

Rainfall frequency and extreme forecasts

—

Wet days and Wet spells Outlooks June to August 2018

**Dr. Cedric VAN MEERBEECK¹, Wazita Scott¹, Dr. Simon MASON²,
Ángel MUÑOZ², Dr. Teddy ALLEN², Dale Destin³**

¹Caribbean Institute for Meteorology and Hydrology (CIMH), Barbados

²International Research Institute for Climate and Society (IRI), USA

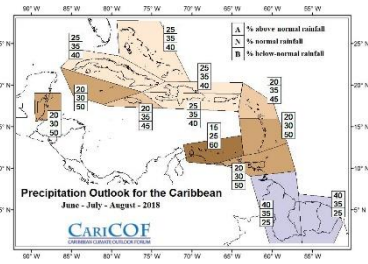
³Antigua and Barbuda Meteorological Services



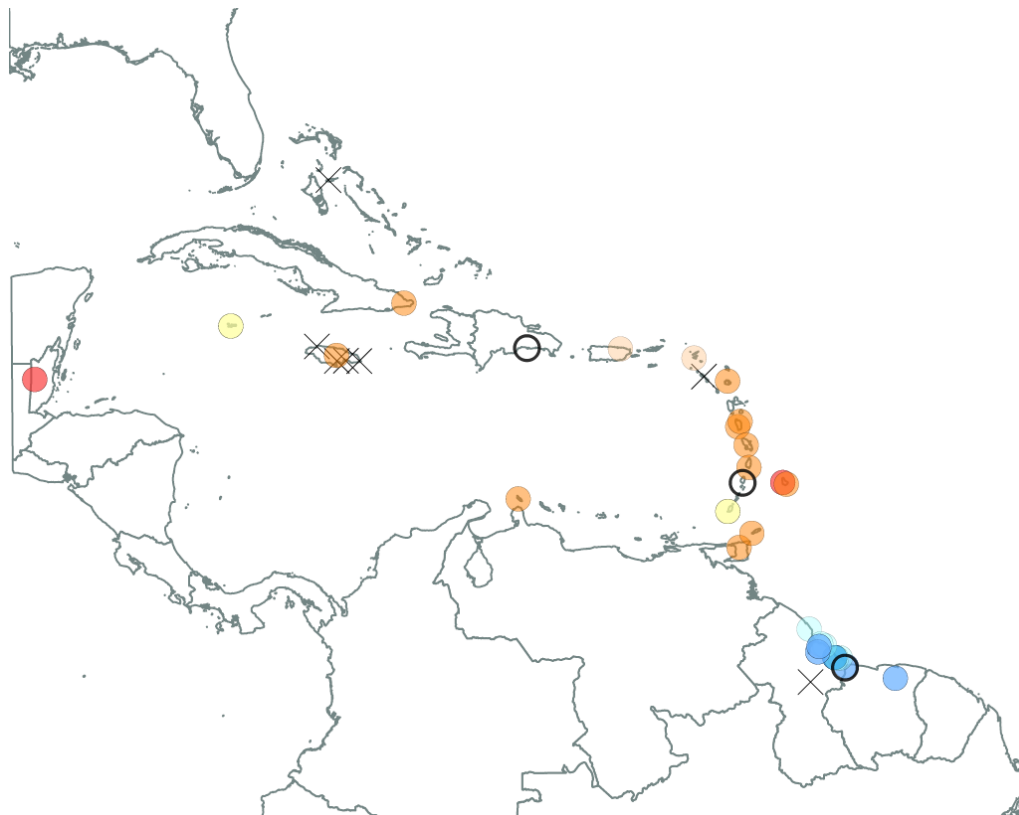
Wet day frequency shifts

Forecast for: June to August 2018

Precipitation outlook



JJA 2018
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 coastal Guianas (ABC Islands: 5-15).

FORECAST: JJA rainfall may be drier than usual with fewer wet days, except in the Guianas which are likely to be at least as wet as usual, with an increase in wet days (*medium confidence*).

