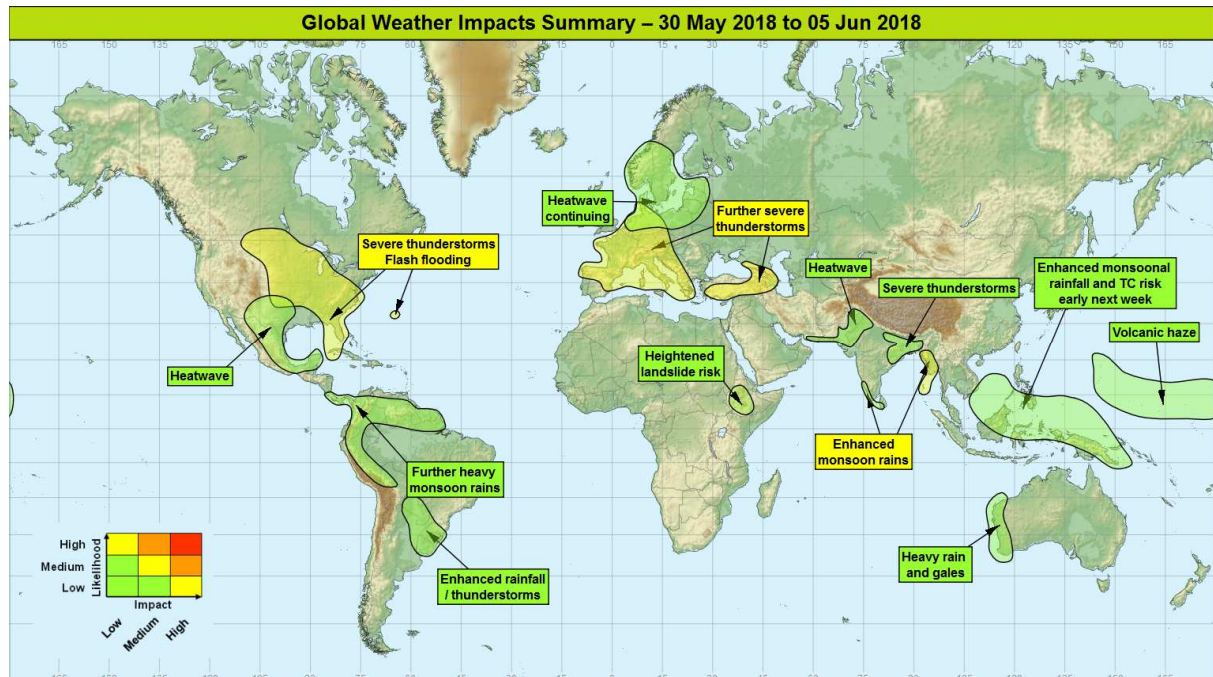


Global Weather Impacts – Wednesday 30th May to Tuesday 5th June 2018

Issued on Wednesday 30th May 2018

HEADLINES

- Indian Monsoon has been officially declared – enhanced monsoonal rainfall SW India, SW Sri Lanka, Myanmar and possibly southern Bangladesh (including Cox's Bazar)
- Severe thunderstorms affecting parts of Continental US and Europe through next few days.

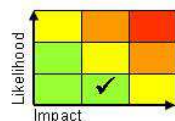


DISCUSSION

Tropical Cyclones

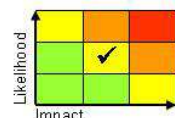
There are no tropical cyclones. However the following areas are being monitored for possible development:

South China Sea and the Philippine Sea – Confidence is low but there is a continued broad signal for tropical storm development in either or both of the South China and Philippine Seas early next week. This looks to be in response to the rapid northward movement of the ITCZ/monsoon trough which in turn is being forced by the propagation of the MJO across the Maritime Continent.



Europe

Much of continental Europe – Further thunderstorms will occur across parts of continental Europe during the next week. Details will be very difficult, if not impossible to accurately pin down, but there will be a broad trend for the strongest storms to gradually form further east as the week progresses. As in recent days, complex MCS developments are likely, which will allow the storms to persist well into the overnight period. Within these storms, large hail and strong winds are likely, and some places could see 50-100mm in the space of 2-3 hours, which could bring significant flash flooding. There is a significant risk that storms will impact populated areas, and possibly large cities, bringing significant impacts on property, infrastructure, power and transport networks (including aviation).

