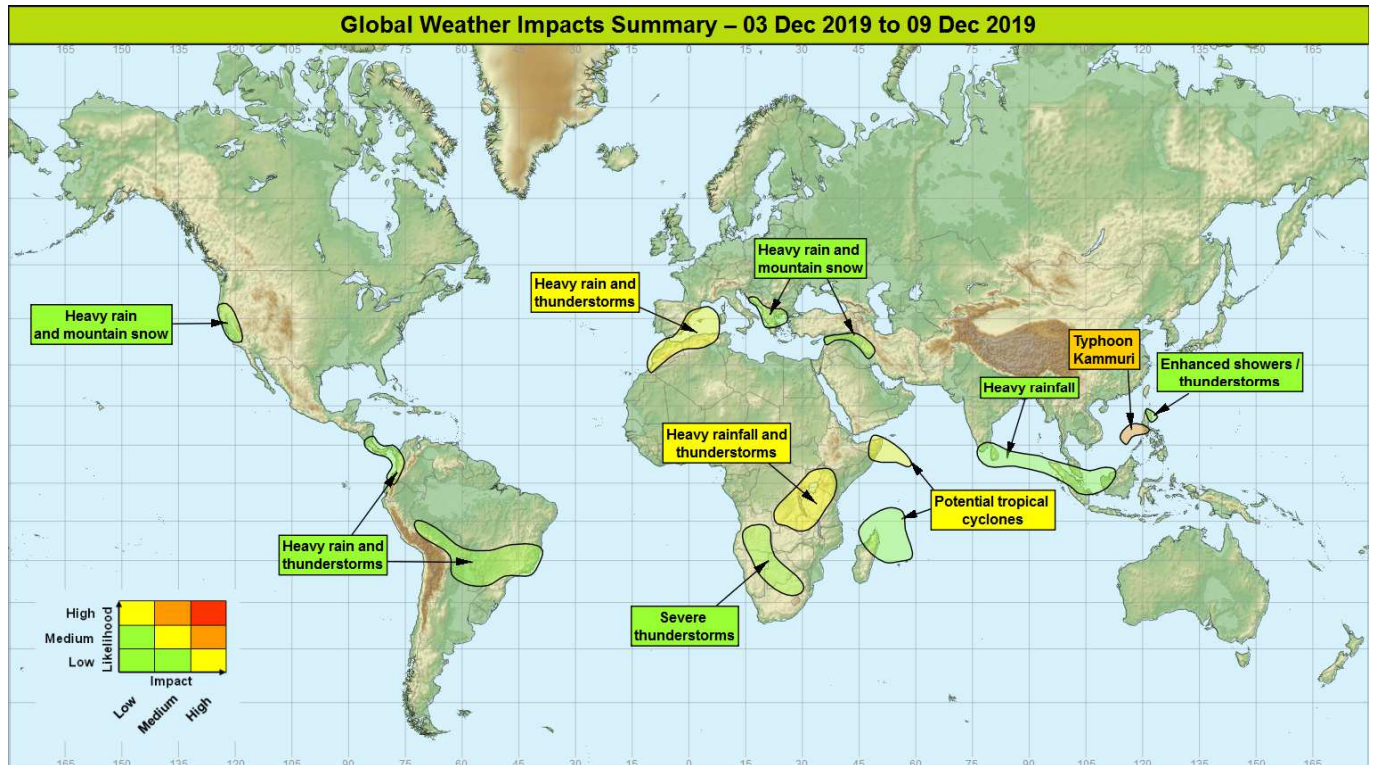


Global Weather Impacts – Tuesday 3rd to Monday 9th December 2019

Issued on Tuesday 3rd December 2019

HEADLINES

- Typhoon Kammuri continuing to track across the Philippines today bringing destructive winds and torrential rain.
- Heavy rain and mountain snow across parts of southern Europe, northwest Africa and the Middle East.
- Continuing wetter than normal across parts of central and eastern Africa, with potential tropical storms affecting the east of the continent.



DISCUSSION

Tropical Cyclones

Typhoon Kammuri

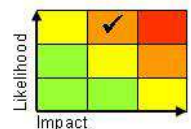
Weather

Typhoon Kammuri was located over the island of Mindoro, around 100 miles south of Manila at 0600UTC with estimated sustained 10 minute mean winds of 80 mph. Further heavy rain and destructive winds will continue to affect western parts of Luzon and Mindoro through Tuesday. Kammuri should clear out into the South China Sea by Tuesday evening (UK time). By then some 200-300mm of rain is expected, locally more over higher ground.

Discussion

Kammuri has been weakened by its passage across the central Philippines, although warm inland seas and low shear have helped maintain the system as a Typhoon. Model track guidance is in good agreement with the storm expected to continue west into the South China Sea through Tuesday. It is then signalled to curve to the S as mid-latitude trough approaches where interaction with a cold surge will lead to a rapid weakening and eventual dissipation of the system.

