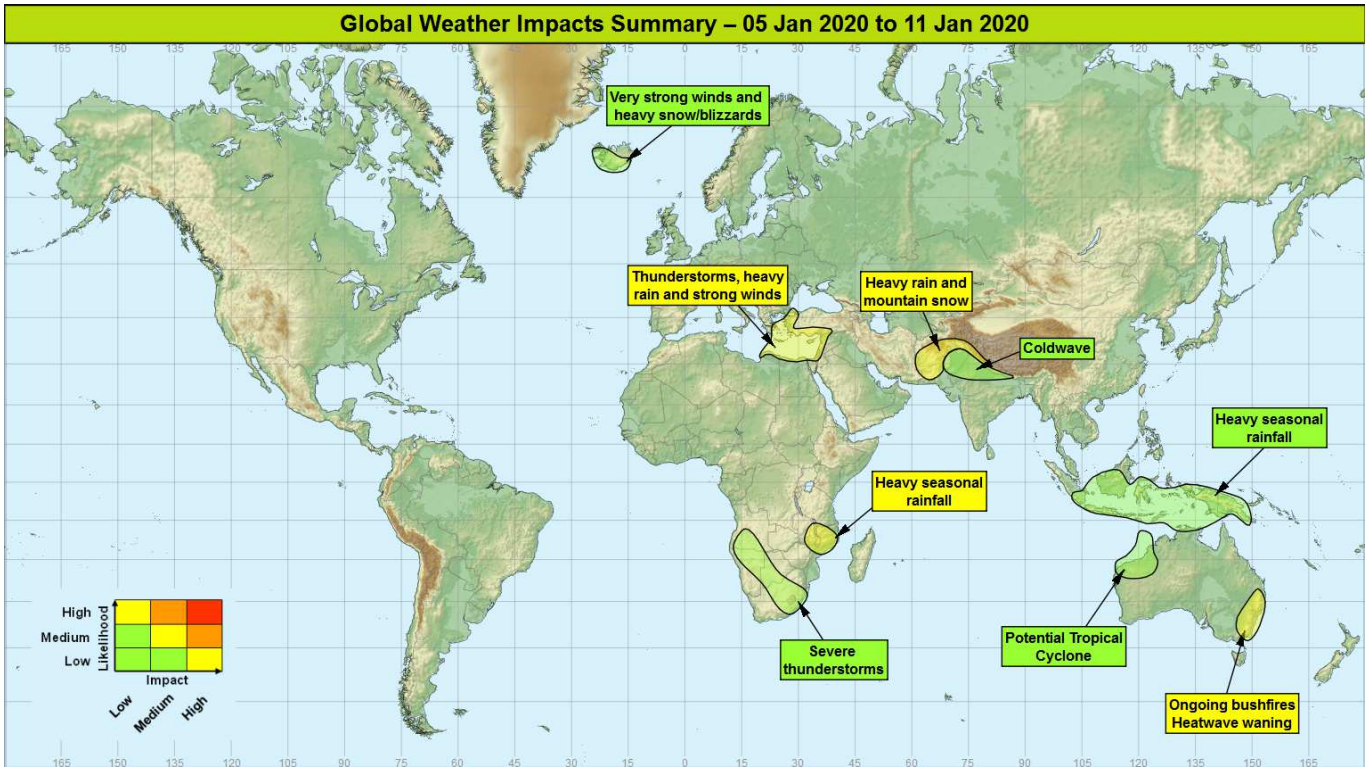
Met Office Daily Global Weather Impacts Assessment

Global Weather Impacts – Sunday 5th January to Saturday 11th January 2020

Issued on Sunday 5th January 2020

HEADLINES

- Heavy rain, thunderstorms and strong winds affecting the east Mediterranean and adjacent coasts.
- Conditions conducive for further wildfire growth and spread in Australia the next few days.
- Continued heavy seasonal rainfall in parts of eastern Africa and parts of the Maritime Continent.
- Further heavy rainfall and mountain snowfall across Afghanistan and west Pakistan.

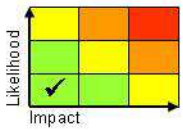


DISCUSSION

Tropical Cyclones

There are currently no active tropical cyclones. The following area is being monitored for potential development:

Southeast Indian Ocean



Weather

A tropical cyclone looks likely to develop in the Timor Sea over the next couple of days. Once formed, any system is likely to be steered south or south-westwards, either across or close to the sparsely populated northwest of Australia during the early and middle of next week. This could bring strong winds and heavy rain to the region.

