

# Rainfall frequency and extreme forecasts

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## Wet days and Wet spells Outlooks June to August 2023

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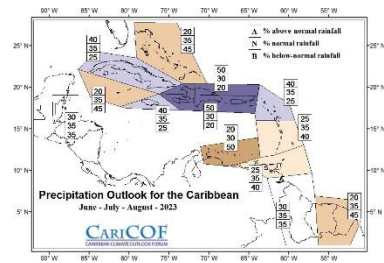
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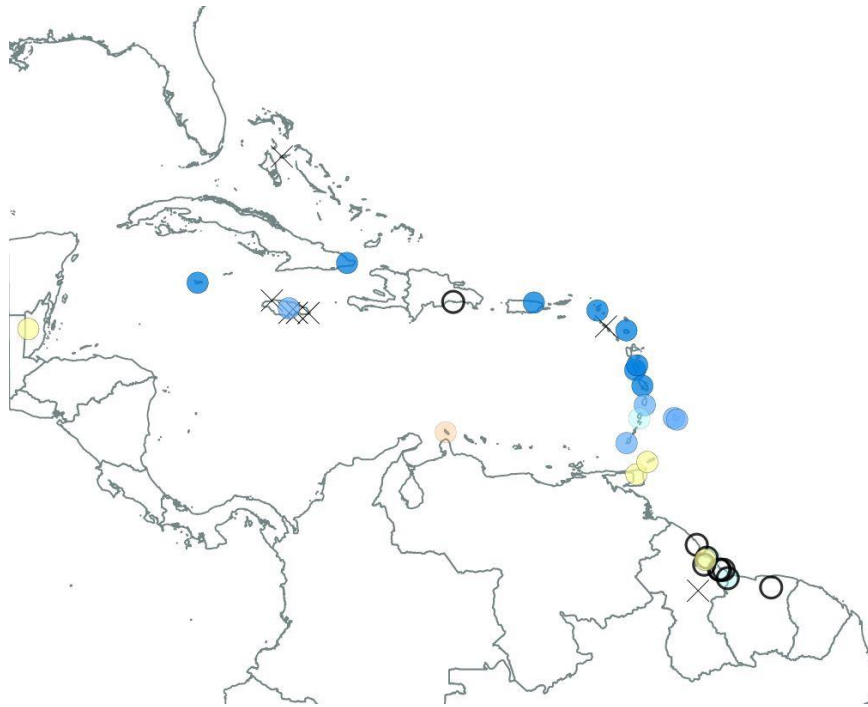
# Wet day frequency shifts

## Forecast for: June to August 2022

### Precipitation outlook



### JJA 2023 Frequency of wet days



**USUALLY:** Out of 92 days in June-July-August, there are about 30 to 45 wet days in relatively flat areas of Belize and the islands, but 50 to 65 in mountainous areas and in the coastal Guianas (ABC Islands: 5-15).

**FORECAST:** JJA may be drier than usual in The ABC islands, The Bahamas, Barbados, Cayman Island, Trinidad & Tobago, the western Guianas, and the Windward Islands and at least as wet as usual across Cuba, Hispaniola, Jamaica, Puerto Rico, and the USVI.

- A larger number of wet days than usual may be expected across most of the region (medium confidence) except in Aruba, Belize, Guyana and Trinidad & Tobago where slightly fewer wet days than usual are expected (low to medium confidence).*

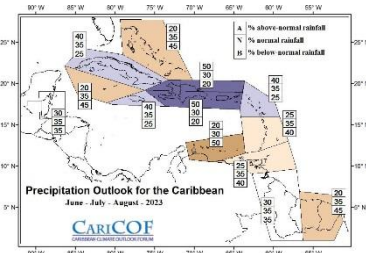
### IMPLICATIONS:

- Frequency of outdoor activity disruptions due to rainfall should be increasing.
- Increasing surface wetness could make environmental conditions more conducive to moisture related pests but, at the same time, largely prevent wildfires.

