

# Heat Outlook for October to December 2022

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**Excessive, humid heat** in October in the Guianas  
and parts of the southern Caribbean

## Participating countries and territories

Antigua & Barbuda, Aruba, Bahamas, Barbados, Belize, Cayman Islands, Cuba, Curaçao, Dominica, Dominican Republic, French Guiana, Grenada, Guadeloupe, Guyana, Haïti, Jamaica, Martinique, Puerto Rico, St. Barth's, St. Kitts & Nevis, St. Lucia, St. Maarten/St. Martin, St. Vincent & the Grenadines, Suriname, Trinidad & Tobago and the US Virgin Islands



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# Health: Slightly increased frequency of mild heat symptoms in October due to excessive, humid heat during this period

## Public health:

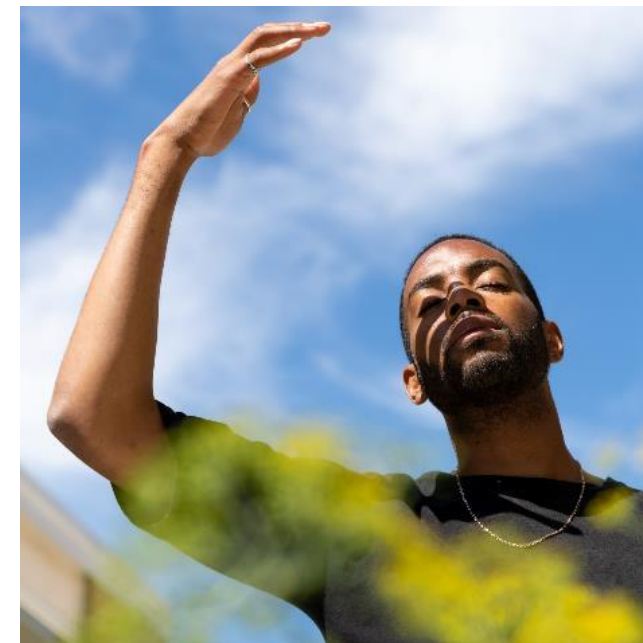
- slight increase in mild heat symptoms due to humid heat
- slight increase in heat illnesses, fainting episodes, hospitalisations, health services
- potential increase in biological risk (e.g. Aedes mosquito borne diseases, gastrointestinal disease)
- exacerbation of vulnerability in patients with chronic illness, children, pregnant women and the elderly

## Occupational health:

- potential increase in exhaustion during intense outdoor activity
- slightly reduced labour productivity

## Well-being:

- increased sweating and water consumption
- snacking/binge eating leading to acute negative health impacts (hypertension, diabetes) and weight gain
- potentially increased fatigue, irritability and aggression in the event of a prolonged heatwave



# Agriculture:

Expect some impacts from local excessive, humid heat during this period

## Livestock:

- increased cooling and ventilation need to mitigate heat stress in small and large livestock
- slightly stunted growth rate of broilers and egg production of layers
- slightly reduced dairy production

## Crop agriculture:

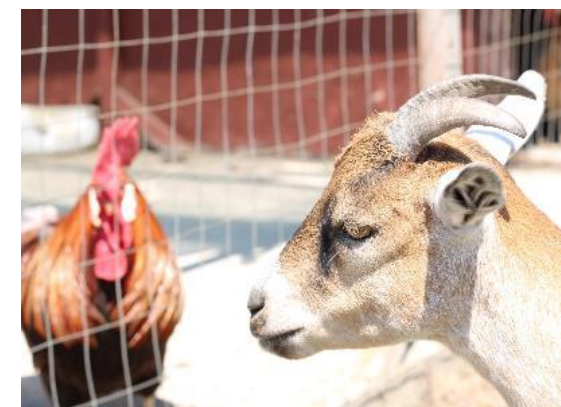
- exacerbation of any drought conditions leading to increased wilting
- reduced productivity between 10 AM and 3 PM