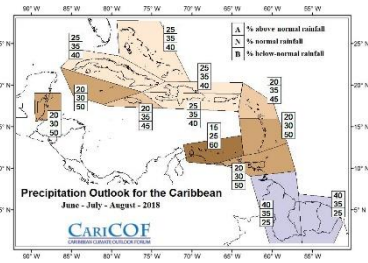
IMPLICATIONS:

- Surface wetness increasing slower than usual after the dry season in Belize and the islands.
- Less reliable rains for agriculture than usual in Belize and the islands.
- Increasing frequency of rainfall disruptions of outdoor activities.

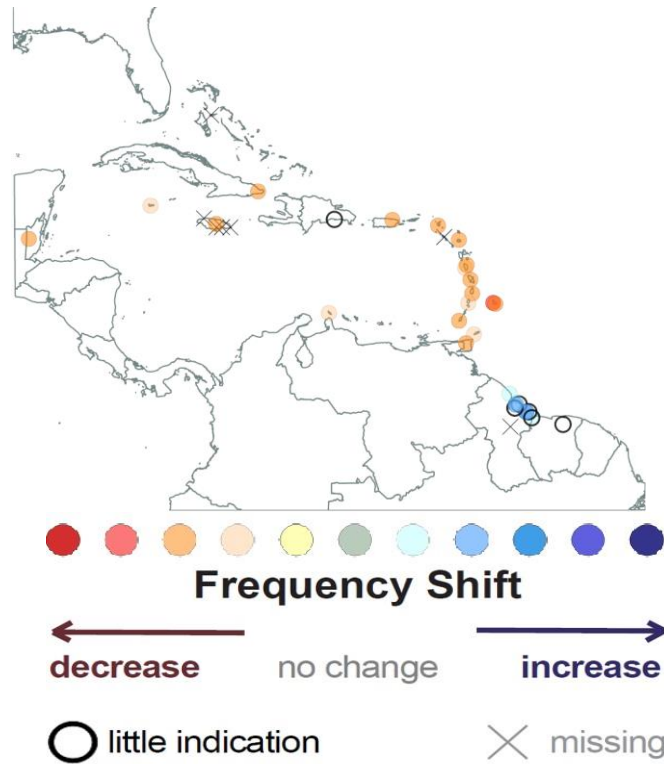
Wet spells frequency shifts

Forecast for: June to August 2018

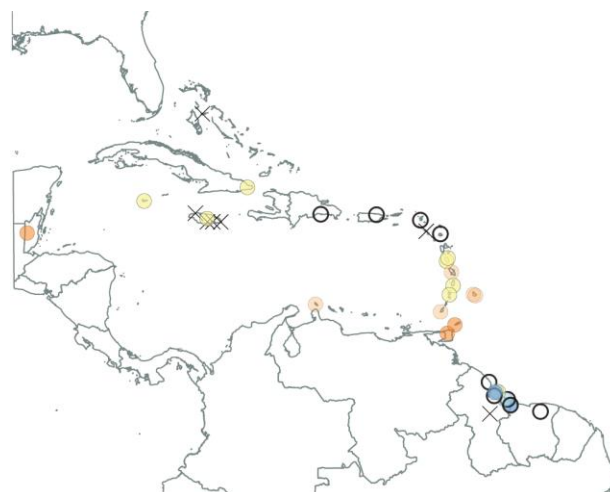
Precipitation outlook



JJA 2018 frequency of 7-day wet spells



JJA 2018 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 rainfall may be drier than usual with fewer wet days, wet spells and very wet spells (*medium confidence*), except in the Guianas which are likely to be at least as wet as usual, with an increase in wet days, wet spells and very wet spells (*low to medium confid.*).

IMPLICATIONS:

- Recharge rates of large water reservoirs associated with the wet season potentially slower than usual.
- Flooding potential in the Guianas associated with many very wet spells.

