

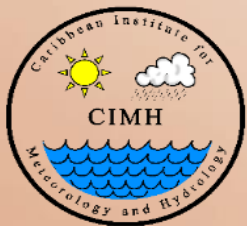
Heat Outlook for August to January 2023-24

—

Excessive heat can be expected until October (particularly in August and September)

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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CARICOF
CARIBBEAN CLIMATE OUTLOOK FORUM

Health: Greater frequency of heat symptoms due to excessive heat, particularly in August & September

Public health:

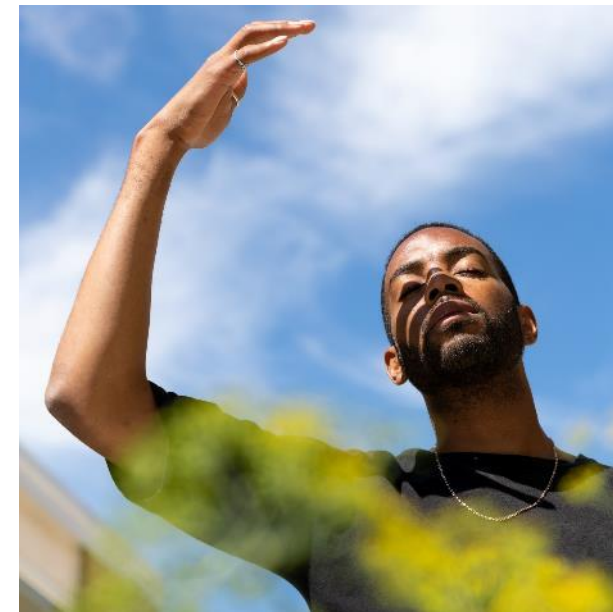
- *strong* increase in mild heat symptoms
- *notable* increase in heat illnesses, fainting episodes, hospitalisations, health services
- *likely* increase in biological risk (e.g. Aedes mosquito borne diseases, gastrointestinal disease)
- *exacerbation* of vulnerability in patients with chronic illness,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

Occupational health:

- *potential* increase in exhaustion during intense outdoor activity
- *significantly* reduced labour performance and productivity if unprotected

Well-being:

- *significantly* increased sweating and water consumption
- snacking/binge eating leading to acute negative health impacts (hypertension, diabetes) and weight gain
- *increased* fatigue, irritability and aggression during prolonged heatwaves



Agriculture:

Expect impacts from excessive heat from August to October

Livestock:

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

Crop agriculture:

- *exacerbation* of any evolving drought conditions leading to increased wilting
- *strongly* 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
- *significant* potential for coral reef bleaching

Forestry:

- *exacerbation* of any evolving drought conditions
- increased wildfire potential if fuel stock is dry



Tourism – Energy – Water:

Expect impacts from excessive heat, particularly in August & September

Tourism:

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

Energy:

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

Water:

- *Quantity and quality* – water reservoir levels potentially decreasing due to increased evapotranspiration; potential increase in algal blooms
- *Consumption* – likely increase in households, hotels and power utilities



DRM – Child Care & Education

Expect impacts from excessive heat from August to October



DRM:

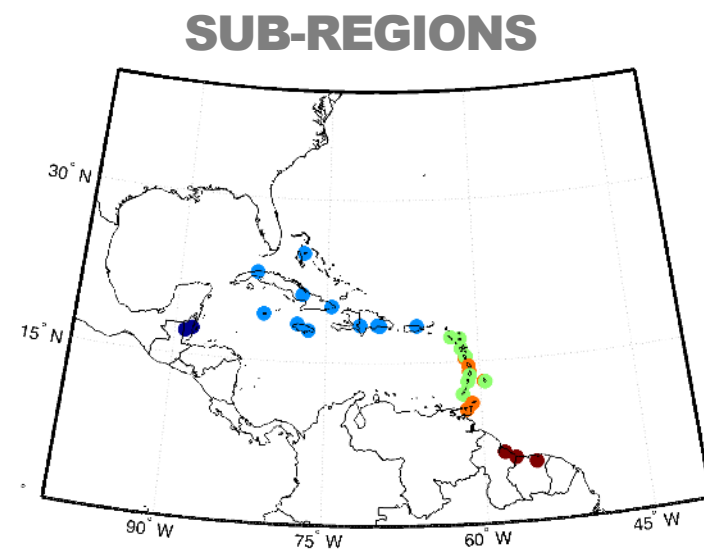
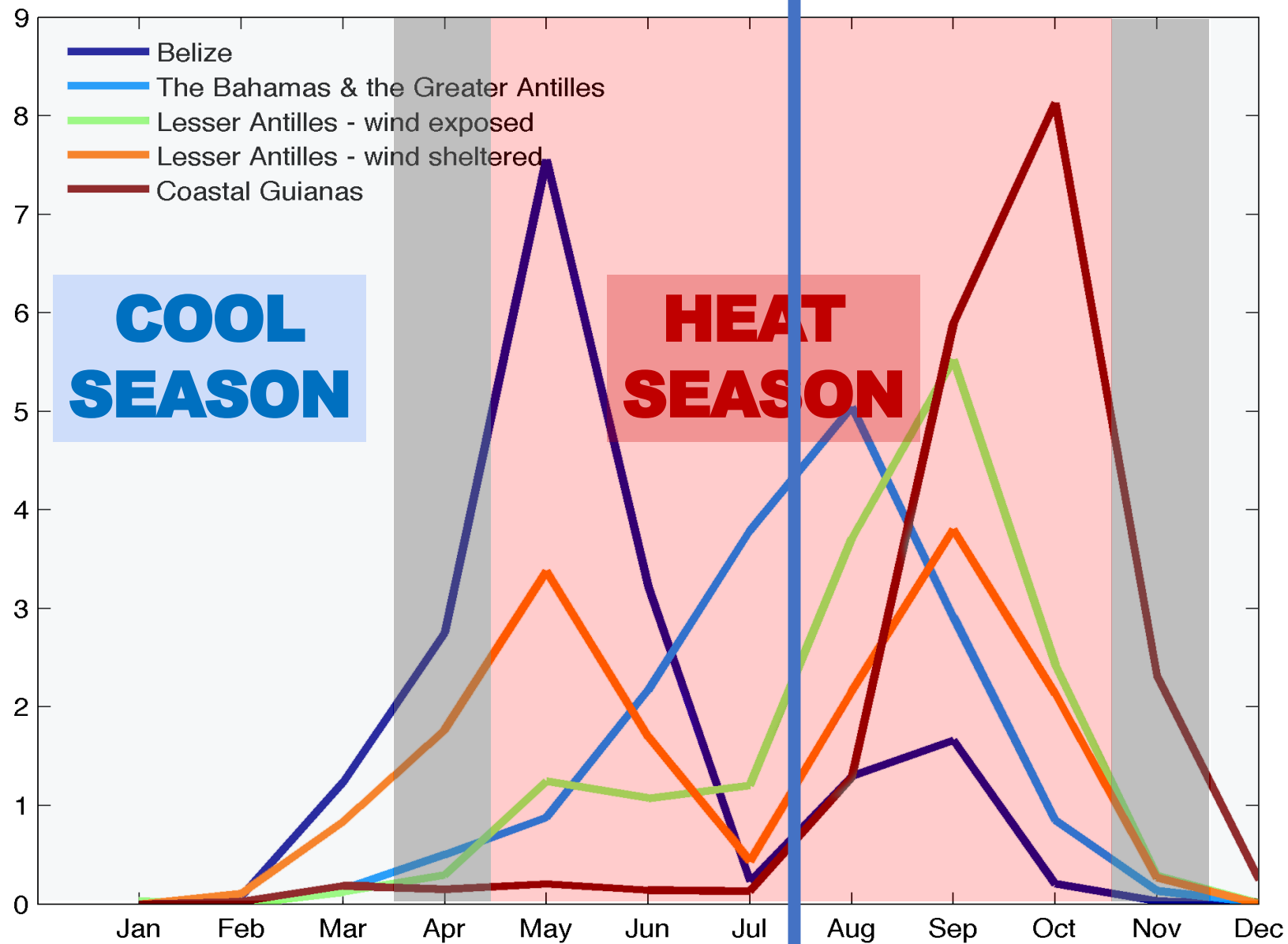
- *Risk:* potentially increased mortality and increased need for cooling strategies immediately post disaster (e.g. intense heat after passage of tropical cyclone); increased wildfire potential (if fuel stock is dry)
- *Operations:* likely reduced productivity of warehouse staff if unprotected



Child care and education:

- *Learning:* significantly reduced productivity and reduced learning ability of students at the start of the 2023-2024 school year
- *Child Protection:* potential increase in aggression during prolonged heatwaves

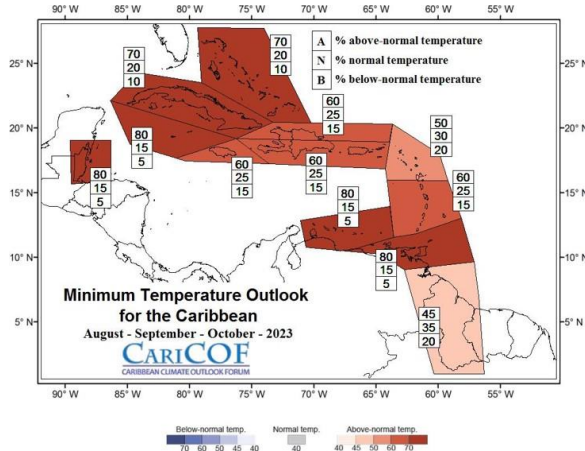
Number of days per month
spent in heatwaves



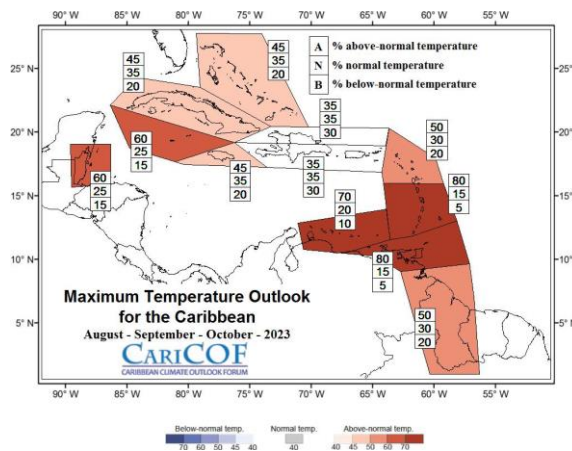
Overall, how hot will the next three to six months be?