Expected Impacts



This forecast may be amended at any time

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Flash flooding and damaging, locally destructive winds possible in some parts of Luzon and Mindoro through Tuesday. Winds close to the centre of the typhoon will be strong enough to cause major damage to well-built structures. Widespread interruptions to power supplies are likely, possibly lasting for several days.

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

Western Indian Ocean

Weather

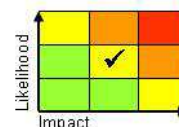
There is the potential for tropical storms to form in the western Indian Ocean both north and south of the Equator, in the next few days. The northern system looks to have become much better organised through the past 24 hours, and the Indian Meteorological Department have initiated advisories with a deep depression located around 500 miles east of the central Somali coast, mean winds are around 30-35 mph. This system is likely to track slowly west toward the Somali coast, with landfall likely as a modest Cyclonic Storm (equivalent to a Tropical Storm) toward the end of this week, Torrential rainfall (100-200, locally up to 300 mm) and strong winds are likely across parts of north-eastern Somalia.

Discussion

Weak wind shear and SSTs some 1 to 1.5°C above normal (a result of the ongoing positive Indian Ocean Dipole event) have allowed convection to become better organised, with evidence from imagery of a low level circulation. Conditions are likely to remain favourable for further modest strengthening through the next 24 hours with models in good agreement for a steady northward and then westward progression. This will take the storm toward the coast of north-eastern Somalia, where it will encounter increased shear which should prevent further strengthening before a likely landfall toward the end of the week.

Expected Impacts

The main impacts are likely to be from flash flooding with lesser impacts from strong winds.



Western Indian Ocean

Weather

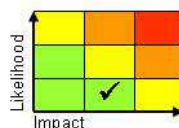
The region of enhanced convection to the north-east of Madagascar remains very disorganised. There is still a signal from models for the development of a tropical storm in this region which then looks likely to track toward northern Madagascar next weekend where it could potentially bring torrential rainfall and damaging winds.

Discussion

Although developments here have been slow, the same factors which allowed development in the northern hemisphere exist. There remains good agreement between models for a system to form, although there is a large spread in forecast tracks with some solutions suggesting it could end up in the Mozambique Channel, while others prefer a track toward La Reunion and Mauritius.

Expected Impacts

Potential for torrential rainfall to bring flash floods to northern parts of Madagascar, along with damaging winds and an enhanced landslide risk. There is a smaller risk of similar impacts to La Reunion and Mauritius.



Europe

Eastern Spain, The Balearics, Morocco and northern Algeria

Weather

Showers and thunderstorms will become more widespread and intense through the rest of this week, before conditions turn somewhat drier over the weekend. Severe thunderstorms are possible in places giving torrential downpours, large hail and frequent lightning strikes. Rainfall accumulations will be highly variable across the region with some locations having very little and others as much 150-200 mm. Strong winds are also expected across eastern Spain.

Discussion



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A succession of trough extensions, then disruptions, already underway across NW Africa, are expected to lead to cyclogenesis across Morocco and Algeria during the next few days. As the resultant surface low drifts NE into the Mediterranean, it is likely to bring gales and spells of heavy, locally thundery rain. Precipitation will be strong orographically modulated, with eastern parts of Iberia particularly prone.

Expected Impacts

Flash flooding is likely with a possibility of landslides.

Southeast Europe

Weather

Heavy rain and snow will fall quite widely over the next couple of days. The heaviest rainfall will be along and just inland of the Adriatic, where 75-150 mm of rain is expected. Further inland amounts will be much smaller, but much of the precipitation will fall as snow. Whilst not uncommon in this region, it will be first major snowfall of the season with around 30-50 cm falling quite widely. Conditions becoming mostly dry by the end of the week.

Discussion

An active cold front will move south across the region bringing a spell of heavy rain and snow over the next few days. High SSTs in the Adriatic will allow convection to develop within the frontal zone, with embedded thunderstorms possible. Continued cold advection will allow freezing levels to fall, with snow possible to low-levels inland, especially Albania, Macedonia and Bulgaria.

Expected Impacts

Flash flooding expected, especially in coastal regions. Travel disruption is likely as snow affects more populated areas.



North America

South-west USA

Weather

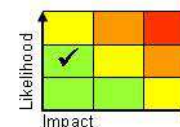
Spells of heavy rain and mountain snow will affect, primarily California, until late in the week. A brief drier spell is then expected before more rain and snow arrives for the weekend. 100-200mm of rain is likely over the more populated, lower ground areas, and 2-3 metres of snow is expected in some parts of the Sierra Nevada.

Discussion

A low latitude, complex and disrupting upper trough has engaged a warm plume to produce an active low pressure, leading to strong onshore flow, lift and heavy precipitation. As the trough undergoes multiple disruptions and mobility stalls, warm conveyor flow will be set up for a time across California, bringing spells of persistent and at times heavy rain, with copious amounts of snow over the Sierras. A transient ridge follows this system on Thursday/Friday, ahead of another active Pacific frontal system running into the region over the weekend.

Expected Impacts

Flash and river flooding, as well as disruption to travel and utilities in the area. Blizzards and enhanced avalanche risk in the Sierras.



