









Heat Outlook for June to November 2020

Frequent excessive heat from August to October

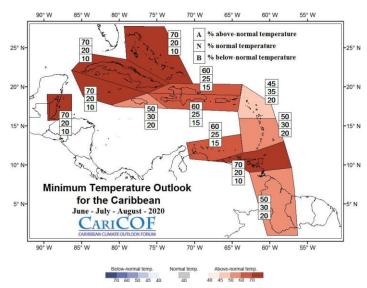
Dr. Cedric J. VAN MEERBEECK¹ (<u>cmeerbeeck@cimh.edu.bb</u>), Dr. Simon MASON², Dr. Hannah Nissan², Dr. Teddy ALLEN², Wazita Scott¹

¹Caribbean Institute for Meteorology and Hydrology (CIMH), Barbados ²International Research Institute for Climate and Society (IRI), USA

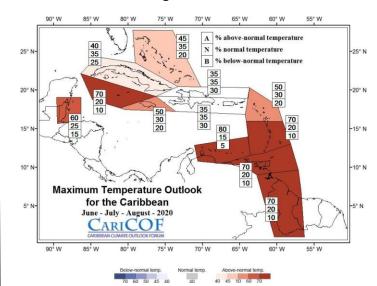


How hot will the next three to six months be?

Night time



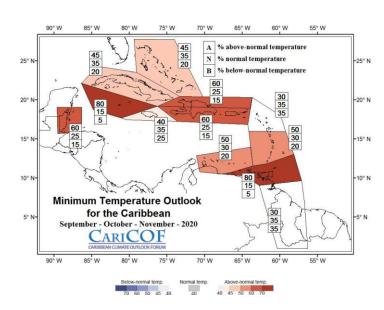
Day time



FORECAST:

- Warmer than usual conditions are forecast for most areas.
- 2. However, in places where rainfall ends up more abundant than usual in the Greater Antilles, day-time temperatures may turn out to be slightly cooler than usual.

