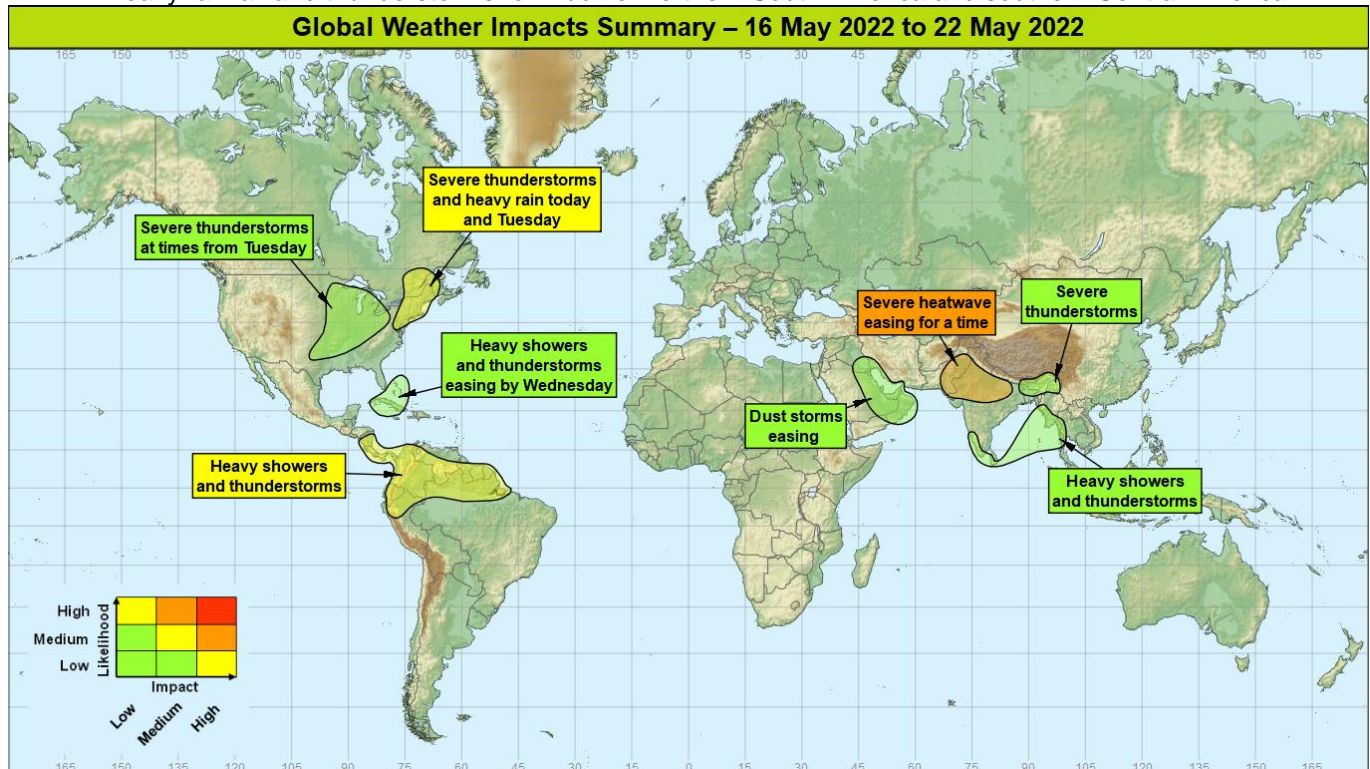


Global Weather Impacts – Monday 16th May 2022 to Sunday 22nd May 2022

Issued on Monday 16th May 2022

HEADLINES

- Severe heatwave across parts of Pakistan and India easing for a time.
- Severe thunderstorms / heavy rain for parts of northeast USA and southeast Canada today and tomorrow.
- Heavy rainfall and thunderstorms for much of northern South America and southern Central America.



DISCUSSION

Tropical Cyclones

No active tropical cyclones. No developments are expected to affect land in the next seven days.

Europe

Nil.