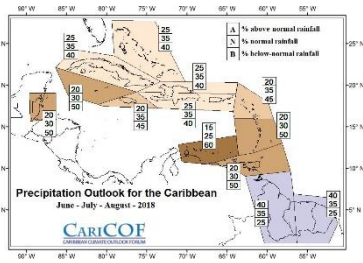
Wet days outlook



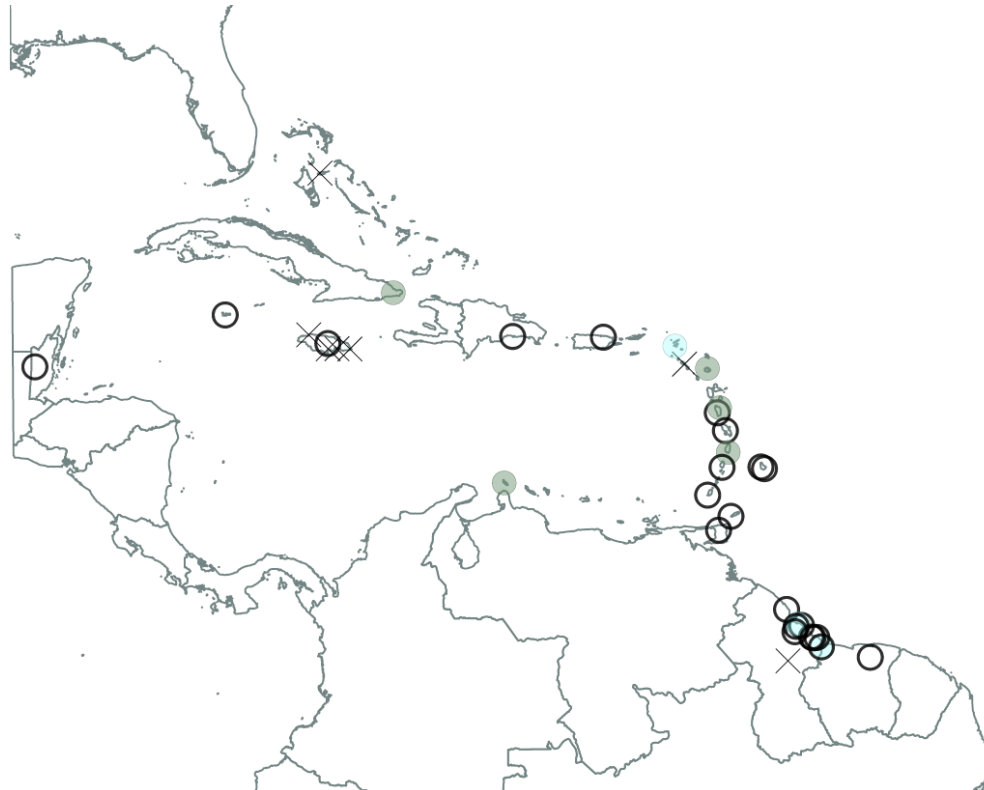
Extreme wet spells frequency shifts

Forecast for: June to August 2018

Precipitation outlook



MJJ 2018 frequency of extreme (top 1%) 3-day wet spells



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

FORECAST: JJA rainfall may be drier than usual with fewer wet days, wet spells and very wet spells (*medium confidence*), except in the Guianas which are likely to be at least as wet as usual, with an increase in wet days, wet spells and very wet spells (*low to medium confid.*).

By contrast, no substantial shift in extreme wet spells is forecast (*low confid.*).

IMPLICATION: Flash flood potential is becoming a concern across the region.

