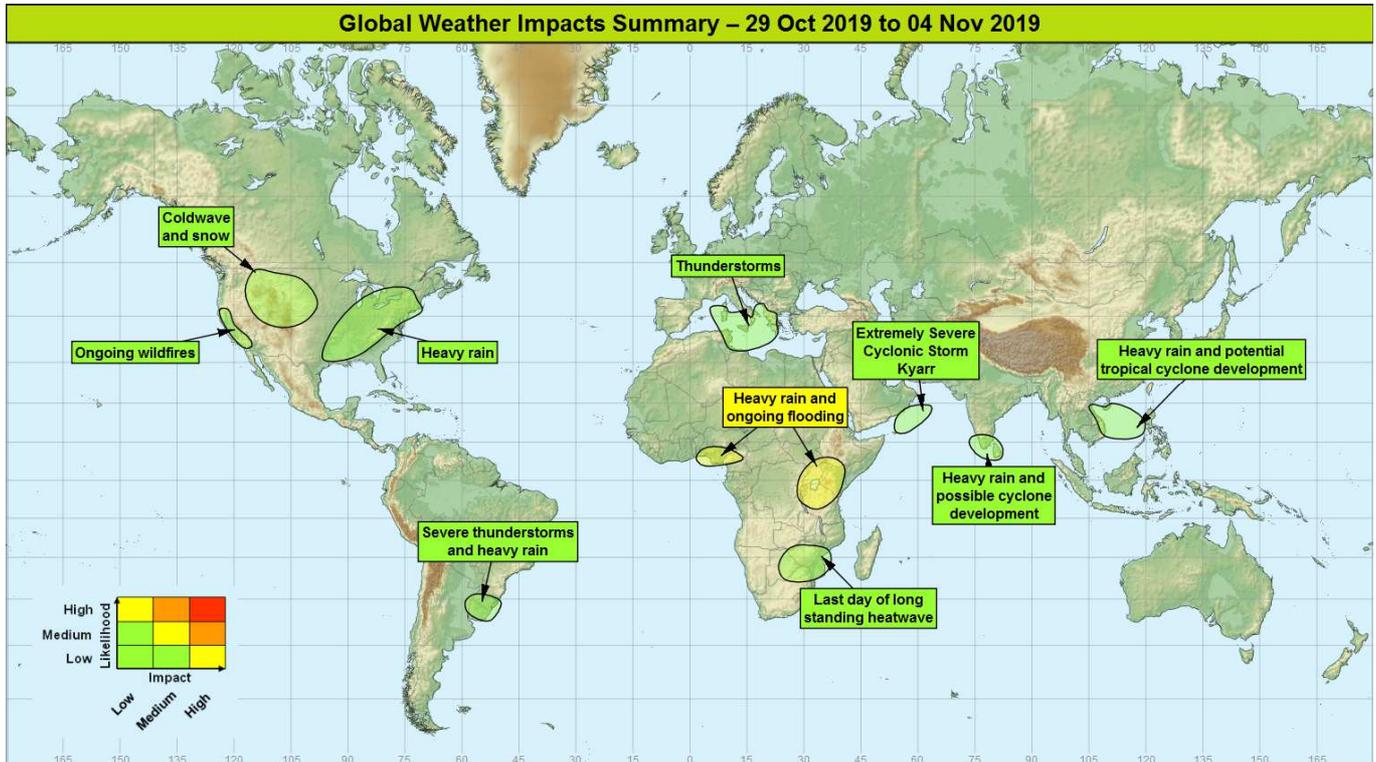


Global Weather Impacts – Tuesday 29th October to Monday 4th November 2019

Issued on Tuesday 29th October 2019

HEADLINES

- Ongoing heavy rainfall across parts of East Africa expected to bring further flooding impacts.
- Tropical cyclone development to bring heavy rain to Vietnam through midweek.
- Extremely critical fire weather conditions continuing across parts of California.



DISCUSSION

Tropical Cyclones

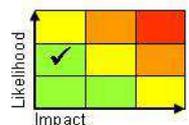
Extremely Severe Cyclonic Storm Kyarr (Arabian Sea)

Weather

Kyarr became the joint strongest tropical cyclone on record in the Arabian Sea on Sunday (based on max. sustained winds of 150 mph). Kyarr weakened overnight into an Extremely Severe Cyclonic Storm. It is expected to be slow-moving for the next few days, weakening gradually as it drifts southwest to lie south of Oman towards the end of the week. The heaviest rainfall and strongest winds are expected to remain offshore although a much weakened Kyarr may affect Socotra by this coming weekend. Nevertheless, the outer rainbands are likely to bring some locally heavy rainfall to the south coast of Oman and perhaps the island of Socotra in addition to large swells and waves as high as 15 metres.