North America

Northeast USA and southeast Canada

Weather

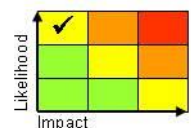
An area of heavy showers and thunderstorms will develop across the northeast of the USA today. Severe thunderstorms look possible, producing the potential for intense rainfall (up to 50mm in a few hours), large hail, strong winds and even a few tornadoes. As this system moves north into southeast Canada on Tuesday the severe thunderstorm potential should ease, but a deep depression could form, producing very heavy rain (up to 100mm in 24 hours – over the average for May) and strong winds, before clearing to the northeast on Wednesday

Discussion

A marked upper trough will engage a cold front as it tracks east across the NE of the USA today, destabilising profiles to produce the potential for severe convection. This process will also be resulting in the formation of a frontal depression that could become a deep feature across southeast Canada on Tuesday before clearing to the northeast.

Expected Impacts

Flash flooding, hail and wind damage also likely in places, with disruption from lightning possible too. This is a highly populated region which increases the potential for impacts.



This forecast may be amended at any time

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Central USA

Weather

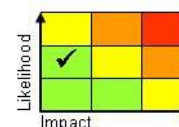
Further severe thunderstorms are possible across parts of central USA from Tuesday, but more especially from later in the week. These storms could produce intense rainfall, large hail, strong winds and a few tornadoes.

Discussion

A frontal wave will sweep east later on Tuesday and Wednesday across the Central Plains, driven on by a short-wave upper trough that could produce isolated severe convection. A similar feature on Thursday could produce the same threat further north, with the associated cold front then expected to sweep southeast across the central USA from Friday into the weekend, driven on by a major upper trough that is likely to pose a higher threat of severe storm potential.

Expected Impacts

Flash flooding, hail and wind damage also likely in places, with disruption from lightning possible too.



Central America and Caribbean

Nicaragua, Costa Rica and Panama: See *South America* section.

Cuba, Bahamas and Turks and Caicos

Weather

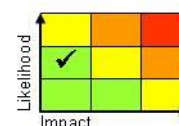
Heavy showers and thunderstorms will affect this region over the coming few days, likely clearing to the southeast around Wednesday. Rainfall amounts will be well above average with daily totals 40-80mm in places; accumulative totals by Wednesday may reach 100-150mm in some locations, this around the average for the whole of May.

Discussion

A warm plume that was previously associated with a frontal system will be slow-moving during the next few day or two before clearing to the southeast, around mid-week. As well as low-level convergence, upper forcing is being provided by a slow-moving upper trough to the northwest, which will relax and move away by Wednesday. Before that though, the ingredients are there for deep convection.

Expected Impacts

Flash flooding and landslides. These areas are prone to tropical cyclones so this precipitation is not expected to cause significant issues.



South America

Northern parts of South America, Nicaragua, Costa Rica and Panama

Weather

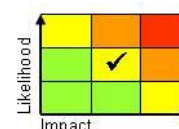
Heavy showers and thunderstorms will be more widespread and heavier than usual across this region through the next week. Up to 100mm could fall in just a day, with 7 day rainfall amounts of up to 350mm in places, although many areas will see in excess of 100mm. It is likely that many places will see the average May rainfall in just a week or less. For northern parts of South America this will come after what has already been a very wet rainy season. The prolonged above average rainfall means river levels in the north Amazon basin remain very high.

Discussion

A continuing enhancement to the usual showers is expected, this driven by tropical waves which may include the first African easterly waves of the season which will extend the heavy rainfall envelope further north into Central America.

Expected Impacts

Flash and riverine flooding. Landslides.



Africa

Nil.

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Middle East

Eastern Arabian Peninsula

Weather

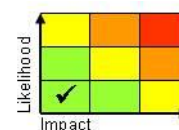
A strong Shamal event (strong northwesterly winds) affected this region over the past couple of days and caused some large dust storms. Winds eased yesterday (Sunday) meaning dust uplift reducing a little before a further pulse of strong winds develops through Monday and Tuesday. This is likely to give rise to further uplift of dust over Iraq, with the dust being transported southeastwards along the Persian Gulf. Winds and the likelihood of dust storms both decrease later in the week.