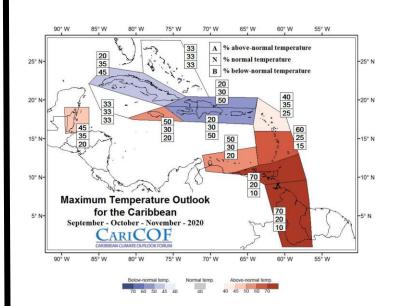
Milder Usual Hotter



Milder

Usual

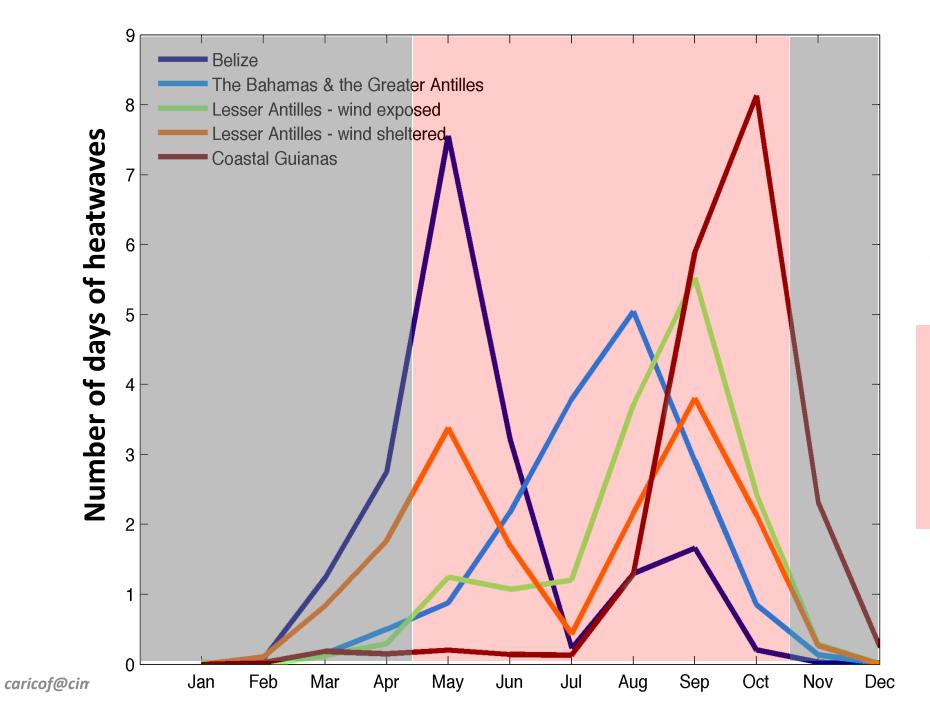
Hotter

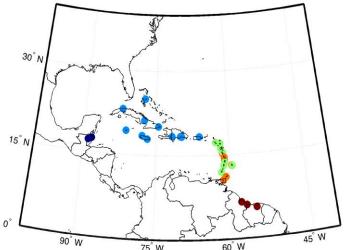


IMPLICATIONS:

- Heat stress in the vulnerable population & small livestock from
 - July to September in the Bahamas and Greater Antilles;
 - August to October in the Lesser Antilles;
 - September to November in the Guianas.
- Cooling need until October will potentially be higher than most other years.

HEATWAVES: SEASONALITY



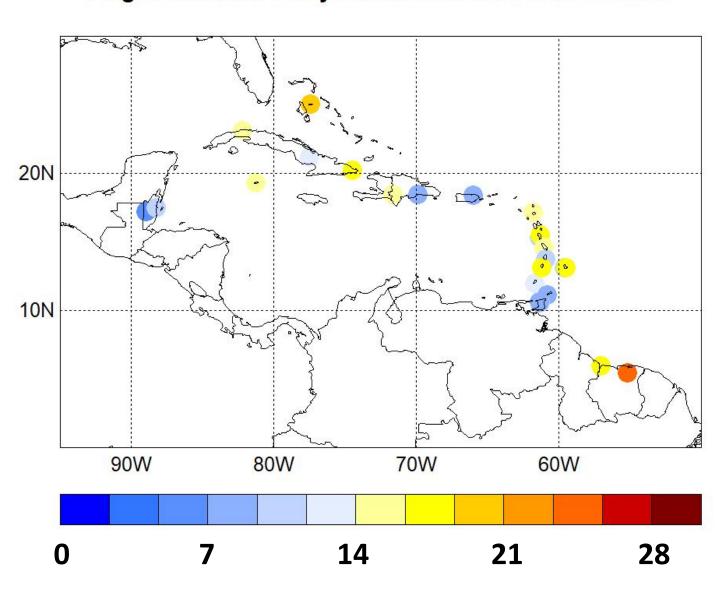


A CARIBBEAN
HEAT SEASON:
May to Oct.

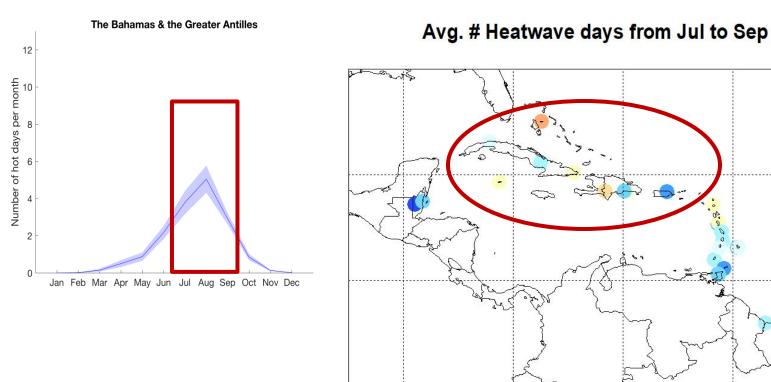


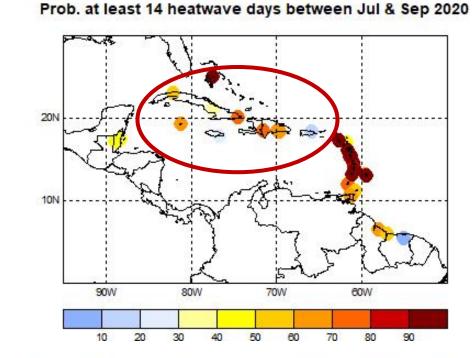
How many heatwave days do we historically get on average from June to November?

