Rainfall frequency and extreme forecasts

Wet days and Wet spells Outlooks May to July 2022

Dr. Cedric VAN MEERBEECK¹, **Dr. Teddy ALLEN**¹, Dr. Simon MASON², Ángel MUÑOZ², Wazita Scott¹, Dale Destin³

¹Caribbean Institute for Meteorology and Hydrology (CIMH), Barbados ²International Research Institute for Climate and Society (IRI), USA ³Antigua and Barbuda Meteorological Services











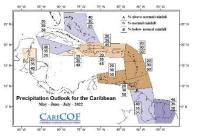




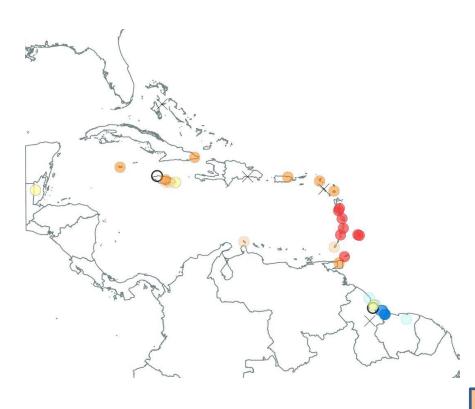
Wet day frequency shifts

Forecast for: May to July 2022

Precipitation outlook



MJJ 2022 Frequency of wet days



USUALLY: During May-June-July, about 25 to 40 days out of a total of 92 days are wet days in relatively flat areas in the islands, and 45 to 65 in mountainous areas and in coastal Guianas (ABC Islands: 5-15).

FORECAST: MJJ rainfall may be more than usual in the NW areas and the Guianas, with an increase in the number of wet days in parts of Guyana (low to medium confidence), but drier than usual elsewhere, with fewer wet days than **usual** (medium to high confid.).



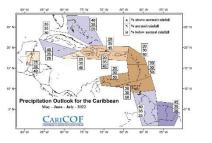
IMPLICATIONS:

- Possible delay in wet season onset
- **Increased wildfire potential in Belize and the** islands.

Wet spells frequency shifts

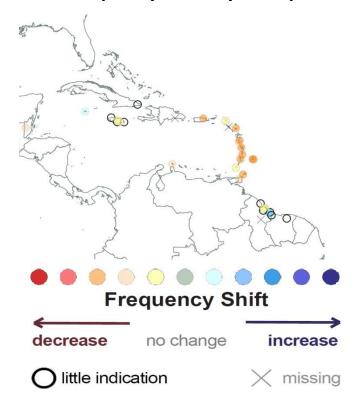
Forecast for: May to July 2022

Precipitation outlook





MJJ 2022 frequency of 7-day wet spells



MJJJ 2022 frequency of 7-day very wet spells



USUALLY: 1 to 5 wet spells (coastal Guianas: 4 to 7) occur from May to July, with 2 or 3 of them ending up very wet (ABC Islands: up to 1; coastal Guianas: 1 to 5).

FORECAST: FORECAST: MJJ rainfall may be more than usual in the NW areas and the Guianas, with an increase in the number of wet days and wet spells in parts of Guyana (low to medium confidence), but drier than usual elsewhere, with fewer wet days and wet spells than usual (medium to high confid.).

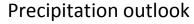
IMPLICATIONS:

- Recharge of large water reservoirs and soil moisture may be delayed due to a reduction in wet spells across Belize and the islands.
- Rising flood potential in the Guianas in view of the increased frequency of wet and very wet spells.

Extreme wet spells frequency shifts

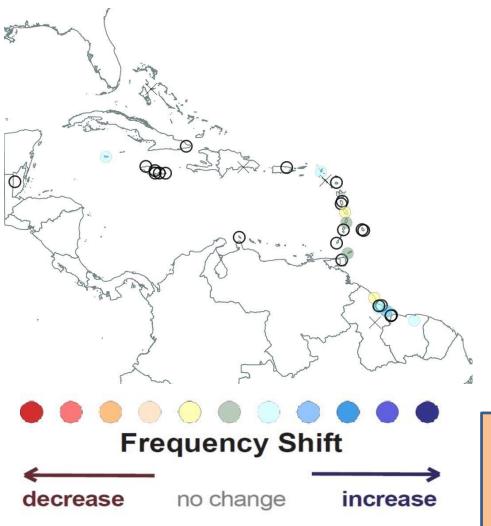
Forecast for: May to July 2022

missing





MJJ 2022 frequency of extreme (top 1%) 3-day wet spells



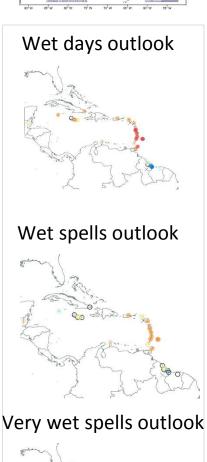
little indication

USUALLY: Up to 1 extreme wet spell occur between May to July (Guianas: up to 2).