Central America and Caribbean

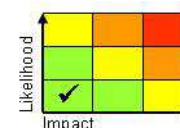
Costa Rica & Panama – see South America section

South America

Western Colombia, northern Ecuador, Costa Rica and Panama

Weather

Further heavy showers are expected in this region over the next 7 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.



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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 Andes. Furthermore, what appears to be Central American Gyre is signalled to set up in the next day or two, enhancing precipitation further.

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

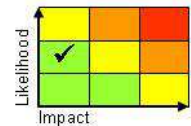
Heavy showers and thunderstorms are expected during Wednesday and Thursday. 50-100 mm of rainfall in a few hours is possible with a few places perhaps seeing 150-250 mm over a period of a couple of days. Additional hazards include frequent lightning strikes, large hail and a risk of tornadoes

Discussion

An upper trough relaxing NE will reactivate the SACZ through midweek. This will manifest in a marked increase in shower and thunderstorm activity, with some torrential downpours and severe convection, as well as a few tornadoes, likely.

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.



Africa

Parts of central and eastern Africa

Weather

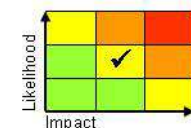
Showers and thunderstorms associated with the seasonal rains are expected to continue to be heavier than normal over the next week, with 100-200mm, perhaps locally as much as 300mm of rain falling in frequent heavy, thundery, afternoon downpours. Much of this area has seen 200-400% of the usual rainfall over the past week.

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. The combination of all these factors dramatically increases the likelihood of further flash and river flooding. However, as compared to recent weeks, the focus for the coming week appears to be further west.

Expected Impacts

An increased risk of flash flooding and landslides in the region, with further river flooding likely. Frequent lightning is also likely, along with large hail and strong wind gusts.



Southern Africa

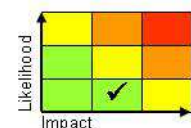
Weather

Widespread heavy showers and thunderstorms will affect the region until the end of the week. Around 30-50mm of rain will fall quite widely each day, with some locations receiving up to 150mm daily. By the end of the week, accumulations of up to 250mm are possible, which would be around twice the monthly average in many parts of the region.

Discussion

A sharp mid-latitude upper trough will interact with a moisture plume of tropical origin to produce widespread heavy showers and thunderstorms. Very high PWAT and moist profiles suggest some very intense downpours are possible, with the possibility of some long-lasting severe storms, especially in the south of the region in Botswana, northern parts of South Africa and parts of Namibia.

Expected Impacts



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Rainfall will be largely welcome as this region of Africa has suffered droughts in the recent past. However, such intense downpours will generate flash flooding and landslides, potentially damaging infrastructure and crops.

Morocco and northern Algeria – see *Europe* section

Madagascar and Somalia – see *Tropical Cyclones* section

Middle East

Parts of Syria, Iraq and western Iran

Weather

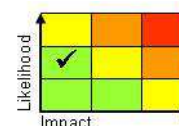
Following a brief dry interlude, further heavy rain and mountain snow will affect the region during Thursday and Friday. The heaviest and most widespread precipitation will fall across northern Iraq and northwest Iran. Here 50-100mm of rain is likely.

Discussion

An active cold front, driven SE by a disrupting upper trough will bring heavy precipitation to parts of the Levant later this week. The resultant cut-off upper vortex and cold pool will maintain the risk of heavy showers into the weekend across northern Iraq and Iran. Strong cold advection will lead to a significant risk of snow over high ground.

Expected Impacts

Flash and river flooding, landslides, and disruption to transport and travel are likely.



Asia

Philippines – see *Tropical Cyclones* section

Philippines

Weather

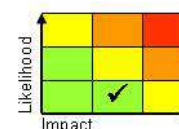
Enhanced showers and thunderstorms are likely to affect north-eastern Luzon through the next 24 to 48 hours. These could produce a further 200-300 mm locally.

Discussion

Enhanced NE flow in the wake of Kammuri will feed showers and thunderstorms into NE Luzon through the next 24 to 48 hours.

Expected Impacts

Increased risk of flash flooding. Risk of landslides.



Southern Malaysia, Sumatra, western Borneo, Sri Lanka and southern India

Weather

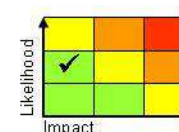
Even though it is the 'rainy season' in this region, heavy rainfall is expected through the next week, with some places seeing up to 300 mm (equivalent of 50-75% of the average monthly rainfall at this time of year).

Discussion

A combination of a weak MJO moving across the Maritime Continent and a surge in the Northeast Monsoon, are likely to enhance convection somewhat through this week.

Expected Impacts

Increased threat of flash flooding and landslides.



Australasia

Nil.

Additional Information

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Eastern Australia – Wildfire: Numerous bushfires continue in parts of eastern New South Wales, Queensland and Australian Capital Territory with 'severe' conditions forecast again across parts of these areas on Thursday and Friday.

Issued at: 030820 UTC

Meteorologists: Brent Walker / Mark Sidaway

Global Guidance Unit

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