Aug-Sep-Oct 2023

Night-time



Daytime



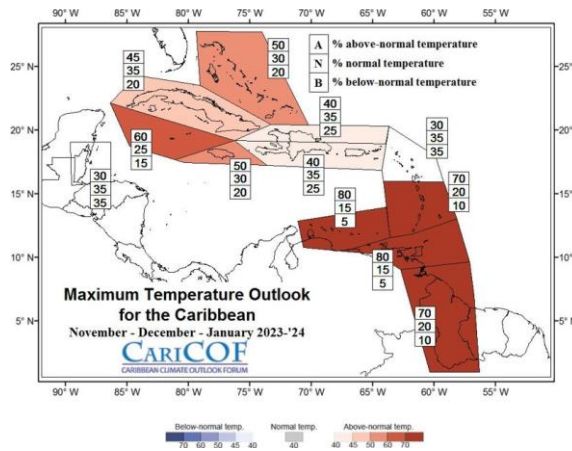
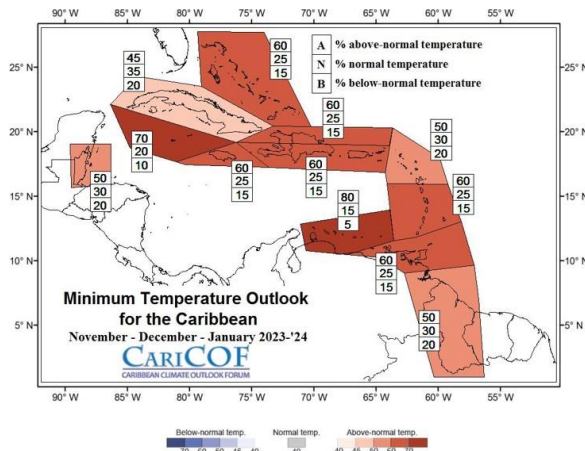
FORECAST

1. August to October, marking the second half of the Caribbean Heat Season and its peak in the Guianas and the Lesser Antilles is forecast to be hotter than usual.
2. Intense night-time and daytime heat is expected to remain present before they cool steadily from November.

IMPLICATIONS

- Frequent and, possibly intense episodes of heat stress in the vulnerable population & small livestock because of high temperature and increasing humidity through September.
- Cooling need rising sharply towards August and September.