Avg. # heatwave days between June & November

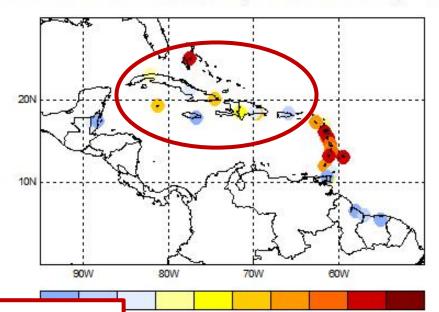


What does the peak of the **heat season** look like in **The Bahamas** and the **Greater Antilles**, i.e. July to September?





Prob. at least 30 heatwave days between Jul & Sep 2020



USUALLY: around 10-15 heatwave days over 3 months.

90W

FORECAST: generally over 30% chance for at least 14 heatwave days, and over 50% chance for at least 30 in Cayman, Cuba and the Bahamas.

80W

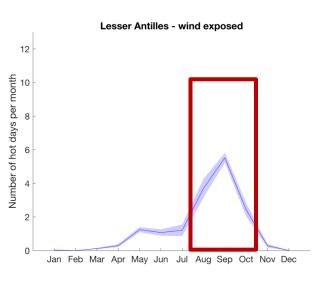
70W

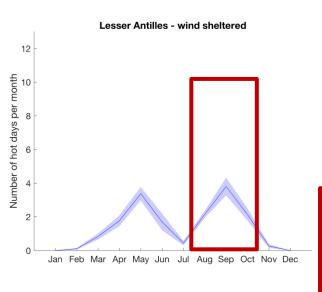
14

60W

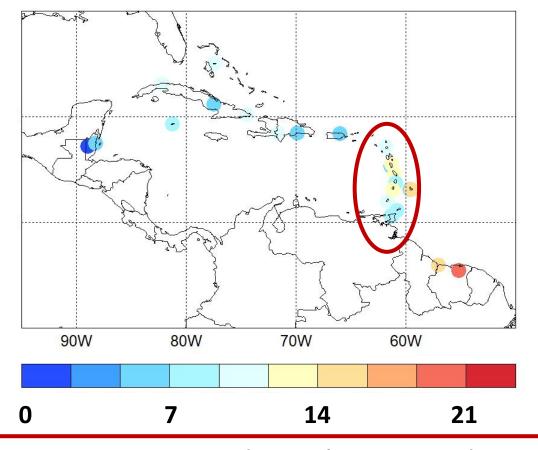
21

What does the peak of the **heat season** look like in the **Lesser Antilles**, i.e. August to October?





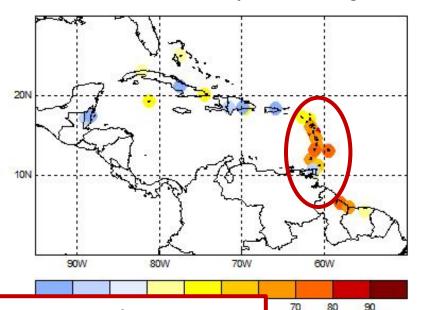
Avg. # heatwave days from Aug to Oct



20N 10N 80W 80W 70W 80W

Prob at least 14 heatwave days between Aug & Oct 2020

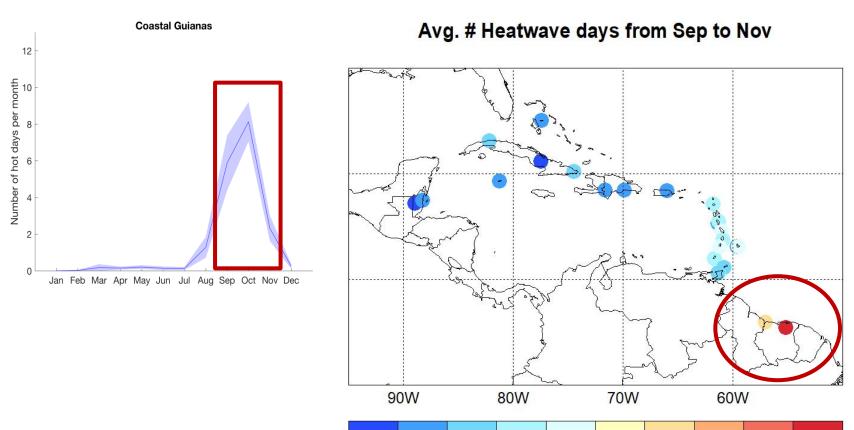
Prob. at least 30 heatwave days between Aug & Oct 2020



USUALLY: around 7-14 heatwave days over 3 months.