# Wet spells frequency shifts

## Forecast for: June to August 2023

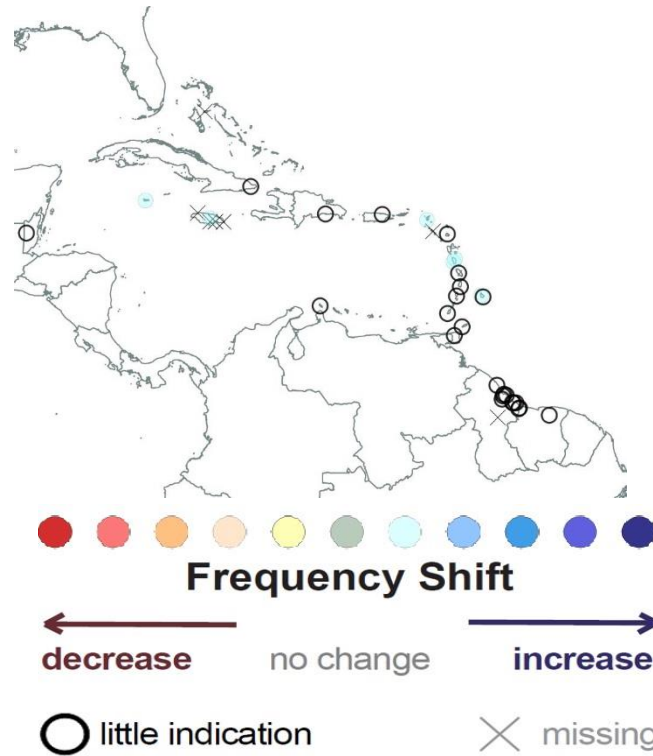
### Precipitation outlook



### Wet days outlook



### JJA 2023 frequency of 7-day wet spells



### JJA 2023 frequency of 7-day very wet spells



**USUALLY:** 3 to 6 wet spells (ABC Islands: up to 3) occur from June to August, with 1 to 3 of them ending up very wet (ABC Islands: up to 2).

**FORECAST:** JJA may be drier than usual in The ABC islands, The Bahamas, Barbados, Cayman Island, Trinidad & Tobago, the western Guianas, and the Windward Islands and at least as wet as usual across Cuba, Hispaniola, Jamaica, Puerto Rico, and the USVI.

- There is little indication for changes in the number of wet spells from the usual in the forecast (low confidence)*
- An increase from the usual numbers of very wet spells is expected for most of the Antilles; however, in the far south of the Antilles and in the coastal Guianas, a slight decrease is forecast (low to medium confidence).*

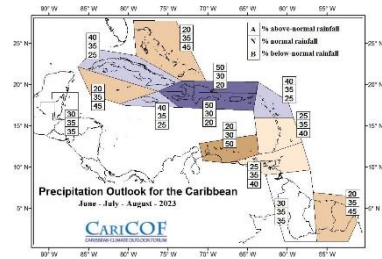
### IMPLICATIONS:

- Accelerating recharge rates of large water reservoirs and soil moisture throughout the region in view of the increasing number of wet spells into the wet season.
- The chance of recurrent very wet spells translates to flood potential (1) increasing from moderate in June and July to high in August in Belize and the islands; (2) decreasing from high to moderate in August in the Guianas.