Discussion

A tropical low has developed in the monsoon trough south of Indonesia, with conditions favourable for a tropical cyclone to form (SSTs of >32°C). There is good agreement that the low will be steered south or south-westwards towards the northwest of Australia. A marked MJO is expected to emerge in this region over the coming days, which would help with tropical cyclogenesis.

Expected Impacts

Any impacts would likely be confined to the sparsely populated northwest of Australia.

This forecast may be amended at any time

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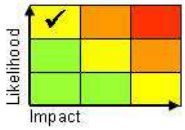
Europe

Greece, Turkey, Cyprus, the Levant, northeast Libya and northern Egypt



Weather

Further spells of very unsettled weather with heavy rain, thunderstorms and some mountain snow are expected over the next few days before conditions improve after Wednesday. Precipitation accumulations will be highly variable but some places could receive over 200 mm over 3 or 3 days, with the potential for 50 mm or so to fall within a few hours. Strong to gale force winds will build rough seas at times through the Aegean Sea and also lift dust over Libya and Egypt. Thunderstorms may spawn a few waterspouts/tornadoes in the eastern Mediterranean.

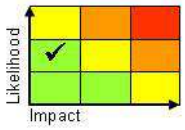
Discussion

A highly amplified upper pattern will see a further upper trough extend into then disrupt across the eastern Mediterranean this weekend, spawning another vigorous low. This will promote shower/ thunderstorm activity over the comparatively warm underlying seas. Showers will be focussed onto the various WBPT plumes wrapping around the low, and driven onto the coasts by the steering flows. Cold air will often feed south through the Aegean, meaning that a fair amount of these showers will fall as snow to relatively low elevations across the region. Crete in particular will likely see significant hill snow above 1000 M elevation at times.

Expected Impacts

Increased likelihood of flash flooding and river flooding as well as landslides in areas where terrain is steep. Significant mountain snowfall will block mountain passes and perhaps bring an unusually high risk of avalanches. Localised damage to property and infrastructure is also possible from lightning and waterspouts moving onshore. Dangerous sea conditions are likely at times through the Aegean Sea.

Iceland



Weather

Successive deep low pressure systems will pass across or close to Iceland over the next 4 or 5 days bringing spells of very strong winds (potential gusts of 70-80mph in exposure). This will be combined with snow at times leading to temporary blizzard conditions and snow drifts.

Discussion

Enhanced Atlantic mobility will see a number of deep depressions spawned on the cold side of the jet with these set to track across or close to Iceland over the next few days.

Expected Impacts

Widespread disruption to travel at times. Some remote communities could be cut off. Disruption to power supplies and communications is possible.

North America

Nil significant

Central America

Nil significant

South America

Nil significant

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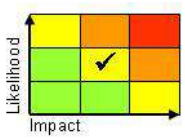
Africa



Parts of eastern Africa, including northern Mozambique and Malawi

Weather

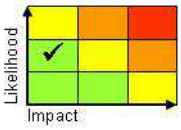
Widespread/frequent thunderstorms are expected to continue across this region, with well above average activity expected to persist especially in the vicinity of Lake Malawi. Each day 50-100mm could fall in places within a few hours. Through the week 200-300mm may build up in the wettest areas should they see repeated days of thunderstorms.

Discussion

During tropical cyclone Calvinia's extratropical transition, the mid-latitude cold front associated with the system was pushed northeast to reach this region, before becoming slow-moving as the steering flow weakened against the region's trades. In this locality the near stationary front will be engaged by various troughs in the sub-tropical jet, causing shower and thunderstorm activity to continue at above normal levels.

Expected Impacts

There will be an enhanced likelihood of some flash flooding and landslides given the already wet conditions. River flooding has been reported across parts of northern Mozambique.



Parts of South Africa, Botswana, Namibia, Angola, Eswatini and Lesotho

Weather

Several bouts of heavy showers and thunderstorms are likely across this region over the coming week. These storms have the potential to bring 30-50 mm of rainfall within a matter of hours, produce strong winds, and large damaging hail.

Discussion

Heat lows forming over the high South African plateau will help draw hot air southwards from the sub-tropics across the east of the country, leading to steep lapse rates in the elevated mixed layer above. Should convection trigger, profiles suggest in the region of 2000-3000 J/kg of CAPE could be released, with wind shear sufficient to allow some organisation and longevity to individual cells.