Nov-Dec-Jan 2023-24

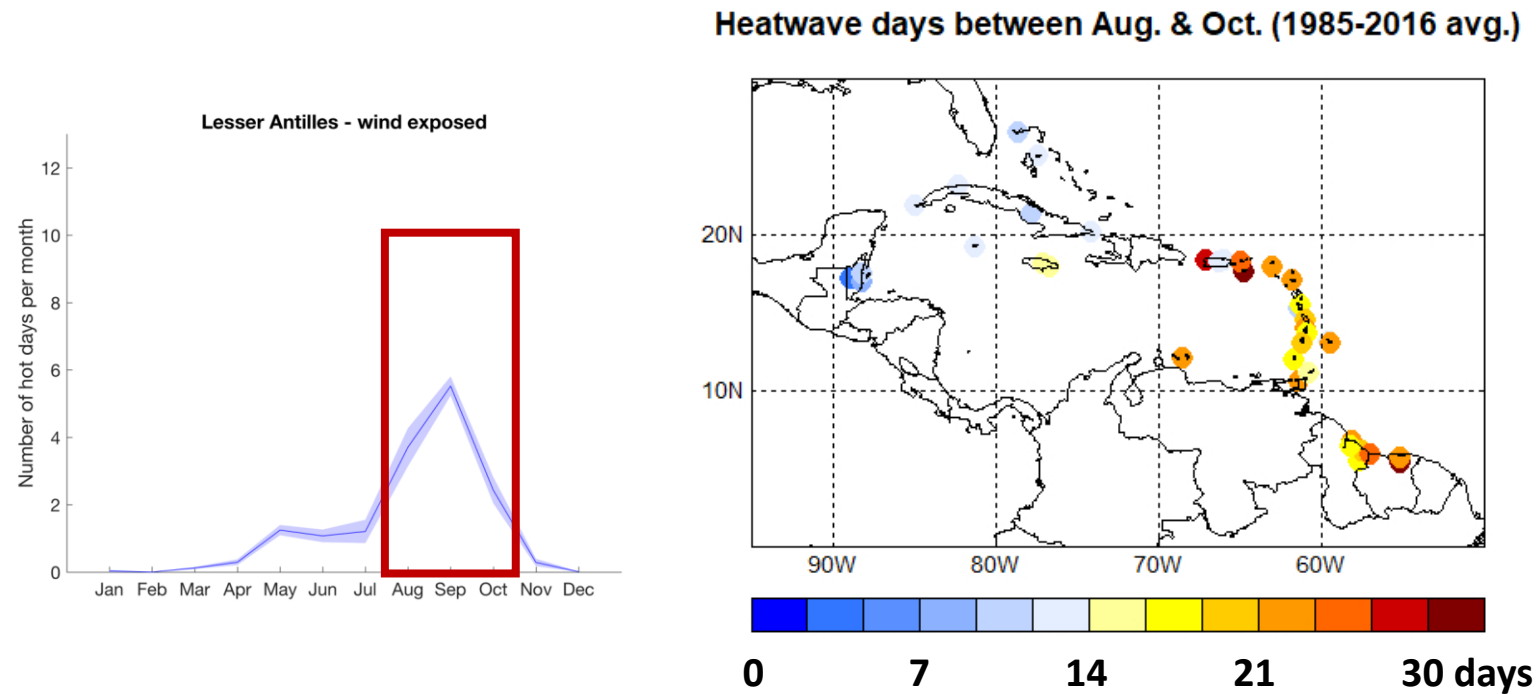


Milder

Usual

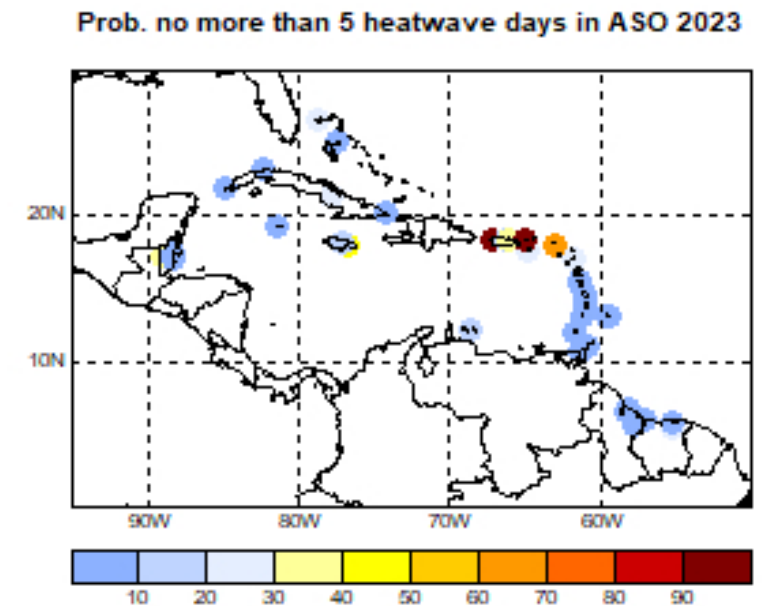
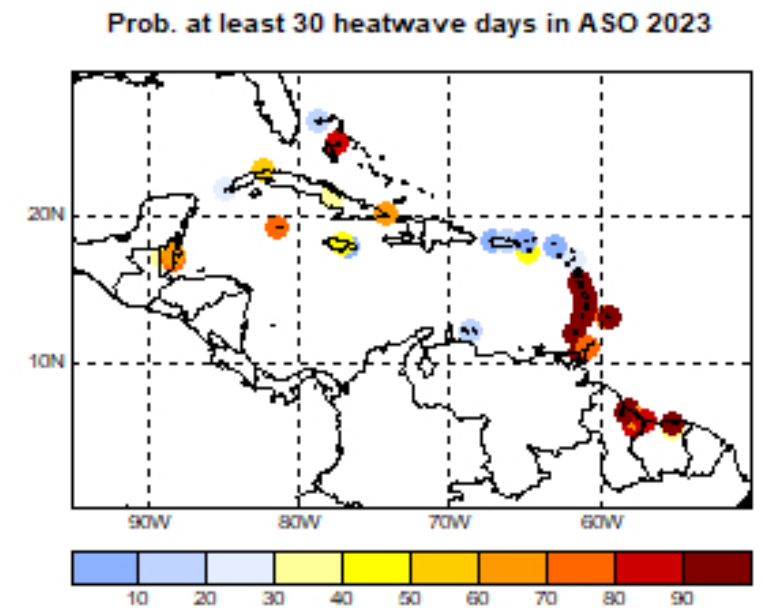
Hotter

How many heatwave days to expect for August to October 2023, i.e. the peak of the heat season in The Lesser Antilles?



USUALLY: 15-30 heatwave days in Puerto Rico, coastal Guianas and the Lesser Antilles; 5-15 heatwave days elsewhere.

FORECAST: Strong increase in the number of heatwave days in Barbados, The Bahamas, coastal Guianas and the Windward Islands; **likely at least 30 heatwave days in Barbados, coastal Guianas and the Windward Islands and possibly in The Bahamas, Belize and the Greater Antilles.**