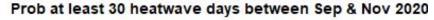
FORECAST: over 80% chance for at least 14 heatwave days, and over 50% chance for at least 30 heatwave days.

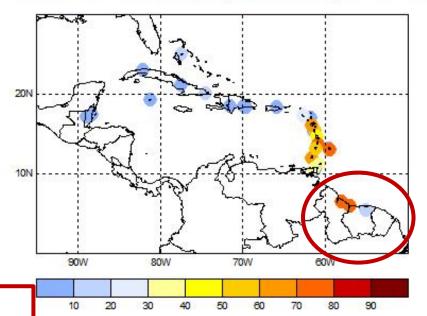
What does the peak of the **heat season** look like in the **Guianas**, i.e. September to November?



20N 10N 90W 80W 70W 80W

Prob at least 14 heatwave days between Sep & Nov 2020





USUALLY: around 14-21 heatwave days over 3 months.

FORECAST: 90% and 60% chance for at least 14 and 30 heatwave days, respectively in Guyana. Possibly fewer in Suriname.

14

21

How many heatwave days from June till November 2020?

USUALLY:

- 1) In most years, relatively few heatwaves in Belize, Puerto Rico and Trinidad and Tobago. In much of the rest of the region, around 14 and up to 21 heatwave days are the norm.
- 2) The peak season for heatwaves is from July to September in The Bahamas and the Greater Antilles, August to October in the Lesser Antilles, and September to November in the Guianas.

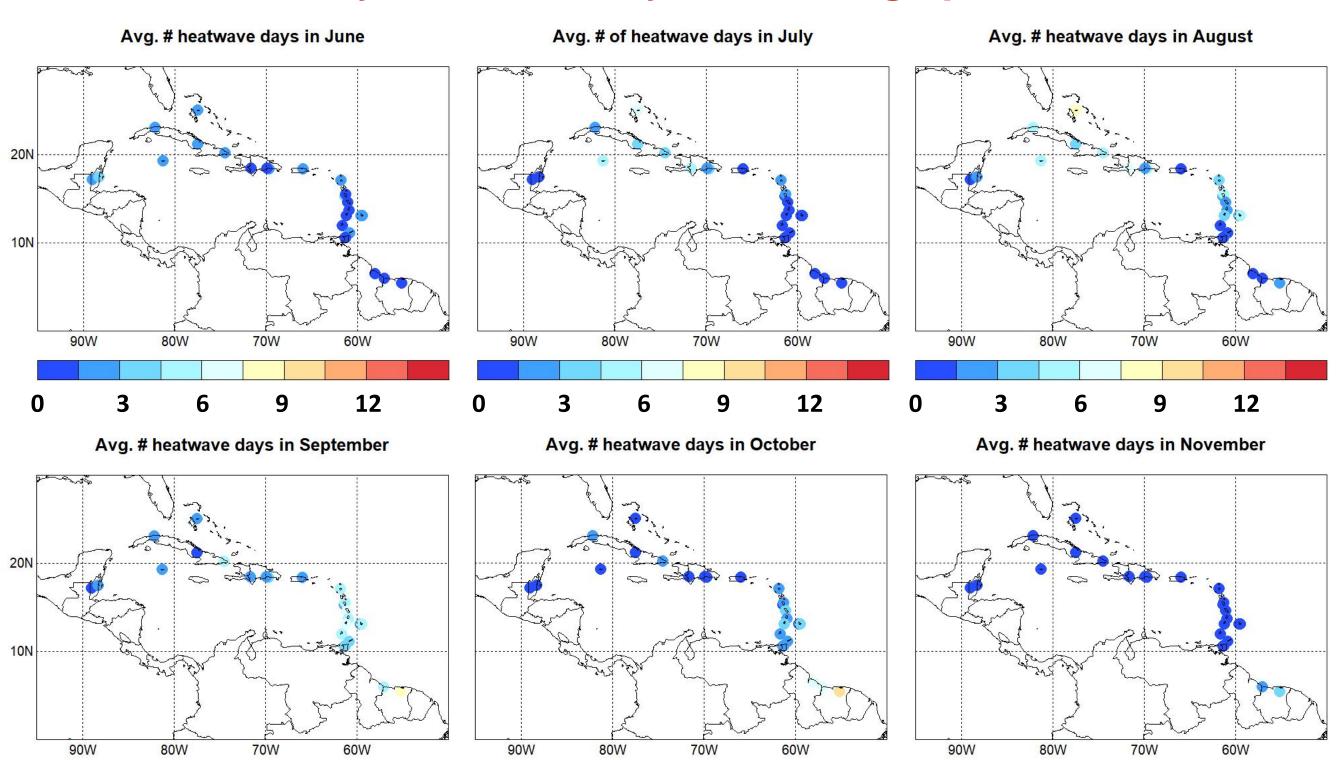
FORECAST:

- The number of heatwave days is expected to be much higher to what we usually get during the Caribbean heat season (May-Oct).
- It will likely be over 30 in many places during its peak, and higher than most years.
- The likely exception is in places with more abundant wet season rainfall than usual.

IMPLICATIONS:

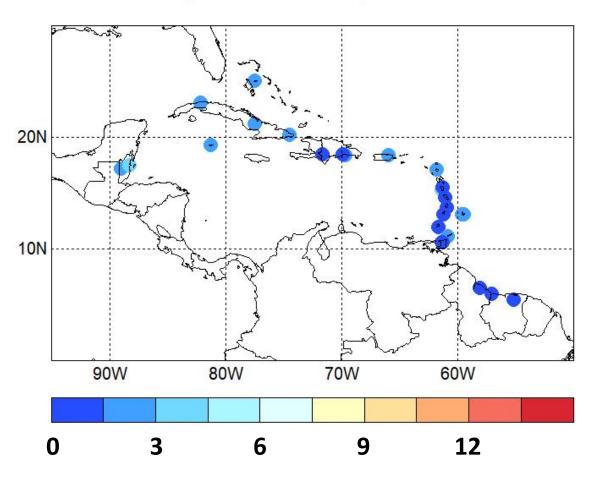
- In the event of heatwaves, of which more than 1 can occur especially during dry spells, heat stress in human populations or livestock will sharply increase.
- Heat stress at the peak of the heat season on par with hottest years (e.g. 2016).

How many heatwave days on average per month?

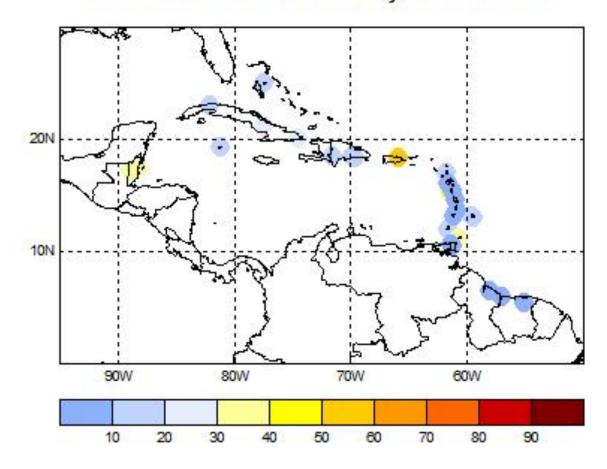


How many heatwave days to expect in June 2020?