Discussion

Strong low-level winds in the wake of a weak cold front will spread across this region on Monday and Tuesday, perhaps reaching gale force in places. The main dust sources in the area are located in the dry flood plains and seasonal lakes in southern Iraq.

Expected Impacts

Disruption to transport (especially aviation) and reduced air quality.



Asia

Much of Pakistan and northwestern India

Weather

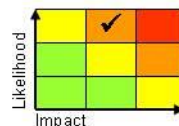
The extreme pre-monsoon heatwave has eased a little across Pakistan after peak temperatures reached 51°C over the weekend. This slight easing of the heatwave is expected to extend to northwestern India in the coming few days. However, the heat looks likely to build again from midweek, peaking later in the week or into the weekend, with maximum temperatures again likely to reach 50°C in some spots, with continued very high overnight temperatures. There is also a continued enhanced risk of fires (largely from planned agricultural burning) in the region which would further add to the poor air quality.

Discussion

An upper trough has moved east across Pakistan and will continue east across northwest India through the next day or two, introducing temperatures closer to normal for a pre-monsoon heatwave. However, contours likely to build again from midweek with temperatures climbing once again, although with another upper trough likely following from the west this weekend.

Expected Impacts

Extreme heat and poor air quality health impacts, most acutely for vulnerable demographics. Disruption to power supplies. Damage to crops. Elevated wildfire risk.



Southern India, Sri Lanka, Myanmar and northwest Thailand

Weather

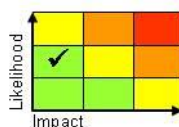
Heavy showers and thunderstorms will affect this area through the coming week with the peak threat area moving east through the week. Some torrential downpours are likely with daily totals of 50-100mm in places, much of this falling in a short space of time. By midweek, cumulative totals could reach over 300mm in places. There is potential for a weak tropical depression to form across the far-south of India early this week which could enhance precipitation in this area (up to 200-350mm/day) should it be close enough to land. These are not exceptional rainfall totals for this region; however, this is still the pre-monsoon period and for this time of year these totals are significantly above average.

Discussion

Weak tropical lows over southern India, enhanced by tropical waves passing this region will give rise to enhanced rainfall over the coming days. This pattern also results in an enhanced southwesterly flow over the Bay of Bengal, bringing enhancement to the precipitation across Myanmar and surrounding areas later in the week.

Expected Impacts

Flash flooding likely in places, this earlier than is usually seen in this region.



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Northeastern India, northern Bangladesh, Bhutan and eastern Nepal

Weather

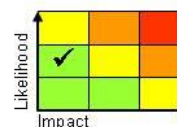
Thunderstorm activity across this region through the next week is expected to be enhanced. Daily accumulations of up to 100-150mm are possible with a few spots seeing over 300-400mm by the end of next week. We are starting to come out of the severe storm season, nevertheless some severe thunderstorms are still possible, producing hail and strong winds as well as torrential downpours. Typical May rainfall is around 300mm.

Discussion

Short-wave upper troughs running through the STJ will provide sufficient forcing to engage the very moist air coming north from the Bay of Bengal, rising up mountainous terrain to produce deep convection across this region. There is more than enough CAPE and vertical wind-shear to bring severe convection, especially this weekend and at first next week, easing thereafter.

Expected Impacts

Flash flooding. Enhanced threat of landslides. Lower likelihood of large hail and wind damage.



Australasia

Nil.

Additional Information

Ukraine: Mostly fine on Monday, just a few showers in the far east. Turning more unsettled on Tuesday with showers or longer spells of rain (heavy and thundery in places) spreading across the far-south of the country, this clearing to the east through Wednesday with a few showers following. Fine and dry for Thursday, but becoming more unsettled again from Friday with rain or thundery showers spreading eastwards into the weekend. Temperatures around or slightly below average, but perhaps becoming warmer this weekend, especially in the west.

Issued at: 160720 UTC

Meteorologist: Ele Hands / Paul Hutcheon

Global Guidance Unit

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