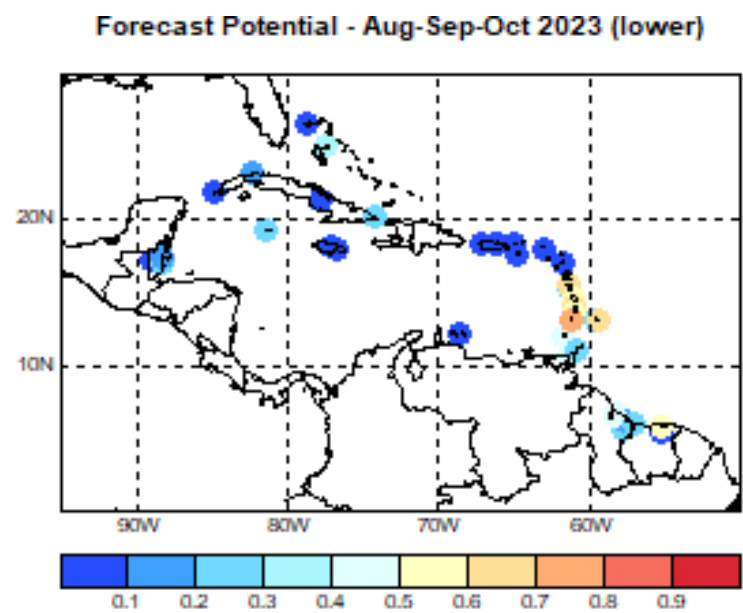
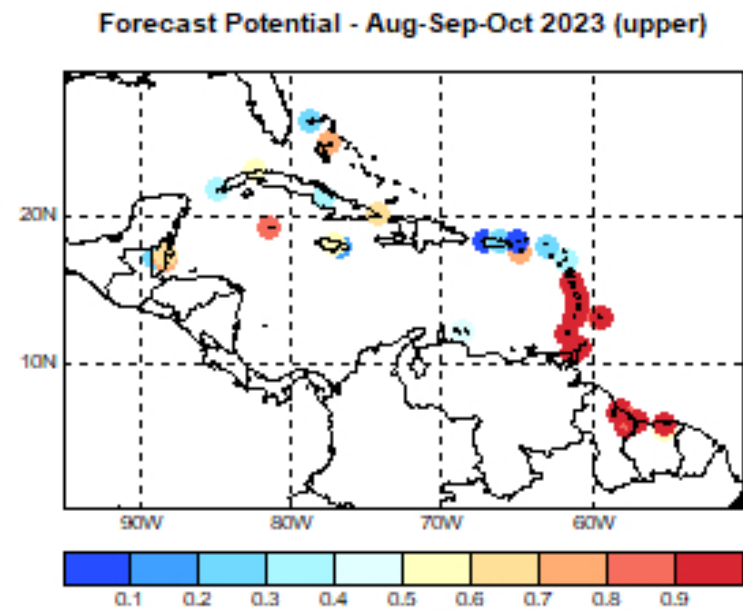
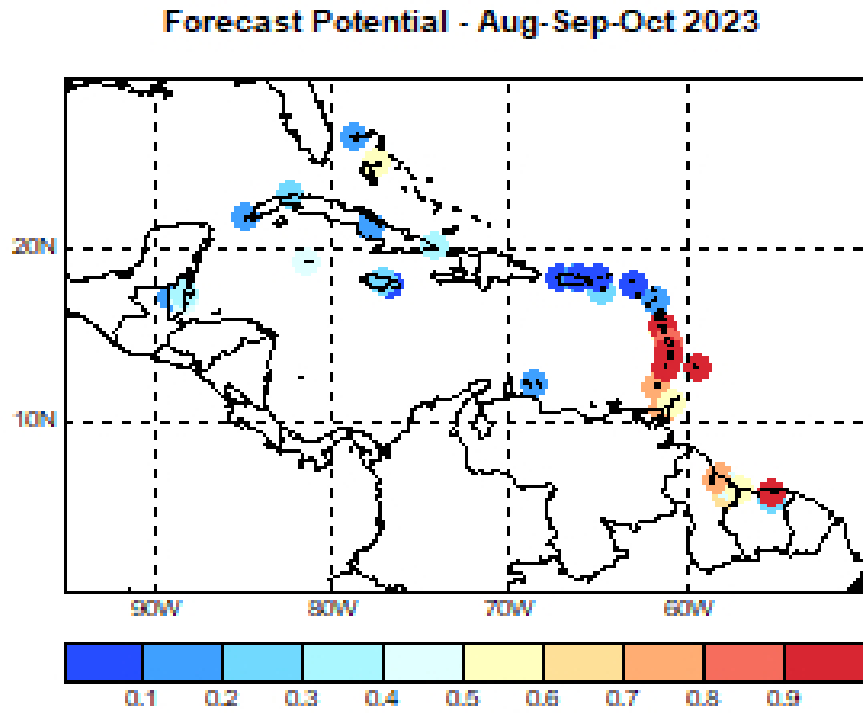


Heat impact potential during Aug-Sep-Oct 2023?