Avg. # heatwave days in June

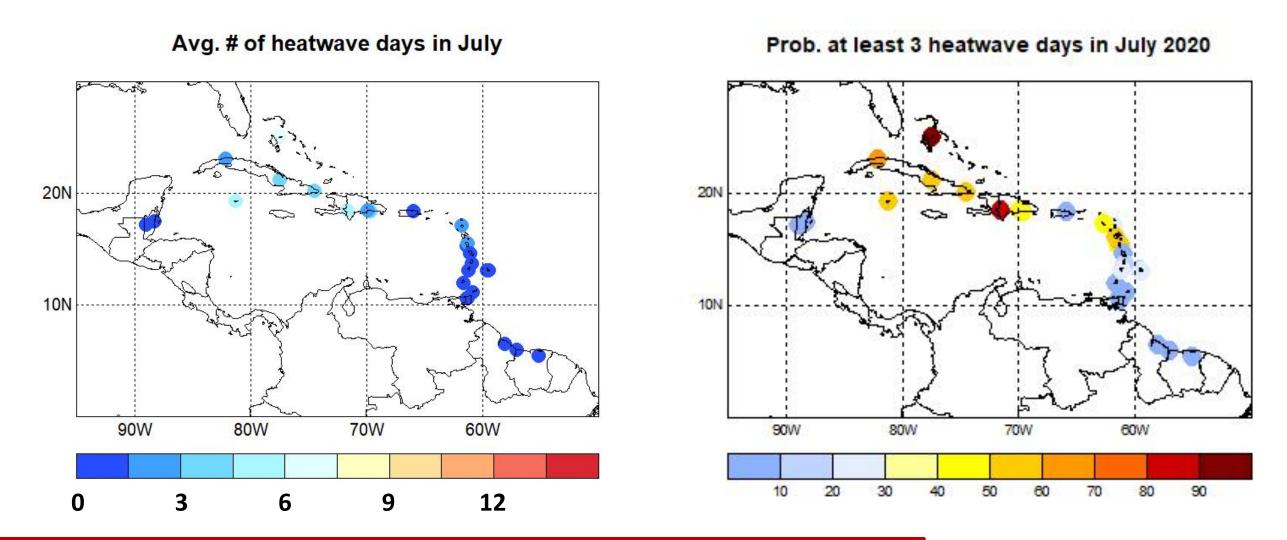


Prob. at least 3 heatwave days in June 2020



USUALLY: up to 3 heatwave days westward of Haiti. FORECAST: very few places can expect 3 or more heatwave days in June this year.

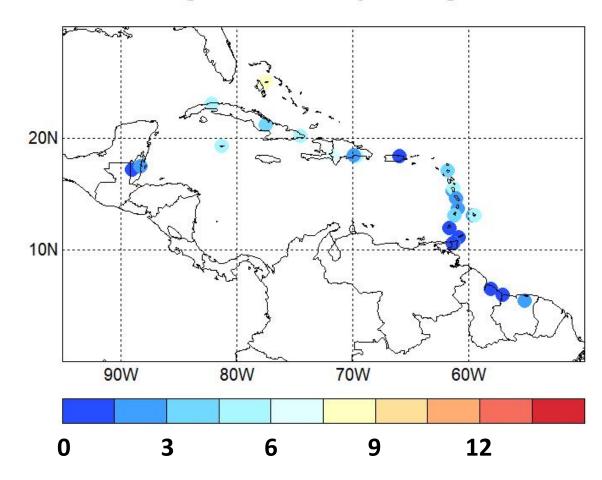
How many heatwave days to expect in July 2020?



USUALLY: up to 6 heatwave days in the Bahamas & Greater Antilles. FORECAST: over 50% chance of 3 or more heatwave days in July this year in this area.

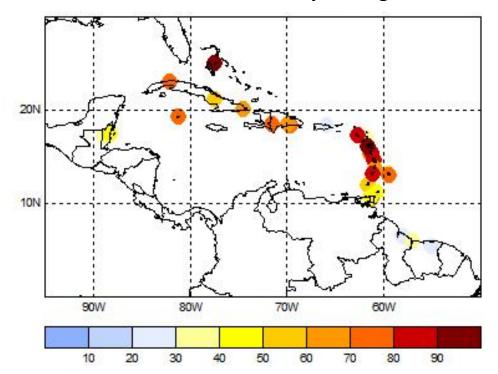
How many heatwave days to expect in August 2020?