## Fisheries:

- increased water temperatures potentially reducing catch of reef fish, die-off and migration of pelagic fish and decreasing health of coral reef communities

## Forestry:

- exacerbation of any drought conditions
- increased wildfire potential in the Guianas if fuel stock is dry



# Tourism – Energy – Water:

## Expect some impacts from excessive heat during this period

### Tourism:

- *Heat adaptation* – slightly increased demand for AC and refrigeration and associated costs in hotels
- *Diving operations* – Potential coral reef bleaching, resulting in long-term reduction in demand

### Energy:

- *Production* – slightly reduced efficiency of power generation; potential increase in interruptions as a result of spikes in cooling demand
- *Demand and consumption* – increased cooling need in households, hotels, restaurants

### Water:

- *Quantity and quality* – water reservoir levels potentially increasing less rapidly than usual during the wet season due to increased evapotranspiration; potential increase in algal blooms
- *Consumption* – potential increase in households, hotels and power utilities



# DRM – Child Care & Education

Expect impacts from excessive humid heat in October in the Guianas & Southern Caribbean



## DRM:

- *Risk:* potentially increased mortality and increased need for cooling strategies immediately post disaster (e.g. intense heat after passage of tropical cyclone); increased wildfire potential in the Guianas (if fuel stock is dry)
- *Operations:* potentially reduced productivity of warehouse staff



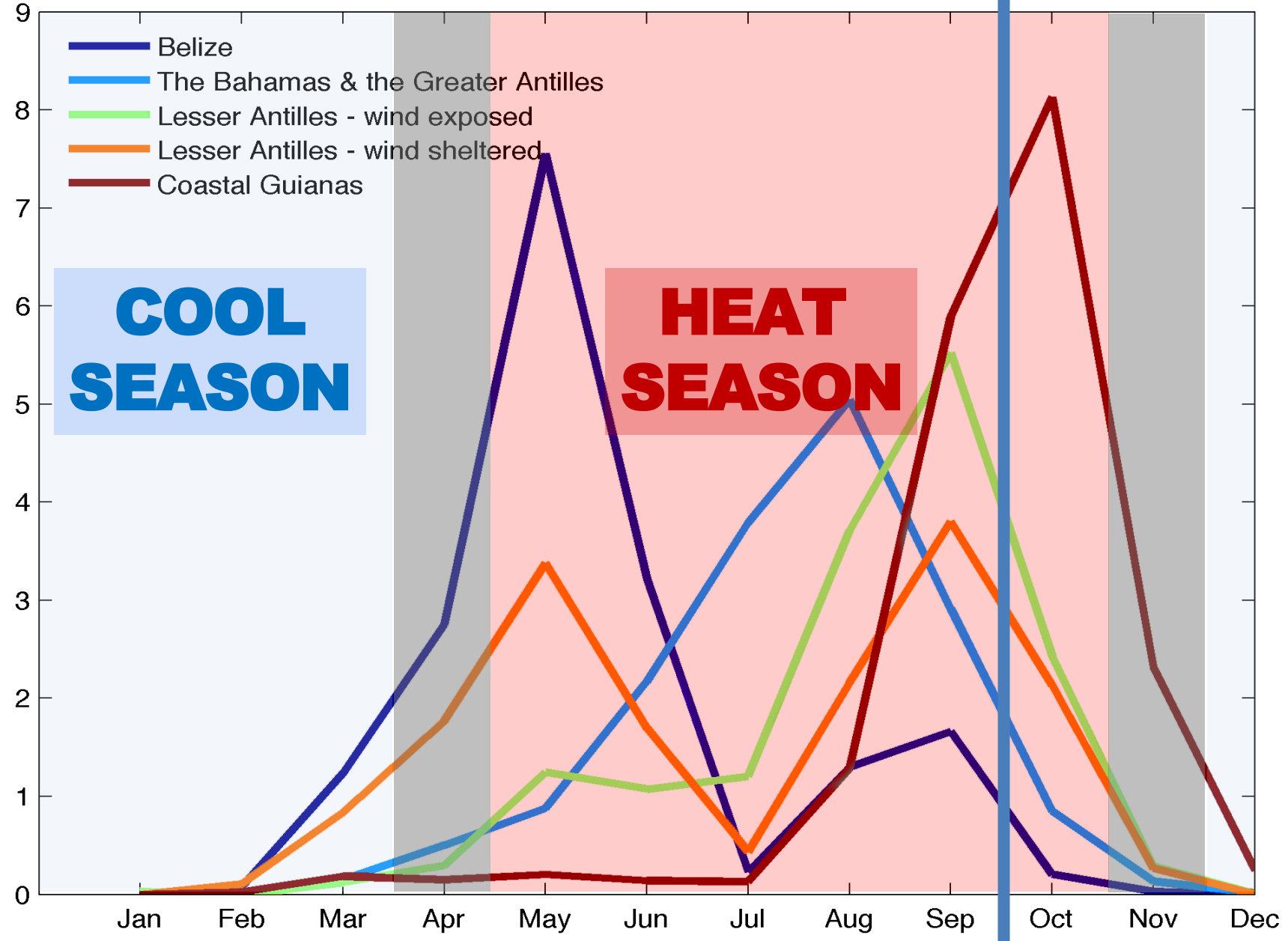
## Child care and education:

- *Learning:* potentially reduced productivity and reduced learning ability of students
- *Child Protection:* potential increase in aggression in the event of a prolonged heatwave

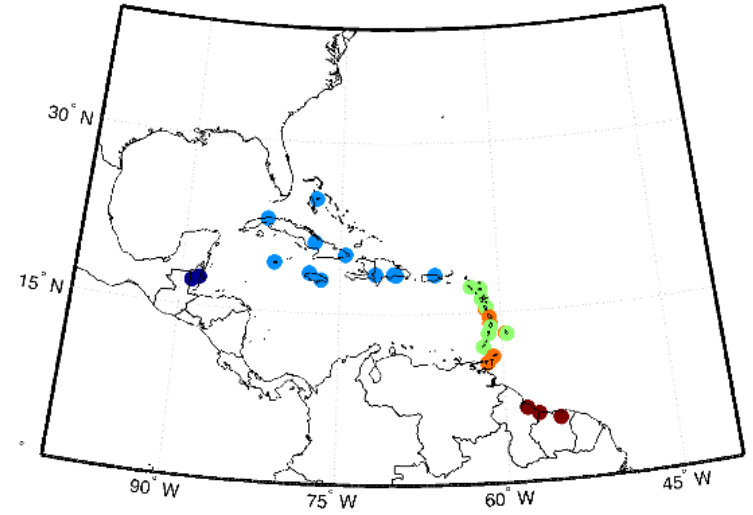


**TODAY**  
**(end of September)**

Number of days per month  
spent in heatwaves



**SUB-REGIONS**



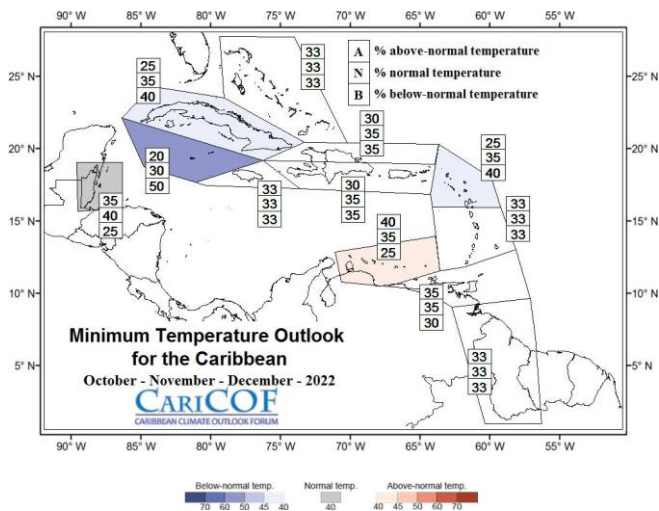
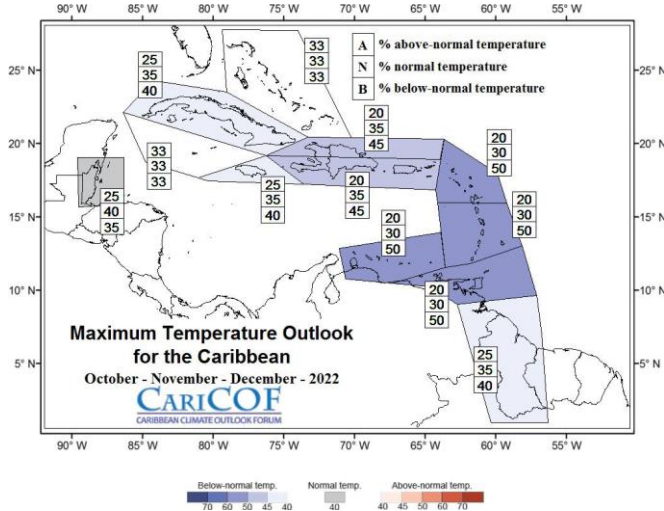
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# Overall, how hot will the next three to six months be?

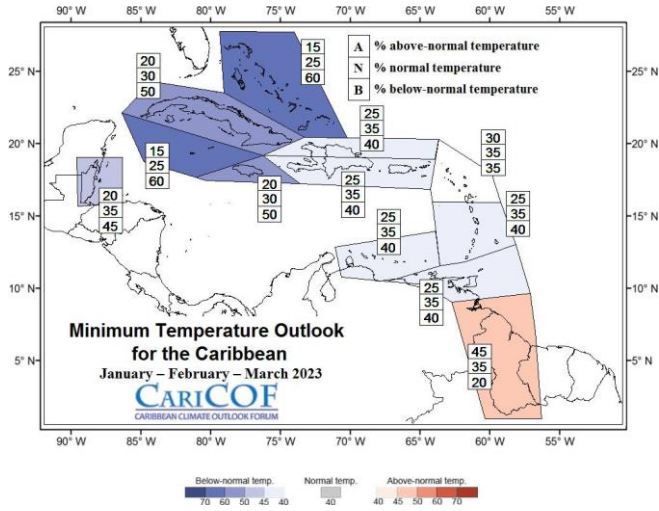
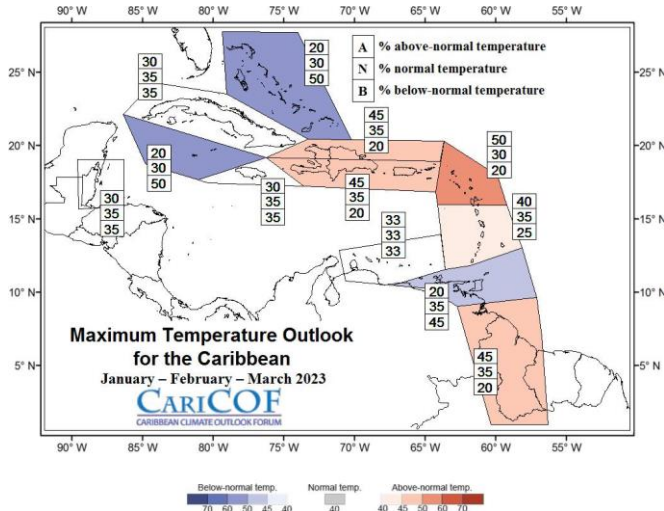
## Day time

## Night time

Oct-Nov-Dec 2022



Jan-Feb-Mar 2023




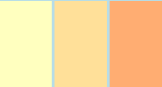
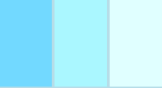
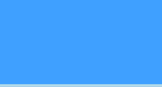

## FORECAST

1. Seasonably high temperatures are expected as the region transitions out of the 2022 Heat Season (April/May to October) and into to the cool season (December to March).
2. Cold nights may be more frequent than usual from January, with the likely exception of Guyana, while days may be slightly warmer than usual in many areas east and southwards of Jamaica.