FORECAST: : MJJ rainfall may be more than usual in the NW areas and the Guianas, with an increase in the number of wet days, wet spells, and extreme wet spells in parts of Guyana (low to medium confidence), but drier than usual elsewhere, with fewer wet days and wet spells than usual (medium to high confid.).

IMPLICATION:

• Flash flood potential throughout the region is less of a concern across the region.



brown is a decrease in frequency,

May to July 2022	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)	21-38	23-43	1.3-4.9	1.4-3.9	0.4-3.2	0.3-1.7	0-1	0-0
Aruba (Beatrix)	6-12	12-47	0.7-2.4	2.4-7.9	0.2-1.3	1.5-5.4	0-1	0-1.1
Barbados (CIMH)	24-42	22-45	1.3-5.2	0.8-2.8	0.5-2.2	0.4-1.8	0-1	0-0.3
Barbados (GAIA)	27-45	23-42	2.1-4.9	0.8-3.5	0.4-2.7	0.7-1.9	0-1	0-0.5
Belize (C. Farm)	28-40	19-41	2.4-5.1	1.2-4.2	1.3-3	0.1-1.7	0-1.1	0-0.5
Cayman	25-36	10-22	3-5.5	0.2-2.3	1.1-3.4	0-1.1	0-1	0-0
Cuba (Punta Maisi)	8-18	11-24	1.3-3.6	1.7-4.7	0.2-2.1	0.2-1.8	0-1	0-0
Dom. Republic (Las Americas)								
Dominica (Canefield)	38-60	35-57	2.5-5.5	0.4-3.9	1.3-3.4	0-1.7	0-1.2	0-0
Dominica (Douglas Charles)	47-66	48-68	1.9-5	0.8-3.5	0.5-2.2	0.1-1.4	0-1	0-0
Grenada (MBIA)	30-48	18-45	2-5	0.6-3.6	0.7-2.8	0.1-2.4	0-1	0-0.8
Guyana_73	30-42	17-35	3.9-6.9	1.2-4.3	1.8-3.4	1-4	0-1	0-1.9
Guyana (Albion)	44-58	28-57	3.9-7.2	1.6-7.2	2-3.9	1.5-5.9	0-2	0-2.8
Guyana (Blairmont)	49-67	30-64	3.4-7.3	1.3-6.8	1.3-4.9	1.4-5.7	0-2	0-2.9
Guyana (Enmore)	47-63	32-54	3.4-6.9	1.7-4.7	0.9-4.3	1.2-4.8	0-1.6	0-1.3
Guyana (Georgetown)	54-68	35-64	3.5-7.3	1.1-7.6	1.3-4.1	1.4-7.4	0-1	0-3.4
Guyana (New Amsterdam)	50-65	31-59	3.8-7.3	1.3-5.8	1.7-4.5	1.5-5.9	0-1.8	0-2.5
Guyana (Skeldon)	49-63	30-52	3.9-6.9	1.3-4.2	1.7-4.3	0.9-2.9	0-2	0-1.6
Guyana (Timehri)	56-71	38-68	3.9-7.3	1.7-6.1	1.7-4.3	1.2-5.2	0-2	0-1.9
Jamaica (Worthy Park)	25-41	14-26	2.6-5.6	0.4-2.7	1.3-3	0-1.3	0-2	0-0
Martinique (FDF Desaix)	43-59	43-64	2.1-5.1	1-3.5	0.9-3	0.1-1.4	0-1	0-0
Puerto Rico (San Juan)	29-47	30-50	2.2-5.8	1.6-4.3	0.9-3.9	0.4-1.8	0-1	0-1
St. Lucia (Hewanorra)	32-51	30-47	1.7-5.3	1.1-3.1	0.4-2.6	0.3-1.6	0-1	0-0
St. Maarten (TNCM)	24-37	29-50	1.3-3.9	1.8-5.9	0.4-3	0.3-2.5	0-1	0-1.2
St. Vincent (ET Joshua)	44-64	40-63	2-5.1	0.8-3.3	0.9-3	0.7-2.4	0-1	0-0
Suriname (Zanderij)	58-70	41-58	4.2-6.7	1.7-3.8	1.8-4	0.9-2.6	0-2	0-1.2
Tobago (ANR Robinson)	41-57	24-45	3.2-6.2	0.7-4	1.3-3	0.2-1.8	0-1	0-0.7
Trinidad (Piarco)	32-46	27-45	2.4-4.7	0.3-2.9	0.9-3	0.7-2.6	0-1	0-0.8
								CARIBBEAN CLIMATE OUTLO



caricof@cimh.edu.bb rcc.cimh.edu.bb Caribbean Institute for Meteorology and Hydrology TEL: (246) 425-1362/3 | FAX: (246) 424-4733