Avg. # heatwave days in August

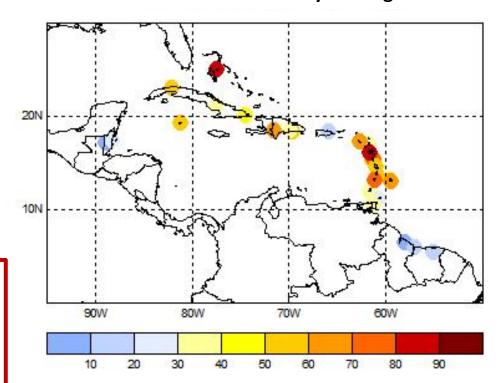


USUALLY: Generally 3 to 6 heatwave days in the islands. **FORECAST: 40-90% chance of 7 or more heatwave days in August this year in the islands.**

Prob. at least 3 heatwave days in August 2020

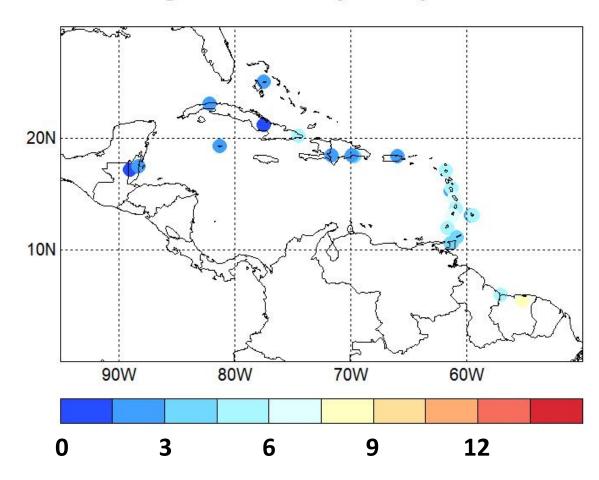


Prob. at least 7 heatwave days in August 2020

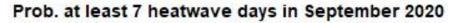


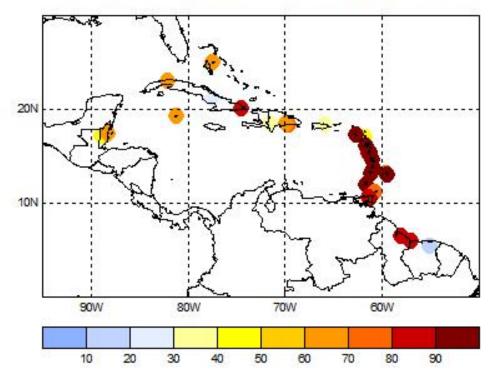
How many heatwave days to expect in September 2020?

Avg. # heatwave days in September

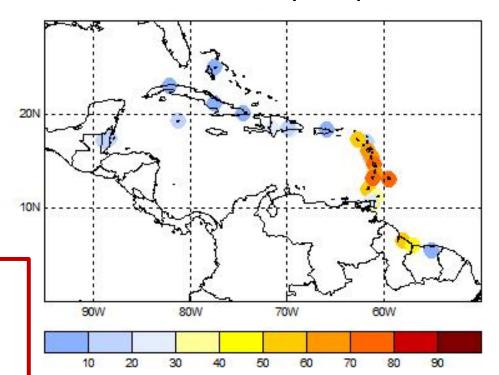


USUALLY: Generally 5 to 9 heatwave days eastward of PR. FORECAST: over 50% chance of 14 or more heatwave days in September this year eastward of Puerto Rico.



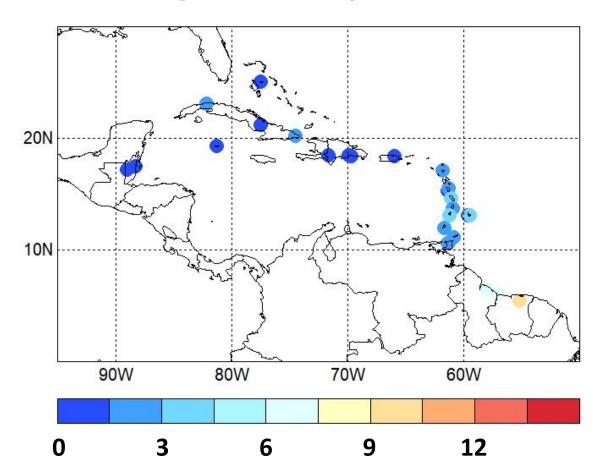


Prob. at least 7 heatwave days in September 2020



How many heatwave days to expect in October 2020?

