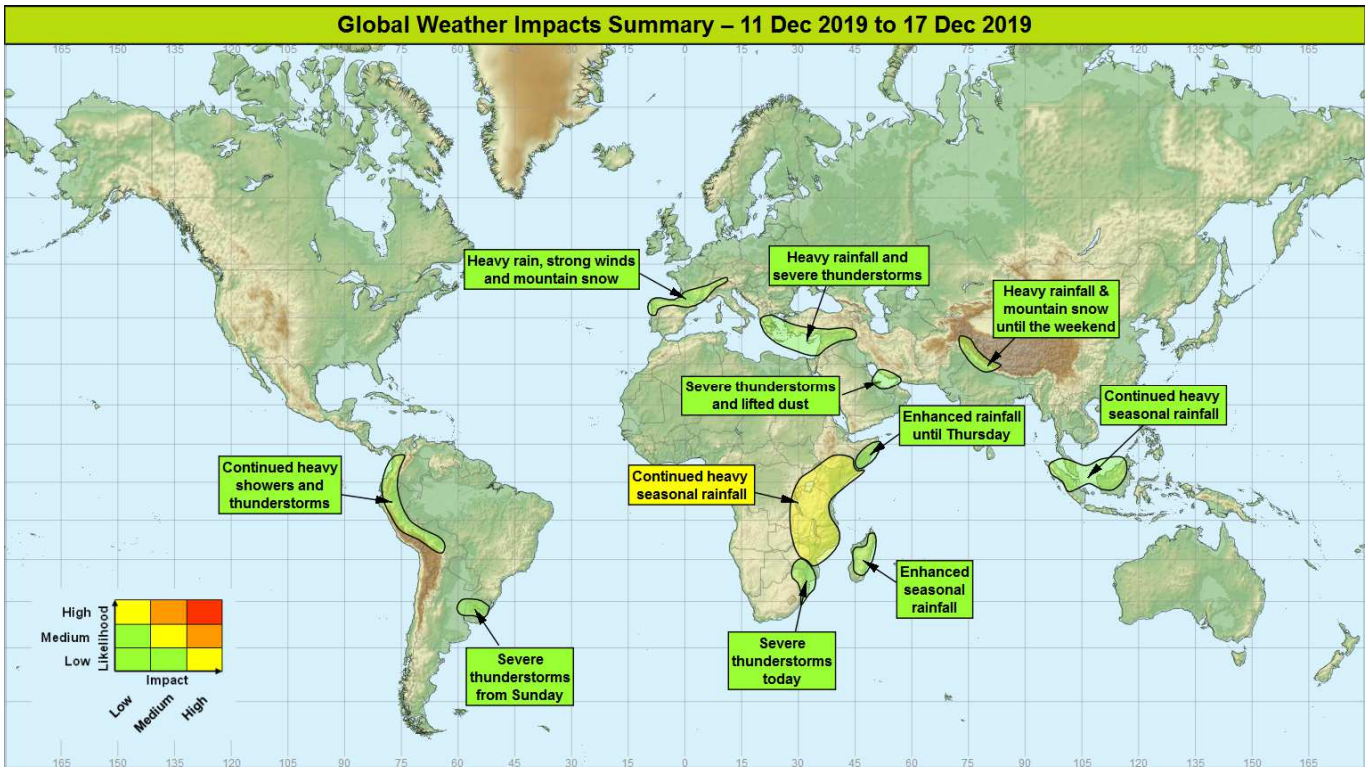
Met Office Daily Global Weather Impacts Assessment

Global Weather Impacts – Wednesday 11th to Tuesday 17th December 2019

Issued on Wednesday 11th December 2019

HEADLINES

- Areas of heavy rain continuing to impact parts of eastern Africa.
- Severe thunderstorms and lifted dust for areas around the Arabian Gulf today.



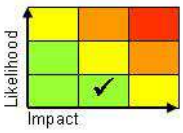
DISCUSSION

Tropical Cyclones

No active or potential development areas are currently being monitored

Europe

Parts of southeast Europe across the north and west of the Middle East



Weather

This region will see heavy showers and thunderstorms at times through the rest of the week, perhaps into next weekend. Up to 50-100 mm could fall in 24 hours, with the highest rainfall totals likely for south-western Turkey. These sorts of values are around the average December rainfall for this area. The thunderstorms could be severe at times, producing a threat of large hail, frequent lightning and strong, gusty winds. These winds could lift dense dust storms across the Middle East.

Discussion

The combination of a south shifted PFJ and a strong STJ will produce areas of deep convection across this region, with the potential for long lived, severe thunderstorms in places.

Expected Impacts

This forecast may be amended at any time
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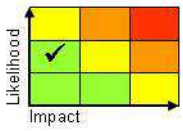
Flash flooding is possible across this region, with frequent lightning impacts possible too. Waterspouts and tornadoes are possible across and around the Mediterranean, with dense lifted dust plumes likely in the Middle East. Heavy mountain snowfall likely in the Zagros mountain.