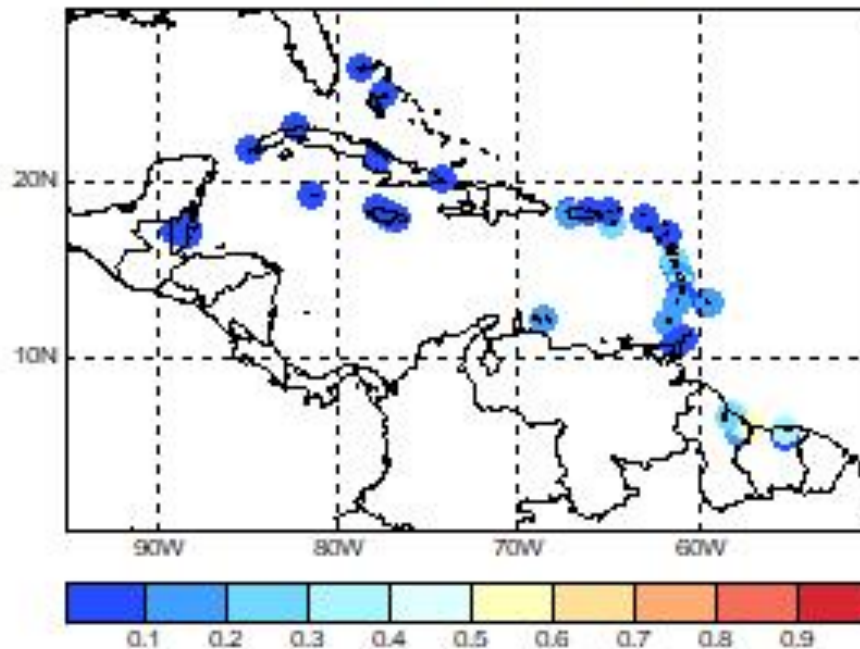
## IMPLICATIONS:

- Recurrent heat stress in the vulnerable population & small livestock through October in the ABC Is. and the Lesser Antilles and from mid-November in the Guianas.
- High temperatures and humidity increase cooling need

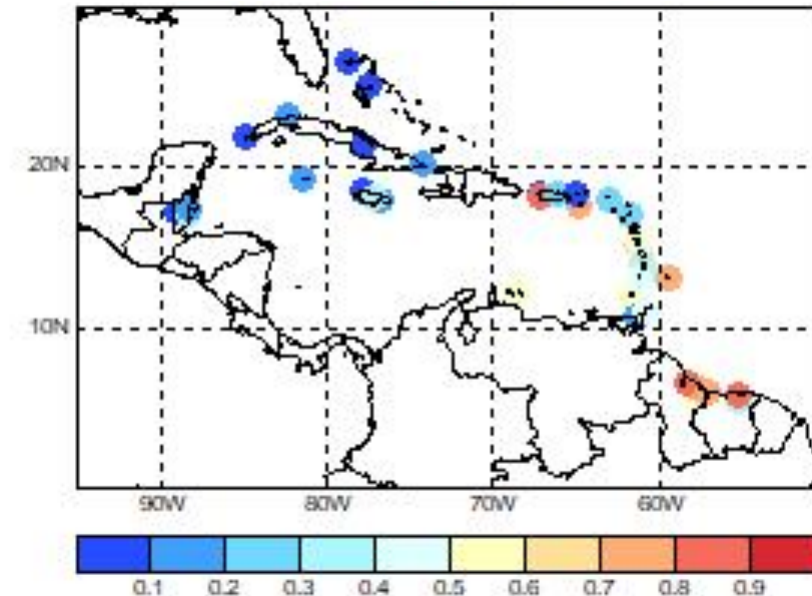
# Impact potential associated with heatwave frequency – zooming in on **Oct. 2022**