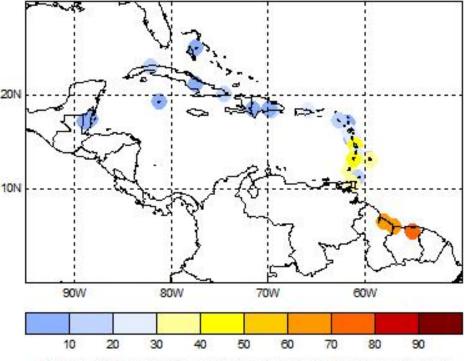
Avg. # heatwave days in October



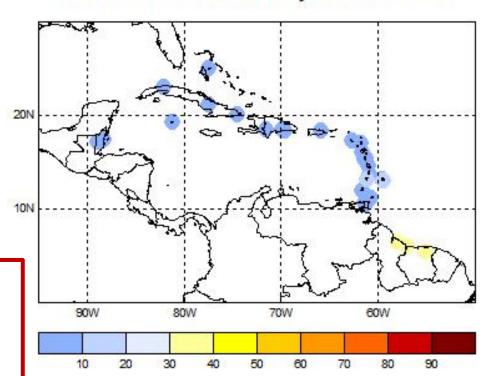
USUALLY: 6 to 10 heatwave days in the Guianas.

FORECAST: 60% chance of at least 3 (but less than 7) heatwave days in October this year in the Guianas.

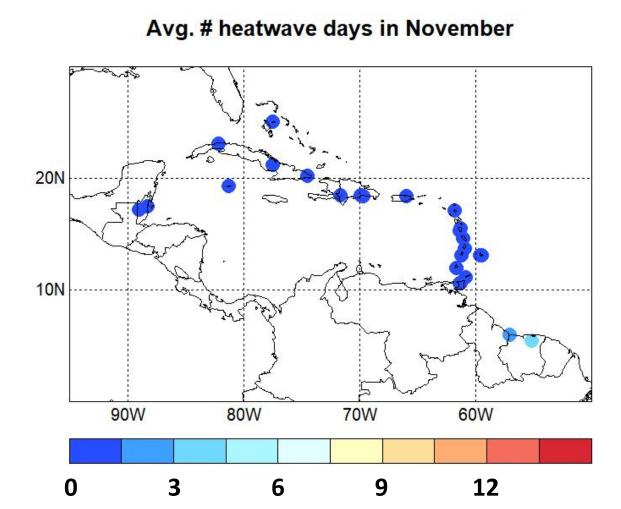
Prob. at least 3 heatwave days in October 2020



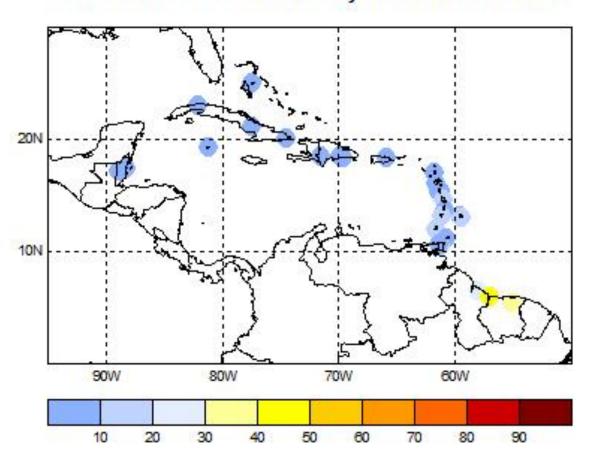
Prob. at least 7 heatwave days in October 2020



How many heatwave days to expect in November 2020?



Prob. at least 3 heatwave days in November 2020



USUALLY: up to 5 heatwave days in the Guianas.

FORECAST: 30-50% chance of 3 or more heatwave days in the Guianas in November this year.