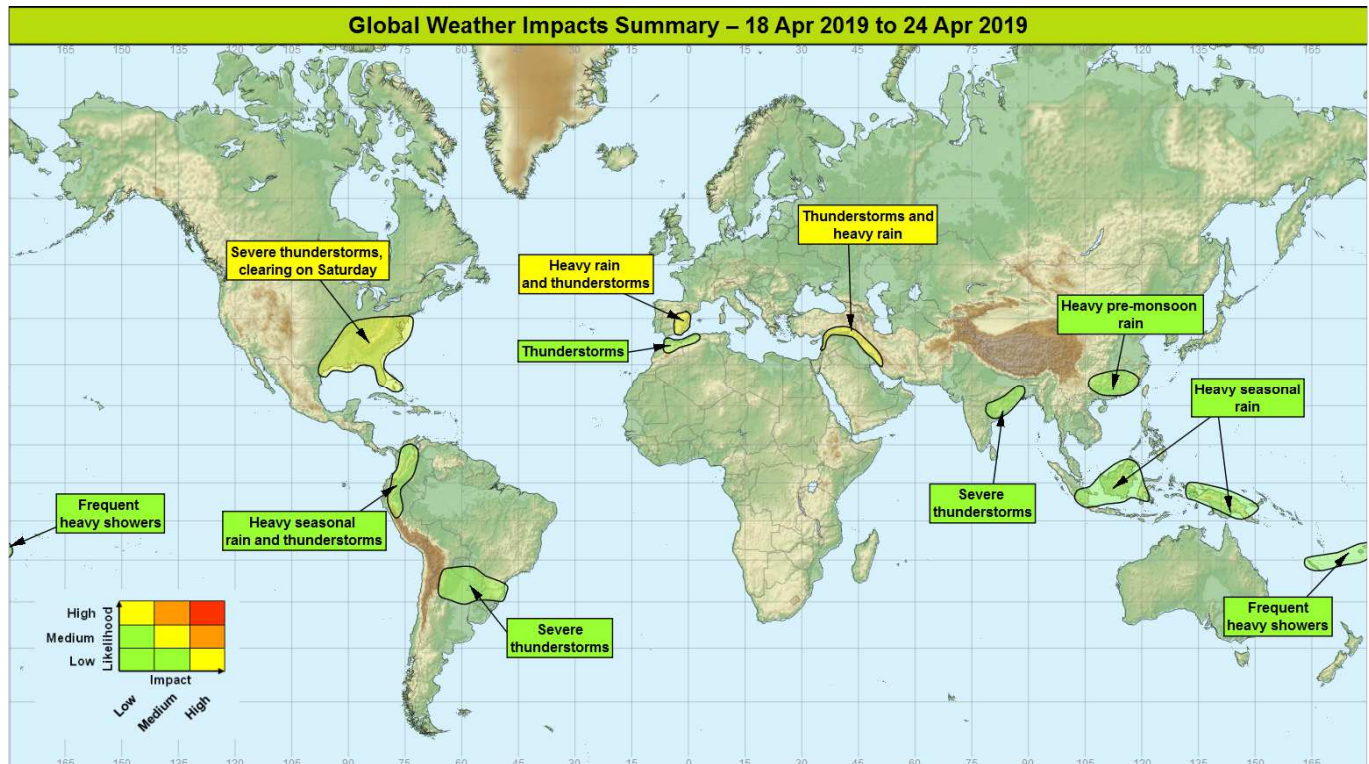


Global Weather Impacts – Thursday 18th April to Wednesday 24th April 2019

Issued on Thursday 18th April 2019

HEADLINES

- Heavy rain and locally strong winds over southeast Spain over the next few days.
- Severe thunderstorms/tornado potential over central/SE USA, clearing Saturday.
- Further heavy showers and thunderstorms over parts of the Middle East.



DISCUSSION

Tropical Cyclones

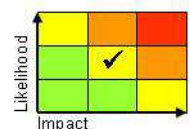
There are currently no tropical cyclones and no developments are expected over the coming days.

Europe

Southeast Spain Weather

An area of heavy rain is expected to become slow-moving across southeastern parts of Spain over the next few days. Daily rainfall totals in excess of 75mm look possible with the heaviest rainfall likely on Friday and Saturday. By early next week rainfall accumulations could reach as much as 150-200mm in the wettest areas. This in contrast to the April average, of 20 to 40 mm. Strong winds, and perhaps coastal gales, will accompany the heavy rain, leading to significantly below normal temperatures too. Conditions should start to improve from Monday.