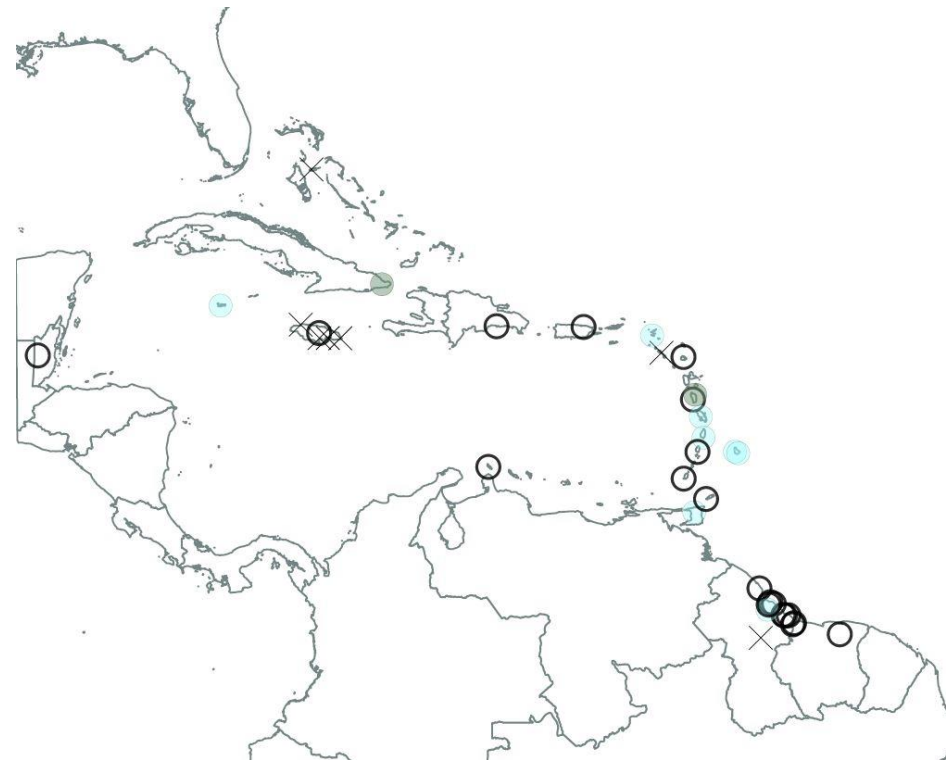
# Extreme wet spells frequency shifts

Forecast for: June to August 2023

## Precipitation outlook



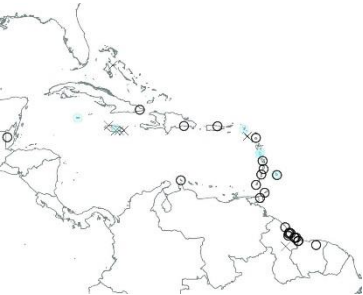
## JJA 2023 frequency of *extreme (top 1%) 3-day wet spells*



## Wet days outlook



## Wet spells outlook



## Very wet spells outlook



**USUALLY:** Up to 1 extreme wet spell occurs between June to August (ABC Islands: up to 1).

**FORECAST:** JJA may be drier than usual in The ABC islands, The Bahamas, Barbados, Cayman Island, Trinidad & Tobago, the western Guianas, and the Windward Islands and at least as wet as usual across Cuba, Hispaniola, Jamaica, Puerto Rico, and the USVI.

- *Not much change from the usual chance of extreme wet spells are forecast (low confidence).*

## IMPLICATIONS:

- In view of the chance of extreme wet spells increasing towards August in Belize and the islands the potential for flash floods and associated hazards is expected to increase from moderate to high. The inverse trend is expected in the Guianas by the end of August.