Relative risk	Colour codes	Percentage of time spent in heatwaves
<b>EXTREMELY HIGH</b>		>80%
<b>HIGH</b>		50-80%
<b>MODERATE</b>		20-50%
<b>SLIGHT</b>		10-20%
<b>MARGINAL</b>		0-10%

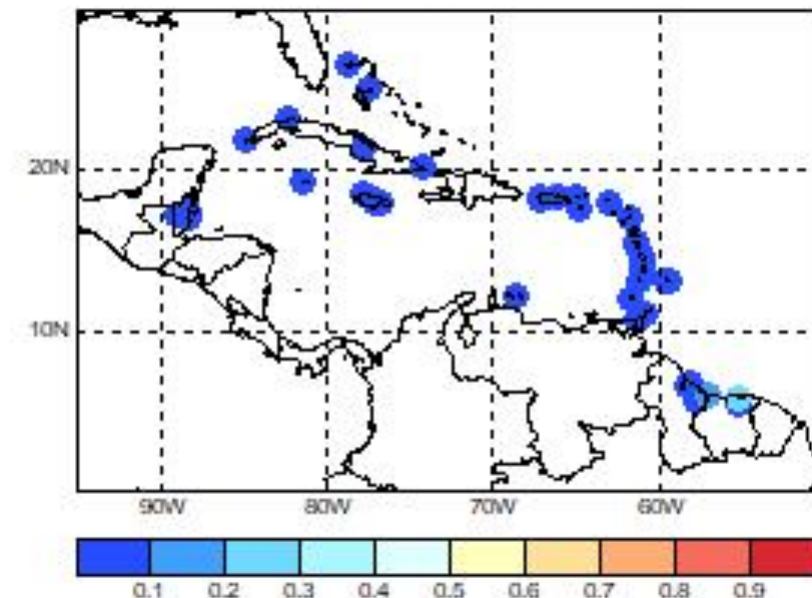
Forecast Potential – October 2022



Forecast Potential – Oct. 2022  
(upper scenario)



Forecast Potential – Oct. 2022  
(lower scenario)

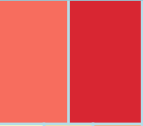
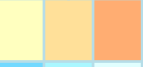
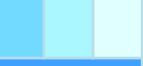




