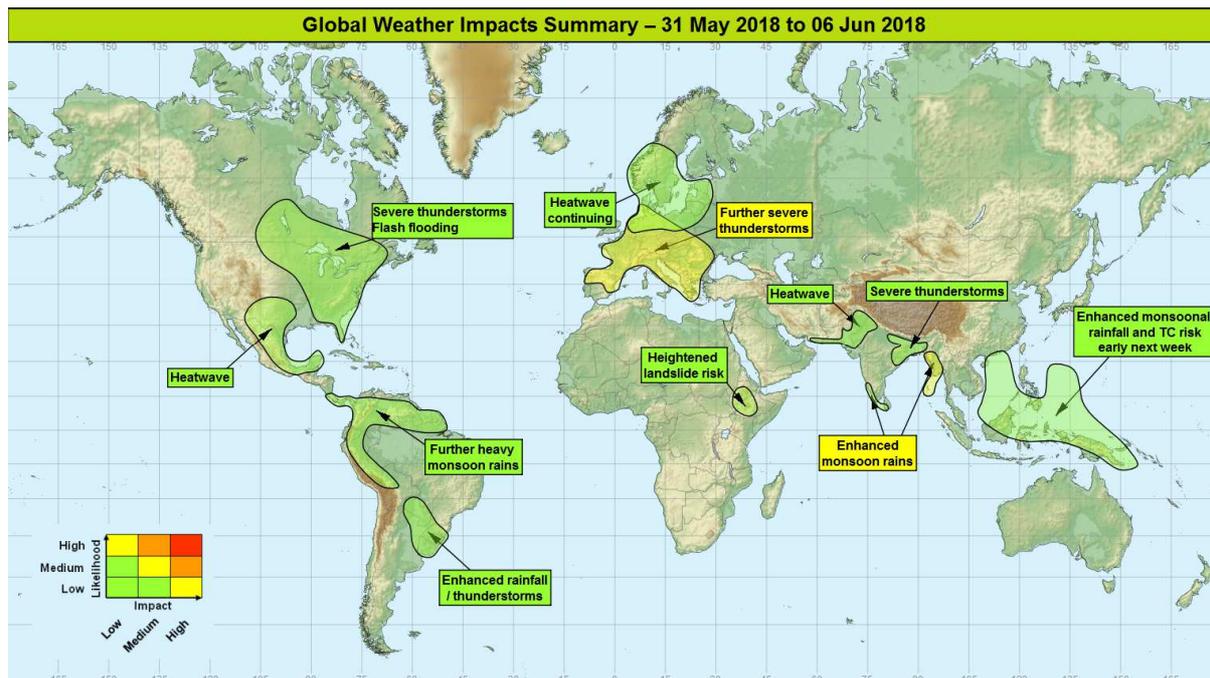


## Global Weather Impacts – Thursday 31<sup>st</sup> May to Wednesday 06<sup>th</sup> June 2018

Issued on Thursday 31<sup>st</sup> 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 the next few days.

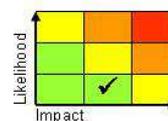


### DISCUSSION

#### Tropical Cyclones

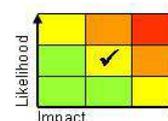
There are no tropical cyclones. However the following areas are being monitored for possible development:

South China Sea and/or Philippine Sea – Continued model signals for the development of a tropical system in the South China Sea by the end of the coming weekend. Model differences persist with respect to this system’s evolution. A secondary development in the Philippine Sea is signalled with the main impact from this likely to be enhanced rainfall across E Philippines into next week. Either system has the potential to develop into a more significant storm, though confidence on which, if any, develops is low.



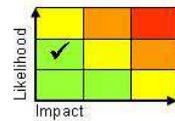
#### Europe

Much of continental Europe, Turkey, E Syria and The Levant – Further severe thunderstorms and MCS developments are likely throughout the period. Some of these storms are likely to be severe with large hail and strong winds likely. Isolated tornadoes are an additional hazard. 50-100mm in the space of 2-3 hours, which could bring significant flash flooding. Impacts on urban areas are likely, with hub airports and over-flight across these areas impacted by thunderheads. Other transport as well as electrical networks are likely to also be impacted.