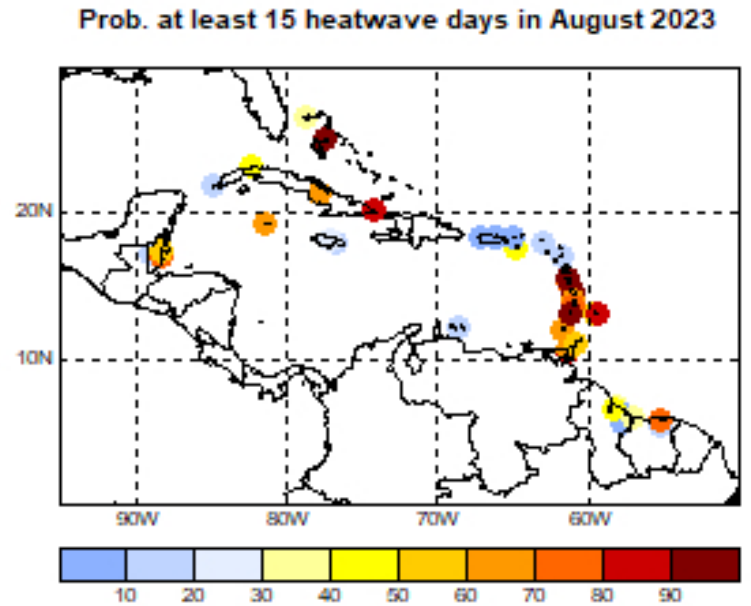
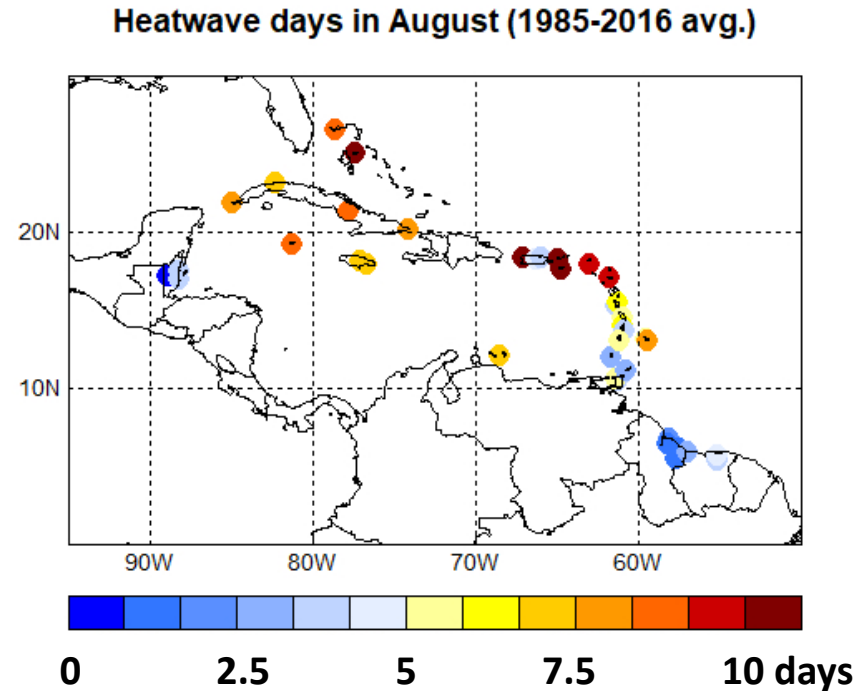
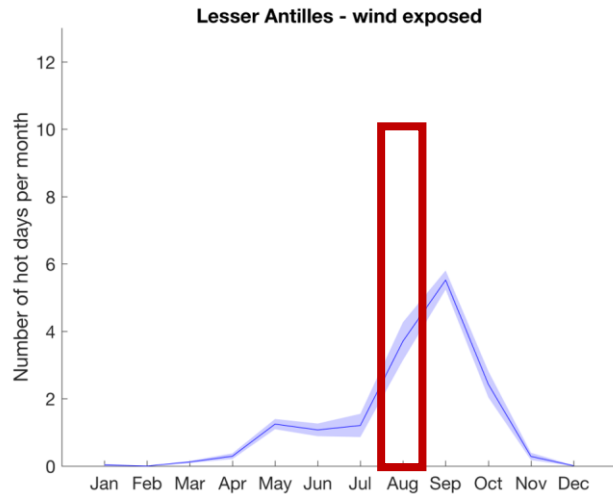
(i.e., percentage of time spent in heatwaves during ASO 2023)

Heat impact potential	Colour codes	Percentage of time spent in heatwaves
EXTREMELY HIGH	<div><div></div><div></div><div></div></div>	>80%
HIGH	<div><div></div><div></div><div></div></div>	50-80%
MODERATE	<div><div></div><div></div><div></div></div>	20-50%
SLIGHT	<div><div></div><div></div></div>	10-20%
MARGINAL	<div><div></div></div>	0-10%

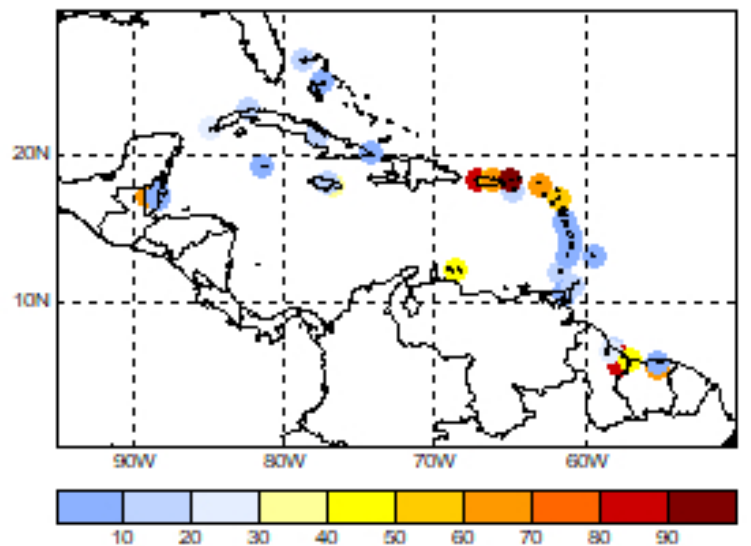
FORECAST: High to extremely high potential in Barbados, coastal Guianas & the Windward Is.; slight to moderate potential in The Bahamas, Belize, the Greater Antilles and St. Croix; marginal to slight potential in the ABC & Leeward Is. *(left centre map)*; **extr. high potential possible in Barbados, Cayman Is., across the coastal Guianas and Windward Is.** *(top right map).*



How many heatwave days to expect in August?