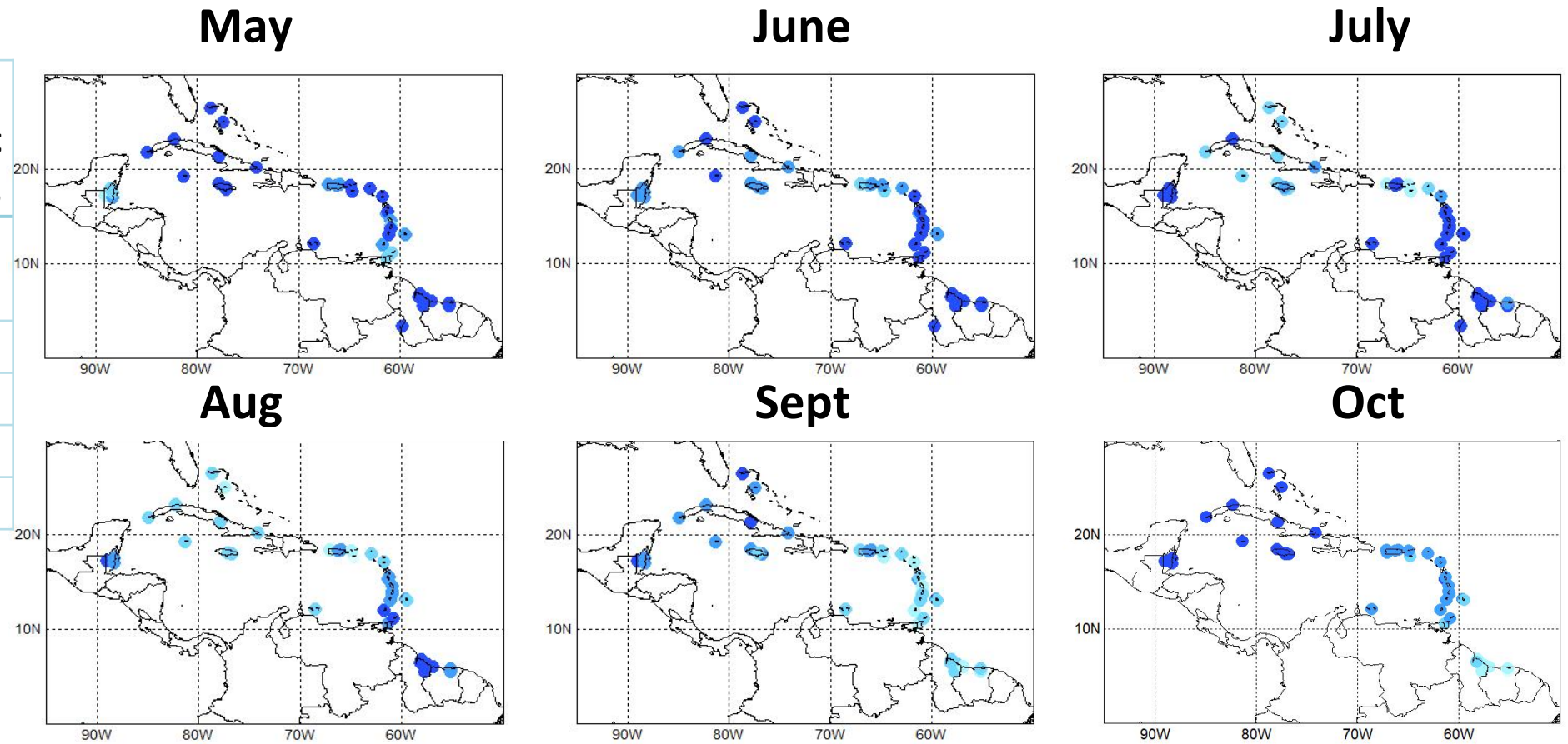
**USUALLY:** Slight to moderate potential east & southwards of Hispaniola; marginal elsewhere.

**FORECAST:** Moderate potential across the coastal Guianas; Slight to moderate potential in Barbados, Curaçao, St. Croix, Windward Is.; marginal elsewhere; **possibly extremely high potential in coastal Guianas & western Puerto Rico, high in Barbados, Curaçao, St. Croix & locally in the Windward Is.**



# Historical monthly heat impact potential due to heatwaves during the heat season

Relative risk	Colour codes	Percentage of time spent in heatwaves
<b>EXTREMELY HIGH</b>		>80%
<b>HIGH</b>		50-80%
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May: Moderate potential in Belize; marginal to slight elsewhere.  
 Jun.: Slight potential in Barbados and areas from St. Martin westwards; marginal elsewhere.  
 Jul.: Slight to moderate potential in the Greater Antilles & Leeward Is.; marginal to slight elsewhere.  
 Aug.: Moderate potential in Barbados & islands westwards of Guadeloupe; marginal elsewhere.  
 Sep.: Moderate potential in the ABC Is., Lesser Antilles, Guianas; marginal to slight elsewhere.  
 Oct.: Moderate potential in Barbados, the Guianas & St. Croix; marginal westwards of Hispaniola; slight elsewhere.



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