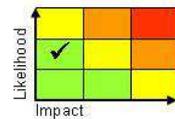
**This forecast may be amended at any time**

Parts of N 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°C 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. A general increased threat of wildfires (away from areas affected by thunderstorms) is likely.



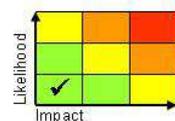
## North America

Much of continental USA east of the Rockies, as well as the Plains of central and E Canada – Warm and moist air which has been drawn N by ex-Alberto is likely to phase in with multiple upper troughs across the area. The result will be occasional bouts of severe thunderstorm activity. The initial focus will be across parts of Kansas and Oklahoma, where some tornadic storms are likely. The focus then shifts E/NE through the next few days as a pair of active troughs traverse the area.



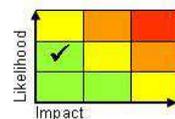
The severe storm activity could bring over 150mm in a few hours, which could bring severe flash flooding (a recent event in Elicott City, Maryland, saw a provisional 232mm in less than two hours leading to catastrophic flooding and one fatality). Large hail, strong winds and tornadoes are also possible.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



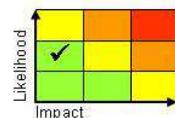
## Central America and Caribbean

Much of Central America – See South America section

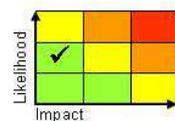


## South America

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.



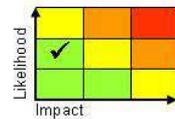
NE Argentina, Uruguay, Paraguay and S Brazil – The South Atlantic Convergence Zone looks to be active through the next few days across and around the River Plate basin. Locally severe thunderstorms could produce in excess of 100 mm in a short period, hail, frequent lightning and gusty winds. Tornadic activity is also a possibility. The storms could affect major cities including 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.



**This forecast may be amended at any time**

## 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.

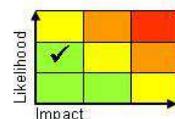


## Middle East

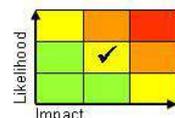
Nil

## Asia

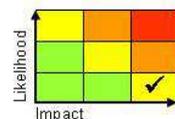
Pakistan, S Iran and NW India – Typically the pre-monsoon heatwave results in heat stress fatalities across the Indian sub-continent, and this year is no different, with at least 65 heat-related deaths recorded in Karachi so far and many more suspected elsewhere. Maximum temperatures over the next few 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.



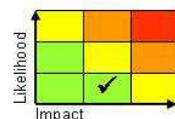
Bangladesh and NE India – Continued heavy pre-monsoon showers and thunderstorms are expected through the next few days, following a particularly active May which has claimed at least 250 lives so far. Most recently (28<sup>th</sup> and 29<sup>th</sup>), strong storms killed at least 45 people in the 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.



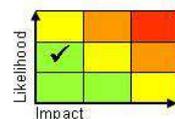
Myanmar, S Bangladesh (possibly including Cox's Bazar) – A pulse of very heavy early monsoon rainfall is expected across Myanmar and perhaps the far south of Bangladesh during the next few days, with up to 400mm possible. Cox's Bazar humanitarian camp is especially vulnerable to fairly modest amounts of rainfall. Should this enhanced rainfall affect the camp the impacts could become severe, with the potential for significant loss of life. Port Blair, the capital of the Andaman and Nicobar Islands received 231mm on Wednesday, much of which fell in a short period of time.



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. Mangalore received 284mm of rain on Wednesday as the Monsoon begins to get its act together.



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 failed to commence, but the movement of the MJO through Indonesia this week will induce a cross equatorial flow which should 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).



**This forecast may be amended at any time**

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**Australasia**

Nil

**Additional Information**

Nil.

**Issued at:** 310300 Z **Meteorologist:** Jason Kelly**Global Guidance Unit**