Discussion

Kyarr achieved an estimated minimum pressure of 915 hPa on Sunday, surpassing Super Cyclonic Storm Gonu in 2007. The intensity, based on official advisories from IMD, equalled that of Gonu. Some fluctuations in intensity are likely over the next couple of days before a gradual weakening trend commences through the latter part of this week. Although there is still large spread in the forecast track as the week progresses the threat to Oman has diminished, but there is still a chance it may affect Socotra by the weekend.



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Expected Impacts

Dangerous swells and rip currents are likely to affect much of the Arabian Sea coastline this week. Although the centre of Kyarr is expected to remain offshore, there is still a risk of flash flooding from thunderstorms across eastern Oman and later Socotra, as well as strengthening winds capable of lifting dust across the southeast of the Arabian Peninsula.

The following area is being monitored for tropical storm development that may affect land in the next 7 days:

South China Sea (including Hainan, Vietnam, Laos and Cambodia)

Weather

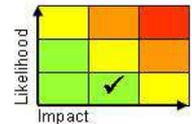
An area of heavy showers and thunderstorm activity in the South China Sea is associated with a tropical depression, which has a high likelihood of strengthening into a tropical storm through midweek. Landfall is likely in the South Central Coast region of Vietnam later Wednesday. The main hazard will likely be from rainfall, with 100-200 mm of rain possible in parts of Hainan, Cambodia, Laos and Vietnam. However, coastal Vietnam from Nha Trang northwards could receive up to 400 to 600 mm, exceeding the average monthly rainfall in 48 hours.

Discussion

An equatorial Rossby wave currently west of the Philippines will likely support tropical cyclone development through Tuesday and Wednesday. However, its duration over water is likely to be limited with the main impact being enhanced onshore flow combined with frequent heavy showers and thunderstorms resulting in large rainfall totals along much of the Vietnam coast.

Expected Impacts

An increased likelihood of flash flooding and landslides across the Indochina peninsula, in particular the central and northern coastal region of Vietnam, and perhaps also Hainan.



Europe

Central Mediterranean (including Malta, Tunisia, Italy, Sardinia and southern Balkans)

Weather

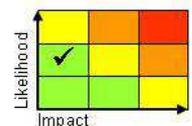
Further heavy showers and thunderstorms are expected to affect the region through this week. On Tuesday, the focus will be around Malta and Tunisia before expanding to include Italy, the southern Balkans and Greece from Thursday onwards. Isolated 50-75 mm of rainfall is possible in a couple of hours, in addition to large hail, strong winds and one or two tornadoes.

Discussion

A cut-off, slow-moving low over Tunisia is expected to spawn further thunderstorms, locally severe, during Tuesday across the central Mediterranean. Forecast profiles support isolated supercells capable of producing all convective hazards. The cyclonic upper pattern persists through the remainder of this week, maintaining the likelihood of further heavy showers and thunderstorms across a wider area.

Expected Impacts

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



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North America

Central USA and Rockies

Weather

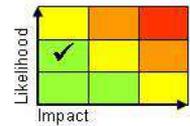
Widely below average temperatures are expected to affect the northwestern half of the USA through the next few days. Daytime maximum temperatures are expected to be some 15-20°C below average across the eastern Rockies and Central Plains. Some heavy snow is also expected, particularly over Colorado, Nebraska and Wyoming through to Wednesday where up to 30 cm of snow is possible.

Discussion

An upper trough has introduced a Canadian airmass across the Rockies and Great Basin into the northern and central Plains. However, this will be reinforced by a colder airmass of arctic origin through Tuesday. Along each of these transitions, heavy snow is possible with the greatest likelihood of this affecting Colorado, including the Denver Metropolitan area.

Expected Impacts

Travel is likely to be impacted due to ice, snow covered roads and low visibility. Significant wind chill could cause frostbite for those exposed to very low temperatures.



Southern and Eastern USA

Weather

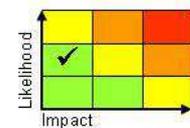
Spells of heavy rain are expected to affect the southeastern half of the USA through to Friday. Much of the region is expected to receive around 40-60 mm of rain over the next 4 days but parts of the Deep South northeastward across the Appalachians and Boston-Washington corridor could receive 100-125 mm (equivalent to the October monthly average). In addition to heavy rainfall, a developing area of low pressure could bring gales to a wide area of the NW USA and SE Canada toward the end of this week.

Discussion

A moisture-laden airmass from the Gulf of Mexico is expected to be drawn northeast ahead of a positively tilted upper trough that will slowly translate eastward through the working week. The warm conveyor belt is expected to bring widespread rain across the region, culminating in a potentially very wet and windy spell at the end of this week.

Expected Impacts

Increased likelihood of flash flooding causing some property and infrastructure damage, and transport disruption. Some additional disruption due to strong winds is possible at the end of this week.