Prob. no more than 5 heatwave days in August 2023




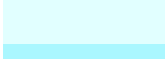





USUALLY: Over 10 heatwave days in The Bahamas, Leeward Islands, Puerto Rico and USVI; 5-8 in the ABC Is., Barbados and across the Greater Antilles; no more than 5 elsewhere.

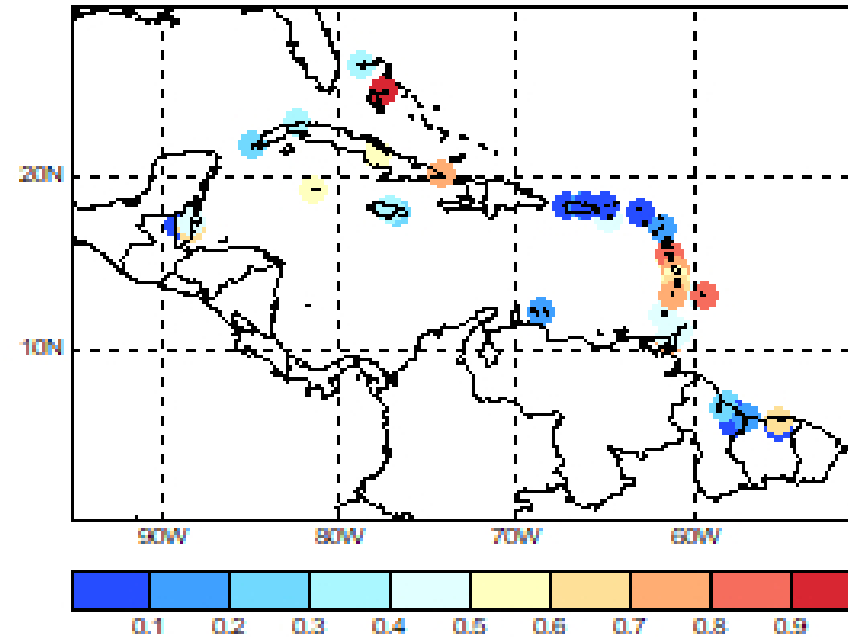
FORECAST: Strong increase in the number of heatwaves in The Bahamas and across the Antilles; **likely at least 15 heatwave days in Barbados, The Bahamas and most of the Windward Islands.**

Heat impact potential during August 2023?

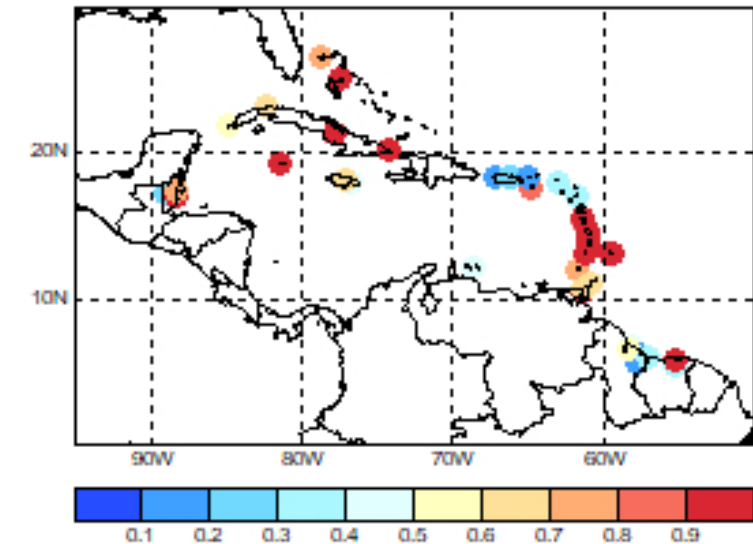
(i.e., percentage of time spent in heatwaves during August 2023)

Heat impact potential	Colour codes	Percentage of time spent in heatwaves
EXTREMELY HIGH		>80%
HIGH		50-80%
		