Western Europe



Weather

Conditions will turn very unsettled during Thursday and Friday, with heavy, strong winds and mountain snow affecting large parts of the region. The wettest and stormiest weather will be across France and northern Iberia on Thursday, transferring the Alpine region on Friday. Around 50-75 mm of rain will fall quite widely, with 150-200 mm possible in some of the wetter parts of northern Iberia and The Alps; here heavy mountain snowfall is also expected above 2000 M in the Pyrenees and above 600 M over the Alps.

Discussion

A south-shifted powerful trans-Atlantic jet will drive active frontal systems into western Europe. As the upstream pattern amplified slightly there is potential for frontal waves to move into the left exit region of the jet and develop rapidly, producing a threat of very strong winds, with severe gales over large parts of France, northern Iberia and the western Mediterranean for a time. Extensive snow is expected in the Alps above 600 metres.

Expected Impacts

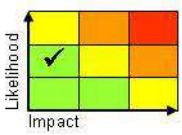
Flash flooding is likely, with disruption to travel expected. Marine transport, in particular, could be severely disrupted due to strong winds which could also cause some power outages. Heavy snowfall will increase the risk of avalanche, especially in the Pyrenees where melting of much of the fallen snowfall is expected over the weekend

North America

Nil.

South America

Ecuador, western Colombia, Peru and Bolivia



Weather

Frequent heavy showers and thunderstorms will affect these regions through the next 7 days, with the showers each day bringing 50-75 mm in just a few hours, with some locations receiving over 200 mm (around the December average rainfall). As is the nature of showers, spatial coverage on any one day will be highly variable.

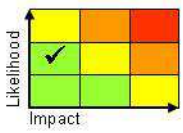
Discussion

With the South American Monsoon extending well south now, daily rounds of showers and thunderstorms are expected to form to the west of the Andes of Colombia and Ecuador, and to the east of the Andes further south. The region highlighted has seen above average rainfall during the past weeks, and is also forecast to receive the highest rainfall totals.

Expected Impacts

Flash and river flooding likely, with increased likelihood of landslides.

Parts of Argentina, Uruguay, and southern Brazil



Weather

From Sunday onwards a further round of severe thunderstorms is signalled to develop and move northeast across this region. Frequent lightning is likely, and a risk of localised large hail.

Discussion

A shortwave upper trough in the STJ will run northeast east across this region from Sunday and engage the high moisture plume associated with the South American Monsoon, resulting in a significant pulse of the SACZ. Within this zone areas of heavy rainfall and severe convection are supported.

Expected Impacts

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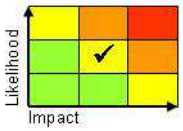
Localised flash flooding, and low risk of localised damage from large hail, frequent lightning and strong wind gusts.

Africa

Parts of eastern/central Africa



Weather

Further widespread heavy showers and thunderstorms associated with the seasonal rains are expected to continue to be heavier than normal over the next week, with a further 100-200 mm of rain falling in places from frequent heavy, thundery, afternoon downpours. This is close to the average rainfall in this region for the whole of December, with this area having already seen 200-400% of the usual rainfall over the past few weeks.

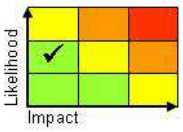
Discussion

Enhanced seasonal rainfall in association with the strong positive Indian Ocean Dipole event which, although declining, is still influencing the large scale shower distribution. Large tracts of eastern Africa have seen well above average rainfall over the past few months. The combination of all these factors dramatically increases the likelihood of further flash and river flooding along with further deadly landslides.

Expected Impacts

An increased threat of flash flooding and landslides in the region, with further river flooding likely.

South-eastern Africa



Weather

Once further day of heavy showers and severe thunderstorms is expected, before conditions finally turn somewhat drier. These storms are capable of producing up to 100 mm in just a few hours. There is also a threat of large hail, frequent lightning and strong gusty winds

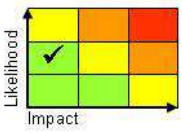
Discussion

The advance of an upper trough has drawn very warm air south from the sub-tropics that will then be engaged by increased levels of upper forcing to produce very high PWAT, high CAPE profiles that suggest some very intense downpours are likely at times, with the possibility of some long-lasting MCS due to some strong vertical wind shear profiles. The clearance of the upper trough by Thursday will lead to a marked reduction in activity beyond that.

Expected Impacts

In the longer term this heavy rainfall will be welcome as this region of Africa has suffered droughts in the recent past. However, such intense downpours will generate flash flooding and landslides, potentially damaging infrastructure and crops.