Discussion



This forecast may be amended at any time

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A cut off upper low will slowly sink S across Iberia over the next few days, the accompanying cyclogenesis and backing flow through depth drawing a PS14 WBPT plume from North Africa. Strong shortwave forcing, isentropic ascent and some convective destabilisation within this plume will lead to development of heavy rain, which could be orographically enhanced in places given the strengthening E to NE'ly flow. Models and ensembles are more consistent now with the broad story, area of concern and integrated rainfall amounts, although the daily detail is still somewhat uncertain. Frequent heavy showers and thunderstorms will be present widely beneath the upper vortex but in lower WBPT/lower PWAT air.

Expected Impacts

Localised flash flooding is likely, possibly affecting areas popular with tourists. Strong winds at the coast could lead to some minor coastal flood impacts, whilst there is also a low risk of localised damage to buildings and infrastructure due to lightning.

North America

Central/Eastern USA and the Bahamas

Weather

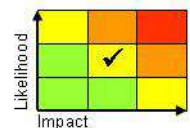
Severe thunderstorms across the Central Plain are expected to extend east through the rest of the week before clearing during Saturday. Strong winds, tornadoes, heavy rain and large hail are all expected; 50-100 mm could fall in a matter of a few hours.

Discussion

A cut-off vortex travelling across the Central Southern US today will be reinforced by a strongly extending trough in the polar jet, resulting in a potent trough and accompanying jet streak spreading east across the eastern half of the US over the next few days. This, in favourable conjunction with a very warm, moist air mass sourced from the Gulf of Mexico, is expected to lead to multiple rounds of severe convection, driving eastwards before clearing the Eastern Seaboard over the coming weekend.

Expected Impacts

Localised flash flooding is probable, whilst large hail could cause damage to structures and vehicles. Tornadoic activity is also a significant threat with this event, with associated damage and/or destruction.



Central America and Caribbean

Bahamas – see *North America*

South America

Western Colombia, Ecuador and far northwest of Peru

Weather

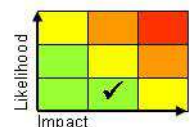
Further heavy seasonal rain is expected this week, following what has already been a very wet rainy season. The rains will come in the form of thunderstorm activity that could produce intense rainfall (up to 75 mm in a few hours). Through the next 7 days up to 250 mm of rain could fall in places along the Andes. This equates to over 50% of the average April rainfall falling within a week.

Discussion

There continues to be a strong model signal for enhanced rain through the next week in this region. Weak tropical waves may well help enhance the deep convection as they pass through the region over the coming week, whilst the weak El Nino conditions may also be driving this. This will come on top of what has already been an impactful start to this current rainy season in Colombia.

Expected Impacts

Potential for further flooding and risk of landslides.



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North Argentina, Paraguay, Uruguay, south Brazil

Weather

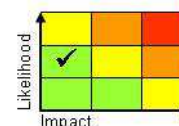
Enhanced showers and thunderstorms, locally severe, are expected to develop over this coming weekend, with frequent lightning and the risk of tornadic activity. 50-80 mm, locally 100 mm could fall in some places per day, with 100-150 mm in areas most affected through the course of the event.

Discussion

A gradual southward migration of tropical air is expected to become increasingly unstable and prone to release of deep convection, with torrential showers as a result. Later in the weekend, and early next week, a sharp trough/cut-off vortex on the northern periphery of the sub-tropical jet will engage this warm plume, allowing more organised storms to develop. Forecast profiles depict large CAPE, PWAT, and strong low-level helicity with increasing potential for supercells by the end of the weekend.

Expected Impacts

Localised flash flooding, increased chance of landslides in mountainous areas, and localised risk to life and property through frequent lightning strikes and/or strong winds.



Africa

Northeast Morocco and northwest Algeria

Weather

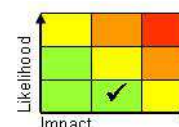
The rain area affecting southeast Spain over the next few days may sink far enough south to affect this region on Friday, with thunderstorms likely to develop over the weekend. Where thunderstorms and heavy showers develop, 20-40 mm could fall in a few hours, perhaps as much as 50 mm in a day. This equivalent to nearly a month's worth of rainfall in these areas.

Discussion

The upper vortex described above is expected to sink south across the area over the coming weekend, before degenerating into a trough. This will provide excellent conditions for the release of deep instability – profiles are moist through depth and the NE'ly flow on the backside of the induced low (see southeast Spain) would support frequent triggering over mountains inland.

Expected Impacts

Flash flooding may occur.