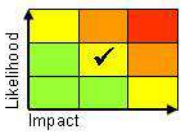
Expected Impacts

Potential for flash flooding, frequent lightning, large hail and strong wind gusts.

Middle East

Western Syria, Lebanon, Jordan and Israel – See *Europe* section.

Asia



Afghanistan and western Pakistan

Weather

Following heavy precipitation across the region in recent days, with rain in the southwest and heavy snow falling elsewhere, a potent cold spell has now established itself. Minimum temperatures are likely to be exceptionally low for the region with severe frosts. From Sunday a further spell of very wet and snowy weather will spread across the region. An additional 20-40mm of rain may fall across the usually arid southwest of the region, with potential for an additional metre of snow over the high mountains. As context, the mean precipitation for Kandahar in the southwest of Afghanistan in January is 45.8mm.

Discussion

The very disturbed weather across the eastern Mediterranean is signalled to shed several upper troughs into the zonal flow. The first of these is likely to cross Afghanistan on through the end of the weekend and into next week. The primary focus of ppn in association with resulting developments should be across the south of the country, where higher WBPT and PWAT allow for better rainfall chances. Further north, further heavy snow is likely across the Hindu Kush.

Expected Impacts

Flash flooding possible across the southwest of Afghanistan in particular, with disruptive snowfall for many elevated regions. Severe cold both before and after this event will likely impact vulnerable and exposed populations, with a rapid return to poor air quality as fires are needed for heat.

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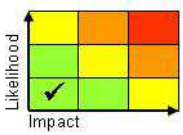
North India, Nepal and eastern Pakistan



Weather

Temperatures have now recovered to nearer average across northern India and Pakistan; however a further cold spell is expected later next week across this region, with temperatures falling some 6-10˚C below normal. Although the initial cold will coincide with precipitation, eventually more settled conditions will prevail with the return of dense fog and very poor air quality.

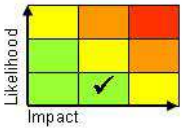
Discussion

A continued succession of western disturbances originating from the Mediterranean and are expected to cross the region over the coming week. With suppressed daytime temperatures due to cloud cover as the disturbances cross, and cold airmasses being drawn south across this region in the wakes of the various disturbances. Colder than average temperatures will contribute to much poorer than average air quality in the region due to the increased demand for heating.

Expected Impacts

Poor visibility has already, and will continue to, affect air, road and rail networks in the region. Below average temperatures are also likely to have a human health impact to vulnerable people exposed to near freezing overnight temperatures.

Parts of the Maritime Continent and far north of Australia



Weather

Scattered heavy showers and thunderstorms will be more frequent than usual over the next week. Some places are likely to receive up to 100-200 mm per day, although rainfall amounts will be highly variable from location to location. Much of this region has been anomalously dry over recent months, however this rainfall falling over a short duration will still likely lead to some modest and highly localised impacts similar to those seen across parts of Sumatra and western Java in recent days.

Discussion

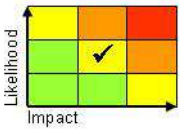
Convection has undergone an uptick in activity in recent week as the Indian Ocean Dipole (IOD) has rapidly decayed, and in recent days a marked cold surge and the passage of an equatorial Kelvin Wave has brought enhanced shower and thunderstorm activity to the region. Over the next few days models are consistently signalling the emergence of a strong MJO in the region which would lead to continued above average convection across the region.

Expected Impacts

Increased likelihood of flash flooding and landslides.

Australasia

Parts of southern and eastern Australia



Weather

Numerous bush fires continue across parts of Victoria, eastern New South Wales, south-eastern Queensland and Australian Capital Territory with dry conditions persisting across much of the region. Following further record breaking heat with maximum temperatures rising above 45°C in some places (15°C above average) temperatures around the major populated areas should return closer to normal over the next couple of days.

Discussion

A cold front is bringing some welcome rainfall across parts of Southern Australia and Victoria this weekend, but this rainfall is unlikely to reach New South Wales in any great quantity. In New South Wales thunderstorms along the cold front may actually end up igniting more wildfires.

Expected Impacts

The sheer size of many ongoing fires will continue to produce large amounts of small particulates that will contribute to hazardous air quality for several weeks to come, affecting heavily populated areas such as Sydney. Since September the bushfires have killed 23 people. A state of emergency has been declared in New South Wales.

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Additional Information
Nil.

Issued at: 050600 UTC **Meteorologists:** Chris Bulmer **Global Guidance Unit**

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