Madagascar



Weather

The remnants of Tropical Cyclone Belna will become slow moving across Madagascar over the coming week and promote enhanced shower and thunderstorm activity. These storms are capable of producing 50mm of rainfall for an area in a short space of time, with places that see the most showers over the coming week perhaps receiving 200-300mm of rainfall, this represents around a month's worth of rainfall during the wet season.

Discussion

The moisture plume associated with the remnants of Belna will become slow moving over the region. This source of moisture will act to promote shower and thunderstorm activity, with the passage of subtle troughs in the STJ acting to enhance these further. As mentioned previously December is a very wet month in Madagascar at the start of the annual rainy season, hence it is thought that these rainfall accumulations although high are unlikely to be overly problematic.

Expected Impacts

Localised flash flooding possible and an elevated risk of landslides in areas where terrain is steep.

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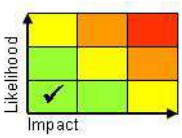
Somalia and parts of eastern Ethiopia



Weather

An area of enhanced rainfall and thunderstorms will move southwest across this region over the next couple of days. These could bring around 50-100mm of precipitation locally, this would be more typical of rainfall across this region during the wetter summer months.

Discussion

An Equatorial Rossby Wave (ERW) did not quite manage to develop into a tropical depression before reaching the Somali coastline. However the moisture associated with this tropical wave will continue to be steered west across Somalia over the next couple of days promoting shower and thunderstorm activity and promoting precipitation totals more typical of the summer months.

Expected Impacts

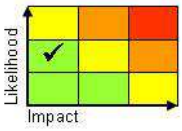
Isolated flash flooding possible, most likely in urban areas.

Madagascar – see *Tropical Cyclones* section

Middle East

Levant coastline, northern parts of Syria, northern and eastern Iraq, western Iran– see *Europe* section

Areas around the Arabian Gulf, including Qatar and the UAE



Weather

Significant thunderstorm activity is expected across this region today. This is likely to produce locally heavy rainfall (25-50mm in extremis) and strong winds gusts capable of lifting dense dust plumes. Conditions will markedly improve by Thursday; however a further stormy spell is expected across this region early next week.

Discussion

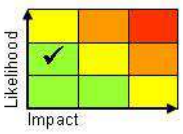
A trough running east on the STJ has generated a so-called western disturbance which runs quickly east across the region bringing significant shower and thunderstorm activity. Strong wind shear supports the organisation of storms into MCS, with high precipitable water and moist sub-cloud layers meaning storms are capable of bringing short period heavy rainfall to a usually dry region.

Expected Impacts

Flash flooding likely in urban regions. Transport likely to be disrupted, especially aviation with the region home to several large hub airports. Strong winds and lightning will bring the risk of localised damage, and lifted dust will reduce air quality.

Asia

Malaysia, Borneo, Brunei and Sumatra



Weather

Even though it is the rainy season in this region, heavy rainfall is expected to continue through the next week, with some places seeing up to 300mm (equivalent of 50-75% of the average monthly rainfall at this time of year).

Discussion

A combination of a weak MJO moving from the Indian Ocean and into the Maritime Continent along with and a surge in the Northeast Monsoon is likely to continue enhancing deep convection through this week. These rains have already caused significant impacts in parts of this region, with flooding being reported across parts of Malaysia.

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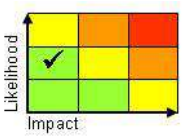
Expected Impacts
Increased threat of flash flooding and landslides.

Northern Pakistan, India and Nepal



Weather
An areas of heavy rainfall and mountain snow will run east across this region over on Thursday and Friday. Large cities such as Islamabad and Lahore could see around 50mm of rainfall, these places typically see 30mm of rainfall during the whole of December. In excess of 1 metre of snow likely over the Himalayas. Conversely this precipitation will wash out pollutants and likely improve the air quality across the region for a time.

Discussion
The same western disturbance that has brought the thunderstorm activity to the Middle East today (Wednesday) will continue east to bring enhanced precipitation across this region through Thursday and Friday. Precipitation will be enhanced by orographic uplift, meaning that the Himalayas' and their foothills will see the greatest accumulations.

Expected Impacts
Some minor flash flooding is possible in some urban areas. Snowfall may disrupt travel across mountain passes in the region and increase the risk of avalanche. Conversely precipitation is likely to wash out airborne pollutants leading to much improved air quality across northern Pakistan and northwestern India.

Australasia

Eastern Australia – see *Additional Information* section

Additional Information
Eastern Australia – Wildfire: Numerous bushfires continue in parts of eastern New South Wales, Queensland and Australian Capital Territory with continued mostly dry weather expected through the week. Although reduced wind speeds and temperatures compared to previous days should aid the fire fighting efforts.

Issued at: 110820 UTC **Meteorologists:** Nick Silkstone / Mark Sidaway **Global Guidance Unit**

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