June to August 2018

	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	23-36	1.7-4.7	1.4-3.7	0.9-2.9	0.6-2.6	0-0.9
Aruba (Beatrix)	6-16	4-16	0.4-3.4	0-3.2	0-2.1	0-1.5	0-0.2	0-0.1
Barbados (CIMH)	34-49	29-43	2.6-6.4	2-4.8	0.9-3	0.8-2.9	0-1	0-0.9
Barbados (GAIA)	36-47	33-45	3-5.4	2.6-5	0.9-2.6	0.7-2.5	0-1	0-1.1
Belize (C. Farm)	33-48	28-44	2.6-5.5	1.9-5.4	1.3-3.4	0.8-3.2	0-1.3	0-1.7
Cayman	28-41	24-40	2.9-5.9	2.2-5.6	0.9-3.6	0.7-3.5	0-1	0-1.1
Cuba (Punta Maisi)	7-15	5-12	0.9-3.4	0.6-2.7	0-1.3	0-1.5	0-0.7	0-0
Dom. Republic (Las Americas)	19-33	17-29	1.8-4.8	1.3-4.1	0.6-2.9	0.5-2.6	0-1	0-0.5
Dominica (Canefield)	49-66	43-61	3.9-6.7	3.3-6.4	1.7-4.5	1.1-4.5	0-1.3	0-1.4
Dominica (Douglas Charles)	53-68	49-66	2.2-5.6	1.6-4.7	0.9-2.9	0.6-2.9	0-0	0-0.1
Grenada (MBIA)	42-51	39-52	3.9-6.3	3.1-6	1.7-3.5	1-3.7	0-1	0-1.6
Guyana_73	25-35	26-39	3.3-5.6	3.2-6.4	1.3-3.3	1.2-4.3	0-1	0-1.2
Guyana (Albion)	37-52	38-55	3.4-6.6	3.3-6.4	1.7-3.7	1.5-3.8	0-1	0-1.4
Guyana (Blairmont)	44-60	47-64	3.4-6.9	3.7-8.3	1.3-3.9	1.7-4.5	0-1	0-1.7
Guyana (Charity)	40-56	35-67	2.3-5.1	1.9-7.4	0.9-3.1	0.5-3.2	0-0.6	0-0.3
Guyana (Enmore)	41-57	41-60	3-6	2.8-6.4	0.9-3.4	0.8-3.6	0-1.1	0-1.2
Guyana (Georgetown)	51-63	50-66	3.1-5.6	3-6.7	1.3-3	1.3-3.7	0-1	0-1.1
Guyana (New Amsterdam)	46-60	45-60	3.8-6.1	3.5-7.4	1.3-3.2	1.5-3.7	0-1	0-1.1
Guyana (Skeldon)	45-52	44-54	3.1-5.9	2.7-6.6	1.2-3.9	1-4.2	0-1.9	0-1.5
Guyana (Timehri)	55-68	56-71	3.4-5.8	3.1-6.3	1.3-3.5	1-3.7	0-1	0-1.4
Guyana_Wales	50-64	52-67	3.4-6	3.6-7.2	0.9-3.3	1-4.6	0-1.9	0-1.7
Jamaica (Worthy Park)	24-38	20-35	2.1-4.7	1.7-4.5	0.9-3	0.6-2.7	0-1	0-1.5
Martinique (FDF Desaix)	51-63	46-62	3-6	2.8-5.2	1.3-3	0.7-2.7	0-1	0-1.4
Puerto Rico (San Juan)	32-50	28-49	2.5-5.5	2-4.8	1.2-3.1	0.9-3.1	0-1	0-0.8
St. Lucia (Hewanorra)	40-57	36-52	2.9-5.6	2.5-4.9	0.9-2.6	0.7-3.1	0-1	0-0.4
St. Maarten (TNM)	28-45	24-43	1.7-4.7	1.2-3.6	0.4-2.6	0.3-2.7	0-1	0-0.6
St. Vincent (ET Joshua)	54-67	52-69	3-5.5	2.4-5.3	0.9-3	0.8-3.4	0-1.1	0-1.4
Suriname (Zanderij)	51-63	51-66	2.9-5.1	2.9-5.4	1.3-3.1	1-3.4	0-1	0-1.5
Tobago (ANR Robinson)	53-64	47-61	4.4-6.5	3.9-6.2	2-3.4	1.4-3.2	0-1.3	0-1.5
Trinidad (Piarco)	43-50	34-52	3.9-5.8	2.9-5.8	1.3-3.4	1.1-3.3	0-1	0-1.2

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



CARICOF
CARIBBEAN CLIMATE OUTLOOK FORUM

caricof@cimh.edu.bb

rcc.cimh.edu.bb

Caribbean Institute for Meteorology and Hydrology

TEL: (246) 425-1362/3 | FAX: (246) 424-4733