California

Weather

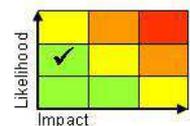
With Santa Ana winds easing for a time today, improved conditions have aided some containment of the wildfires currently burning. However the next wind event, expected to develop into Wednesday and continue into Thursday, is likely to be the strongest so far this season. Winds should ease again by Friday. The Kincadee fire in the Sonoma Valley has become California's biggest of 2019, has burnt 30,000 hectares and is currently 15% contained. Over 100 structures have been destroyed and a further 90,000 are threatened.

Discussion

With the threat of Santa Ana winds reduced for a short while, the very hot, dry windy conditions that come with these winds will also ease. However a return of the Santa Ana winds is expected into Wednesday and through Thursday. A state-wide emergency has been declared for California.

Expected Impacts

Extensive damage to property and infrastructure in areas where wildfires persist and spread to. Power interruptions are also possible, in part as a preventative measure to reduce wildfire triggering. Fire danger forecast remains extreme until late in the week.



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Central America and Caribbean

Nil.

South America

Uruguay, northeast Argentina and southern Brazil

Weather

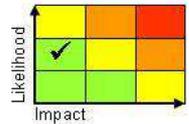
Spells of heavy rain and severe thunderstorms are expected to affect this region through this week. Rainfall totals of 100-150 mm are possible in places each day. This equivalent to over a month's worth of rainfall (although this will only be in a few isolated locations). Frequent lightning, large hail and strong winds gusts will be additional hazards.

Discussion

The SACZ will become increasingly active during this period, enhanced by a southward extension of tropical air over central South America. This will allow a mixture of surface based and elevated convection (triggered by minor upper short waves) with severe thunderstorms possible across the area.

Expected Impacts

Flash flooding, transport disruption and a small risk of property damage from hail and wind gusts.



Africa

Tunisia – See *Europe* section.

Parts of central and eastern Africa

Weather

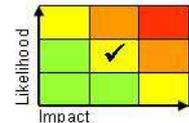
14 people were killed over the weekend due to flooding (making 44 in total since mid October) in the Tanga region of Northern Tanzania. Although rainfall is expected to be less extreme over the coming week, it will likely still remain above average for much of the area highlighted. Whilst rainfall amounts will inevitably vary from place to place, some locations may receive their entire average October rainfall in a few hours.

Discussion

A strong positive Indian Ocean Dipole (IOD) event continues. This is probably responsible for the slightly above average rainfall signal in these areas over the coming week. Based on the strength of the positive IOD event (largest since at least 2001) this could lead to above average rainfall in these areas for the next 2 months which may gradually make impacts more likely.

Expected Impacts

Continued increased likelihood of both flash flooding and flooding along some of the regions rivers. In additional there will be an enhanced risk of land/mudslides in areas of steep terrain.



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Parts of southern Africa**Weather**

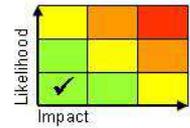
Temperatures are widely some 5-10 °C above average across parts of southeastern Africa. Within the area highlighted maximum temperatures are expected to exceed 35°C, and in some places exceed 40°C (especially northern Zimbabwe, southern Zambia and western Mozambique) through Tuesday before returning to nearer normal. Whilst these temperatures are normal for mid-summer, falling this early in the season makes it near record breaking, particularly over parts of South Africa.

Discussion

The IOD is causing excessive rain to fall in east Africa close to the equator, and keeping the weather dry, hot and sunny in much of south-eastern Africa, especially the north of South Africa. A cold front will track northeast across southern Africa later on Tuesday, allowing temperatures to fall back to nearer average, starting with Gauteng Province in South Africa.

Expected Impacts

Utilities will be under strain due to high air conditioning requirements, and water demands will be high in a region still waiting for the first rains of the spring/summer season, exacerbating the drought conditions in much of the region, especially northeast South Africa where rationing is in place. Increased potential for health impacts for vulnerable demographics. Severe wildfire conditions will be present across tracts of this area too.

**Middle East**

Oman and Yemen – See *Tropical Cyclones* section.

Asia

Hainan, Vietnam, Laos and Cambodia – See *Tropical Cyclones* section.

Southern India and Sri Lanka**Weather**

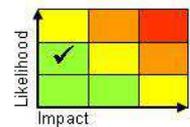
An area of widespread heavy showers and thunderstorms will transfer west across this region through the next 2-3 days, bringing heavy rainfall (up to 300 mm in a day or two) across the region, which would equate to or just above the average October rainfall.

Discussion

An equatorial Rossby wave has developed following the passage of the MJO across the Indian Ocean, passing to the west of Sri Lanka and the southern tip of India on Tuesday before moving into the Arabian Sea by Wednesday. Once over the Arabian Sea it is possible the area could develop into a tropical storm, although any development looks most likely to stay offshore as it tracks north-northwestward.

Expected Impacts

Flash flooding and landslides are the most likely impacts. Significant swells and rip currents could once again affect the Arabian Sea coastline of India later this week.

**Australasia**

Nil.

Additional Information

Nil.

Issued at: 290820UTC **Meteorologists:** Chris Tubbs / Laura Ellam

Global Guidance Unit

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