typhoon Kammuri is now around 1000 miles east of Manila, Philippines with sustained winds of just over 90 mph. Kammuri is expected to move west over the weekend to reach the Philippines (most likely southern Luzon or the Visayas) late Monday UK time. Kammuri is likely to be a very strong typhoon by this time, bringing destructive winds (over 100mph) and a swathe of heavy rain (300-500mm).

Discussion

Moderate wind shear and SST's of 29°C will be conducive to slow but steady strengthening of Kammuri. Now steered by the subtropical ridge, the system is expected to make steady westward progress for the next few days. Deterministic and ensemble output all points towards a landfall over Central or Northern Philippines early next week. Most output does allow Kammuri to cross the Philippines quite quickly, limiting the duration of flooding rains, but 300 to locally 500mm in the space of around 36 hours, with destructive winds also probable.

Expected Impacts



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.

Flash flooding and damaging, locally destructive winds likely in some parts of Central/Northern Philippines. Coastal impacts likely due to a large surge. Disruption of island-island marine transport.

The following regions are being monitored for possible impactful tropical cyclone development.

Western Indian Ocean

Weather

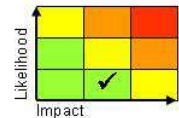
From this weekend and into next week there is the potential for tropical storms to form in the western Indian Ocean both north and south of the Equator. The more likely area to see development is within an area of convection presently to the north-east of Madagascar. Both the actual formation of any tropical systems, and the subsequent track of any that do develop, remains low confidence. Irrespective, enhanced showers in these regions are likely to help enhance rainfall across parts of east Africa and possibly north Madagascar.

Discussion

Weak wind shear and SST's some 1 to 1.5°C above normal (a result of the ongoing positive Indian Ocean Dipole event) provide the background for an increased likelihood of tropical storms. Although the NWP signal is mixed, a mass of enhanced convection is present over the western Indian Ocean, and there are indications from both deterministic and ensemble output of the potential for tropical cyclogenesis in either (or both) hemisphere over the coming days. Steering flow is weak, and consequently there is very large model/ensemble spread with respect to intensity/track of any development thus far. The highlighted areas on the map correspond to the areas most under threat from any system that does form.

Expected Impacts

Potential for heavy rainfall over parts of Somalia, Madagascar, Comoros, Tanzania and Mozambique, but very low confidence at present. Strong winds also a threat.



Europe

Parts of Southern Europe

Weather

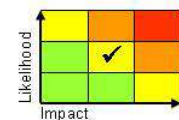
A larger scale weather system arriving across Iberia/W France today will slide south-east, bringing a spell of heavy rain, with a particular focus on parts of SE France, N Italy, and the Balkans where 100-150mm is possible in 24-36 hours on Sunday into early next week. Snow is likely to fairly low elevations on the Northern Alps and increasingly so across the Balkans (perhaps down to 300-500m Alps, 700-100m Balkans) as the system moves east. Mid-week, the focus will likely shift to the potential for heavy, thundery downpours affecting other parts of the Mediterranean coastline (including Morocco and Algeria), accompanied by strong winds.

Discussion

Mobility remains well south-shifted, as it has done for some time now, continuing to drive destabilising frontal systems across southern Europe. An upper vortex slides SE across Iberia this weekend and the associated frontal system becomes well forced and orographically modulated over SE France and N Italy, producing large amounts of precipitation here. Further east the forcing could still produce large amounts of precipitation over high ground across the Balkans. A further cut-off vortex is likely to generate areas of deep instability and slow moving/training thunderstorms, although the location where this becomes anchored shows large variations in the models so confidence in the location of heavier rain during the middle of next week becomes lower.

Expected Impacts

Flash-flooding, landslides and increased avalanche risk. Parts of SE France and NW Italy (eg. Liguria) particularly vulnerable given a similar (although more extreme) event last week. Travel disruption is possible into early next week as snow affects more populated areas.



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.

North America

South-west USA, North-west Mexico

Weather

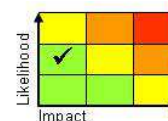
Further heavy rain/mountain snow, accompanied by strong winds, looks likely to arrive from the Pacific on Sunday, and become slow moving over California and the Sierra Nevada. 100-200mm of rain is likely over the more populated, lower ground areas, and 2-3m of snow is expected in some parts of the Sierra Nevada.

Discussion

A low latitude, complex and disrupting upper trough is then expected to engage a warm plume to produce an active precipitation bearing system this weekend. As the trough undergoes multiple disruptions and mobility stalls, warm conveyor flow will be set up for a time across California, bringing a more persistent and at times heavy spell of precipitation before finally weakening early next week.

Expected Impacts

The most significant impacts are likely across California, where heavy rainfall is likely to produce some flooding of densely populated west coast cities, whilst heavy snowfall at higher elevations brings blizzard conditions, increased avalanche risk, and major disruption to mountain passes. Strong winds could also produce some localised disruption to utilities and transport for a time early Sunday before this aspect lessens.