# June to August 2023

	No. of wet days		No. of 7-day wet spells (20% wettest)		No. of 7-day very wet spells (10% wettest)		No. of 3-day extremely wet spells (1% wettest)	
	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast
Antigua (VC Bird)	26-41	28-44	1.8-4.7	2.1-4.9	0.9-3	0.8-3.1	0-1	0-0.2
Aruba (Beatrix)	6-16	5-16	0.4-3.4	0.7-4.2	0-2.1	0-1.9	0-0.5	0-0.2
Barbados (CIMH)	34-49	35-51	2.6-6.4	2.9-6.9	0.9-3	1.1-3.7	0-1	0-1.1
Barbados (GAIA)	37-47	37-51	3-5.4	3.3-5.9	0.9-2.6	1-3.9	0-1	0-1.2
Belize (C. Farm)	33-49	32-48	2.6-5.4	2.5-6.5	1.3-3.4	0.9-3.5	0-1.5	0-1.7
Cayman	28-40	29-46	3-5.8	2.8-6.6	0.9-3.5	1.2-4.8	0-1	0-1.1
Cuba (Punta Maisi)	7-15	8-19	0.9-3.4	1.1-3.6	0-1.3	0.1-1.9	0-0.5	0-0
Dom. Republic (Las Americas)	19-33	20-36	1.8-4.7	1.7-5	0.5-2.6	0.4-3	0-0.9	0-0.9
Dominica (Canefield)	49-66	51-73	4-6.7	4-7.2	1.7-4.6	1.4-5.2	0-1.3	0-1.5
Dominica (Douglas Charles)	53-68	55-74	2.2-5.6	2.2-5.8	0.9-2.8	0.8-3.5	0-0	0-0
Grenada (MBIA)	42-51	42-55	3.9-6.4	3.6-6.7	1.7-3.6	1.1-4.2	0-1	0-1.7
Guyana_73	25-35	26-38	3.2-5.6	2.9-5.8	1.3-3.2	0.9-4.2	0-1	0-1.2
Guyana (Albion)	37-52	37-55	3.4-6.7	3.3-6.3	1.7-3.6	1.4-3.8	0-1	0-1.4
Guyana (Blairmont)	44-60	43-61	3.5-6.9	3-7.4	1.5-3.9	0.9-4.2	0-1	0-1.8
Guyana (Charity)								
Guyana (Enmore)	41-57	42-61	3.2-6	3.1-6.5	1.1-3.4	0.7-3.6	0-1.3	0-1.4
Guyana (Georgetown)	51-63	48-65	3.2-5.6	3-6.1	1.3-3	1.3-3.9	0-1	0-1.2
Guyana (Greatfall)								
Guyana (New Amsterdam)	46-60	43-59	3.9-6.2	3.1-6.5	1.4-3.4	1-3.6	0-1	0-1.2
Guyana (Skeldon)	45-52	44-54	3.3-6	2.7-6.6	1.1-3.9	0.7-3.7	0-2	0-1.8
Guyana (Timehri)	55-68	54-69	3.4-6	3.2-6.3	1.3-3.6	1-3.6	0-1	0-1.4
Guyana_Wales								
Jamaica (Worthy Park)	25-38	25-45	2.1-4.7	2.3-5.6	1.1-3	1-3.4	0-1	0-1.6
Martinique (FDF Desaix)	51-63	51-67	3-6	3.5-6.2	1.3-3	1-2.6	0-1	0-1.7
Puerto Rico (San Juan)	31-49	34-56	2.4-5.2	2.6-5.6	1.1-2.8	1.1-3.6	0-1	0-0.7
St. Lucia (Hewanorra)	41-57	42-60	2.8-5.6	3.2-6.2	0.9-2.6	1.2-4	0-1	0-0.7
St. Maarten (TNCM)	29-45	30-51	1.8-4.7	1.8-5.1	0.4-2.6	0.6-4.2	0-1	0-0.4
St. Vincent (ET Joshua)	55-67	53-69	3-5.5	2.9-5.7	0.9-3	0.9-3.1	0-1.1	0-1.4
Suriname (Zanderij)	52-63	49-64	3.2-5.1	3.1-5.5	1.3-3.2	1.1-4.1	0-1	0-1.5
Tobago (ANR Robinson)	53-64	49-63	4.5-6.6	4.5-6.7	2.2-3.4	1.6-3.3	0-1.5	0-1.7
Trinidad (Piarco)	44-50	37-54	3.9-6	3.4-6.3	1.3-3.4	1.2-3	0-1	0-1.2

**brown** is a decrease in frequency, **light blue** an increase, **grey** none are expected



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