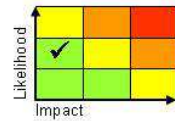


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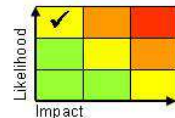
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Parts of NW Europe – Anomalously high temperatures are expected to continue across parts of Scandinavia, northern Germany and Poland in the coming week. Temperatures will continue to rise 10 Celsius above average, resulting in highs into the mid-high 20s and low 30s. This persistent heat may impact on human and animal health, and may also impact upon agricultural activities. Across parts of Scandinavia the heat and prolonged dry spell has also led to a high risk of forest fires.



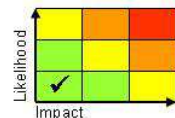
North America

Central and SE USA, S Central Canada, Bermuda – The resident warm airmass, enhanced by the moisture plume brought north by ex-Subtropical Storm Alberto, is expected to continue to be engaged by upper troughing to produce multiple rounds of widespread, organised and at times severe thunderstorms. Storms will likely impact western Cuba today, before clearing away westwards, whilst over the continental US the area of storms will steadily progress eastwards whilst diminishing over the next few days. Storms embedded within a frontal zone will also affect Bermuda today. There is a strong signal that over the weekend another strong shortwave trough will engage warm air over Montana and the Dakotas, eventually producing a second widespread severe storm risk over parts of Central N US and S Central Canada.



The severe storm activity could bring over 150mm in a few hours, which could bring severe flash flooding (a recent event in Elicott City, Maryland, saw a provisional 232mm in less than two hours leading to catastrophic flooding and one fatality). Large hail, strong winds and tornadoes are also possible. Risk to life, impacts on property, transport, infrastructure and aviation are all likely.

Mexico, Central S USA – A very warm airmass in place across much of North America over the coming days will see temperatures widely 5-8°C, and in places 10°C above the average for the time of year. Temperatures in parts of Texas could reach 45°C later this week. A prolonged spell of heat such as this will put stress on both human and animal health, with children and the elderly especially vulnerable.

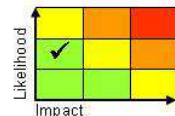


Central America and Caribbean

Western Cuba and Bermuda – See North America section above.

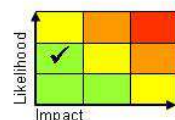


Much of Central America – See South America section



South America

Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, Suriname, French Guiana, N Brazil and much of Central America – The South American Monsoon rainfall remains strong from the Amazon northwards and down the Andes chain south into Bolivia through much of next week. This follows an already active monsoon season in the last few months, and as such further heavy rains make severe flash flooding and landslides events more likely. If these events affect populated areas, significant life threatening impacts are likely. The Colombian dam (Hidroituango) situation seems to have been contained, with the dam's wall having been raised over the last few days.

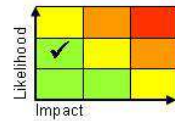


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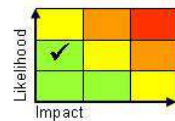
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NE Argentina, Uruguay, Paraguay and S Brazil – The South Atlantic Convergence Zone looks to be active through the next few days across and around the River Plate basin. Locally severe thunderstorms could produce in excess of 100 mm in a short period, hail, frequent lightning and gusty winds. Tornadoic activity is also a possibility. The storms could affect major cities including Buenos Aires and Montevideo. Flash flooding is possible, along with some disruption to travel through the affected region. The system will gradually move NE'wards over the next few days, before petering out over the weekend.



Africa

Ethiopia – Over 30 people in the Oromia region of Ethiopia have died in a landslide that was triggered by heavy rainfall. The outlook for the coming week is for more heavy showers, and so the flood / landslide risk across Ethiopia continues to be heightened compared to normal.