Northern and Eastern USA

Weather

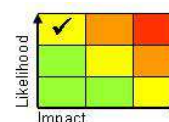
Heavy rainfall and strong winds are likely to affect parts of the north-eastern USA later this weekend and early next week. On the northern and back edge of the system blizzard conditions are likely across the Northern Plains. Further south and east severe thunderstorms are possible, producing torrential downpours, strong winds, large hail and the odd tornado.

Discussion

A mature but potent depression will continue east across the USA this weekend. A period of heavy snow and blizzard conditions is likely across the Northern Plains on Saturday and Sunday with over a meter of snow possible in places. Ahead of the cold front forecast profiles support severe convection across parts of the south. The system should be weakening by the time it reaches the east coast.

Expected Impacts

Significant disruption to road, rail and air travel is likely across the Thanksgiving Holiday weekend. Some disruption to power supplies is possible.



Central America and Caribbean

Costa Rica & Panama – see South America section

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.

South America

Western Colombia, northern Ecuador, Costa Rica and Panama

Weather

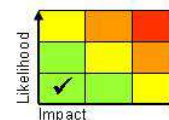
Further heavy showers are expected in this region over the next 7 days, although the most intense rainfall is likely through the next few days. 50-100 mm is likely to fall in a few places in a 24 hour period, with the potential for over 300 mm in a few spots over the week. This region has been slightly wetter than usual over the past month, and rainfall amounts over the coming week represent around a further month's worth of rainfall for the wettest spots.

Discussion

A combination of continued enhanced convection, and wetter than normal antecedent conditions, has helped to identify this region as the most likely to see impacts. Models signal 100-300mm of rain, mainly triggered by upslope motion on the western slopes of the Andes. Increased convergence over southern Central America will help to generate enhanced showers/thunderstorms today, before this weakens going into the weekend.

Expected Impacts

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, far north Argentina, southern Peru and southern Brazil

Weather

Heavy showers and thunderstorms are expected at times through the next week in this region. 40-80 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. Additional hazards include frequent lightning strikes, large hail and a risk of tornadoes

Discussion

Two South American Convergence Zone events are likely to affect this region through the next week, with the first one easing today across south-eastern Brazil, before the second event develops a little further south over Paraguay from later in the weekend. Forecast profiles (large CAPE and decent amounts of vertical wind shear) show the potential for severe thunderstorms as the sub-tropical jet migrates a little further north during these events and interacts with the warm plume across the region.

Expected Impacts

Increased likelihood of flash flooding causing a danger to life, damage to property and infrastructure. Frequent lightning strikes and large hail are also possible, with a lower risk that tornadoes could also produce localised significant damage.



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.

Africa**Central Africa****Weather**

Showers and thunderstorms associated with the seasonal rains are forecast to continue to be heavier than normal over the next week, with 100-200mm, perhaps locally as much as 300mm of rain falling in frequent heavy, thundery, afternoon downpours. Much of this area has seen 200-400% of the usual rainfall over the past week, although the rainfall expected over Angola may be more welcome with much drier than average conditions here in recent times. In addition, next week there is the threat of enhanced rainfall from tropical storms, mainly a threat to Somalia, and eastern parts of Tanzania and Mozambique.

Discussion

Enhanced seasonal rainfall in association with the strong positive Indian Ocean Dipole event which, although declining, is still in full swing. Large tracts of eastern Africa have seen well above average rainfall over the past 3-6 months, and even parts of Angola, although recently dry, have seen above normal rainfall in the past month. The combination of all these factors dramatically increases the likelihood of further flash and river flooding – potential tropical cyclones (see tropical cyclone section) adds further to this risk for select locations.

Expected Impacts

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

Northern Morocco and Algeria – see southern Europe

Middle East

Nil.

Asia

Philippines – see *Tropical Cyclones* section

Malaysia, northern Sumatra, Sri Lanka and southern India**Weather**

Even though it is the 'rainy season' in this region heavy rainfall is expected through the next week, with some places seeing up to 300 mm through the next week (equivalent of 50-75% of the average monthly rainfall at this time of year).

Discussion

With the MJO in the process of entering the Indian Ocean the ITCZ in the northern Indian Ocean is expected to become more active through the next week, resulting in more widespread intense convection.

Expected Impacts

Increased threat of flash flooding and landslides.

Australasia

Nil.

Additional Information

Eastern Australia – Wildfire: Numerous bushfires continue in parts of eastern New South Wales, Victoria and Australian Capital Territory. A cold front will bring some rainfall and introduce cooler air across the region through Saturday, which will likely lower the wildfire threat and aid the containment of existing wildfires going into next week.

Issued at: 300330 UTC **Meteorologists:** Mark Sidaway / D J Harris

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.