MODERATE		20-50%
		
SLIGHT		10-20%
MARGINAL		0-10%

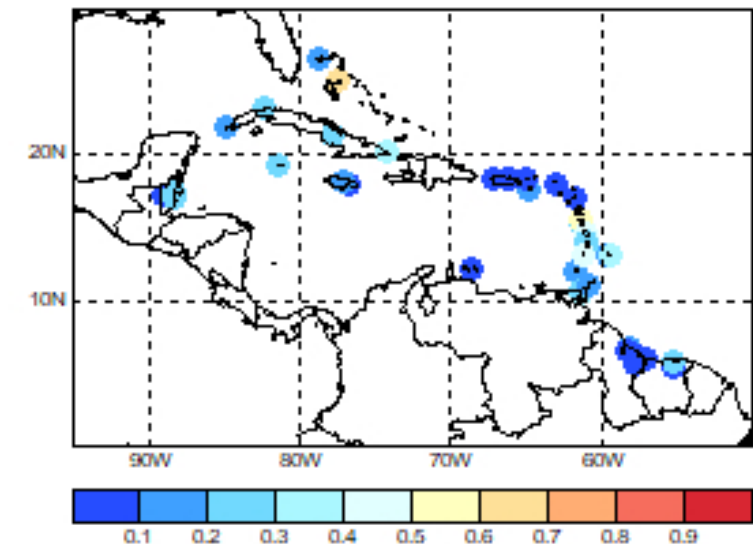
Forecast Potential - August 2023



Forecast Potential - August 2023 (upper)








Forecast Potential - August 2023 (lower)

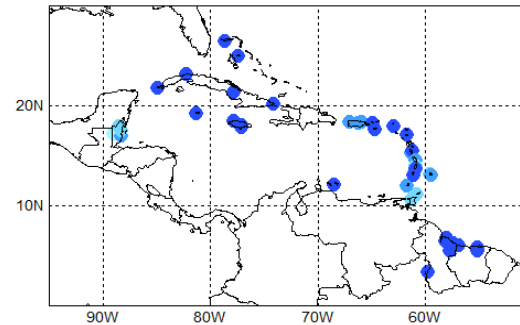


FORECAST: Extremely high potential in parts of The Bahamas; moderate to high potential in Barbados, Belize, across the Greater Antilles (except in Puerto Rico), coastal Guianas, St. Croix & Windward Is.; marginal to slight potential elsewhere (*left centre map*); **possibly extr. high potential in The Bahamas, Barbados, Cayman Is., parts of Cuba, St. Croix, parts of Suriname & the Windward Is. (*top right map*).**

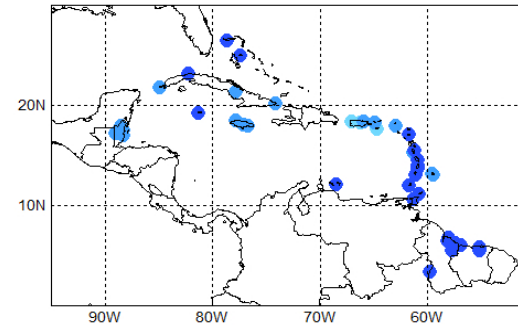
Historical monthly heat impact potential due to heatwaves during the heat season

Heat impact potential	Colour codes	Percentage of time spent in heatwaves
EXTREMELY HIGH		>80%
HIGH		50-80%
MODERATE		20-50%
SLIGHT		10-20%
MARGINAL		0-10%

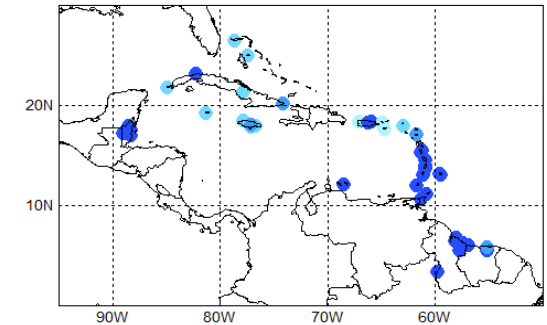
May



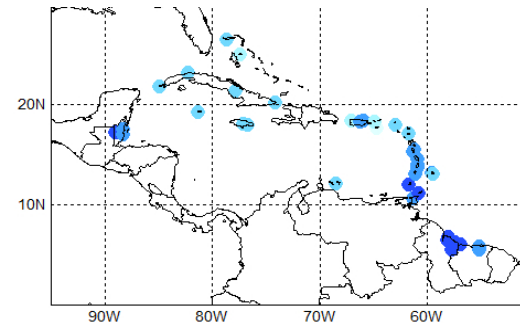
June



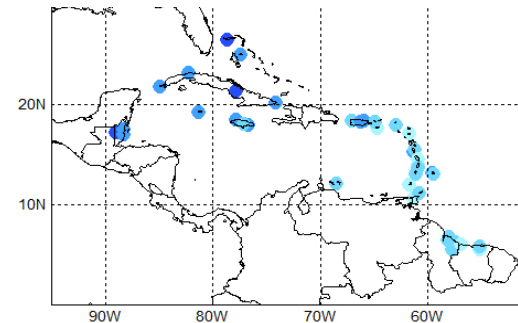
July



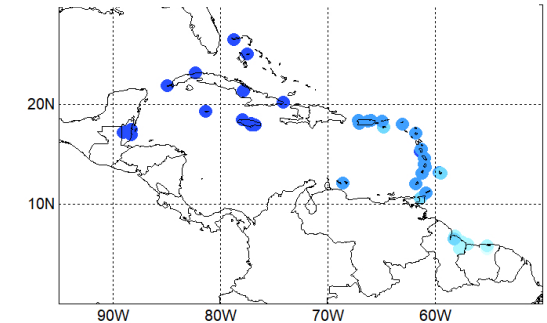
Aug



Sept



Oct



- 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.



**Regional climate data, information, tools,
experimental and operational products
are available at
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