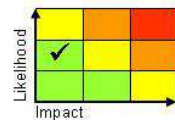


Middle East

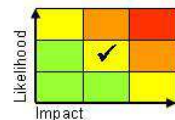
Nil Significant.

Asia

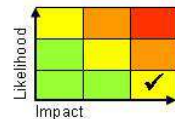
Pakistan, S Iran and NW India – Typically the pre-monsoon heatwave results in heat stress fatalities across the Indian sub-continent, and this year is no different, with at least 65 heat-related deaths recorded in Karachi so far and many more suspected elsewhere. Maximum temperatures over the next few days are likely to be in the 47-52°C range, whilst minima are not expected to fall much below 30°C. This is not too unusual just ahead of the monsoon, but the prolonged heatwave will likely result in yet more heat stress related fatalities in this region.



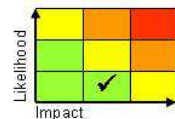
Bangladesh and NE India – Continued heavy pre-monsoon showers and thunderstorms are expected through the next few days, following a particularly active May which has claimed at least 250 lives so far. Most recently (28th and 29th), strong storms killed at least 45 people in the states of Bihar, Jharkhand and Uttar Pradesh. Conditions look conducive for further severe thunderstorms, with forecast profiles indicating areas of high CAPE, high directional shear, and very deep instability. However, with the southwest monsoon trough rapidly approaching, the loss of strong high level flow as the subtropical jet also moves north means that the storms are likely to trend towards high rainfall producing systems and away from large hail and tornado producers. Either way, a significant risk to life and property will continue to exist over the next week as a result of these storms.



Myanmar, S Bangladesh (possibly including Cox's Bazar) – A pulse of very heavy early monsoon rainfall is expected across Myanmar and perhaps the far south of Bangladesh during the next few days, with up to 400mm possible. As we have seen in recent weeks the Cox's Bazar humanitarian camp is especially vulnerable to fairly modest amounts of rainfall. Should this enhanced rainfall affect the camp the impacts could become severe, with the potential for significant loss of life.



SW India, SW Sri Lanka – The Indian Summer Monsoon has now been officially declared in Kerala (3 days earlier than normal), and heavy monsoonal rainfall is expected to affect the far SW of India and SW Sri Lanka over the coming days with 200-300mm likely in places. Sri Lanka in particular has been badly affected by pre-monsoonal storms and landslides (in part due to deforestation for cash crops), and the risk of further flooding and landslides here is heightened, posing a risk to life and property.



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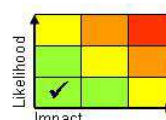
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South China Sea, NE Indonesia and the southern Philippines – This coming week is a significant period for the East Asian Monsoon evolution. So far the southwest phase has ceased to commence, but the movement of the MJO through Indonesia this week will induce a cross equatorial flow which will result in a dramatic northward jump of the ITCZ into the South China Sea and southern Philippines. As it does so, enhanced showers/thunderstorms are likely across much of the northern Maritime Continent, increasing the risk of flash floods and landslides here. The abrupt northward shift in the ITCZ could also help to form one or more tropical cyclones (see tropical cyclone section for further details).

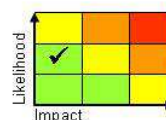


Australasia

Western Western Australia – A plume of very warm and moist tropical air is signalled to be engaged by a strongly extending and potent major upper trough, developing a deep depression with strong winds and extruding an area of heavy rain with embedded thunderstorms towards western coastal areas of Western Australia. The most likely place to see impacts would be Perth, where localised flooding and disruption to transport could occur, with the rest of the area being more sparsely populated.



Marshall Islands, Federated States of Micronesia, Northern Mariana Islands – Emissions of sulphur dioxide and other particles from the ongoing eruption at Kilauea on the Big Island of Hawaii have spread westwards across the Pacific, causing widespread hazy conditions. The volcanic haze may adversely affect people with respiratory problems, and may pose some low key disruption to shipping and aviation. With the eruption ongoing, further episodes of volcanic haze can be expected over the coming weeks.



Additional Information

Nil.

Issued at: 300455 Z **Meteorologist:** Dan Harris

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