Middle East

Lebanon, western and northern Syria, northern Iraq and western Iran

Weather

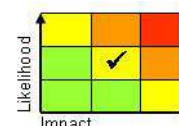
Increased shower and thunderstorm activity is expected across this region at times through the next few days. Up to 25-50 mm of rain in 24 hours is likely in some places, with up to 100 mm of rain accumulating in places over the next 4 or 5 days, especially in northern Iraq and the Levant coastal mountains. This is 2 to 3 times the average rainfall for the whole of April.

Discussion

A succession of upper troughs will transfer east across the region at times through the next week, leading to deep convection, especially across northern Iraq and the Levant coastal mountains, that could result in intense rainfall.

Expected Impacts

Flash flooding, hail, strong winds and dense lifted dust plumes are all likely in parts of this region. The heavy rainfall is likely to produce a threat of river flooding too, especially into the Tigris catchment in northern Iraq. These impacts are likely to affect some of the regions of northern Iraq and western Iran that have seen severe flooding in the past month. Western Syria and Lebanon could become increasingly prone to flooding into the coming weekend.



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Asia

Southwest Bangladesh and northeast India

Weather

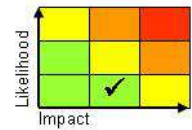
Isolated, but potentially severe thunderstorms are likely to develop across India today (Thursday), this zone then slowly migrating northeast over the next few days, with Bangladesh increasingly likely to see severe storms over the coming weekend. Some of these storms could produce large rainfall amounts (50 mm in a few hours), whilst lightning and hail are likely. Strong, gusty winds and dust storms could also occur in association with the worst storms.

Discussion

Sporadic thunderstorms are likely to develop across northeast India over the next couple of days, courtesy of a weakly cyclonic upper pattern but mainly significant low level warmth. Cloud bases will be relatively high, with the main hazard likely to be strong gusty winds in association with downdraughts. A number of shortwave troughs in the jet across N India and Bangladesh over the weekend will allow for more organised storms to develop, and whilst a tornado couldn't be ruled out, forecast profiles mainly show uni-directional flow within deep instability.

Expected Impacts

Localised flash flooding is possible, with lightning/large hail/strong gusty winds likely, but a lower risk of isolated tornadoes. The strong gusts could result in significant dust storms in some cases.



Southeast China

Weather

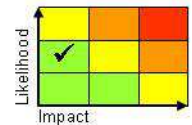
Following something of a break, further heavy pre-monsoonal rain is expected over the next few days, with many places seeing the average April rainfall (150-250 mm). In addition, thunderstorms are likely at times which could produce intense rain (100 mm in 6 hours).

Discussion

Forecast profiles show the potential for embedded high based thunderstorms within the plume. The heaviest rain and greatest risk of thunderstorms are likely within the PS24C 850hPa WBPT that gradually pushes north through the next few days whilst being engaged by short wave upper troughs within the sub-tropical jet.

Expected Impacts

Flash flooding is the most likely impact, with an increasing threat of river flooding and landslides.



Western Indonesia, Papua New Guinea

Weather

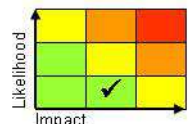
The usual shower and thunderstorm activity is likely to become more frequent and intense with more places than usual likely to see 50-100 mm of rain in a 24 hour period (mostly falling in a 6 hour period).

Discussion

The emerging MJO is likely to assist in maintaining larger scale deep convection in the eastern Indian Ocean and western part of Indonesia. Across Papua New Guinea a persistent feed of showers/thunderstorms arriving from the west and developing in situ may realise locally large totals.

Expected Impacts

Increasing threat of flash flooding and landslides.



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Australasia**Fiji, south Vanuatu, New Caledonia****Weather**

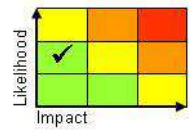
More frequent showers and thunderstorms than normal with 50-80mm, locally 100mm falling in 12-18 hours, and some locations could receive 250-350 mm over the next several days.

Discussion

The SPCZ will become slow moving over the next few days, leading to a persistent train of heavy showers and thunderstorms affecting the area. Small N/S oscillations in the zone will lead to sig variations in detail for the local islands, but the broad envelope of heavy showers is well agreed upon by the main models.

Expected Impacts

An increased flash flood and landslide risk given the persistent nature of the showers, the event spanning a number of days.

**Additional information**

Nil.

Issued at: 180745 UTC **Meteorologists:** D J Harris / Chris Bulmer

Global Guidance Unit

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