Rainfall frequency and extreme forecasts

wet days and wet spells outlooks March to May 2018

Dr. Cedric VAN MEERBEECK¹, **Wazita Scott**¹, 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















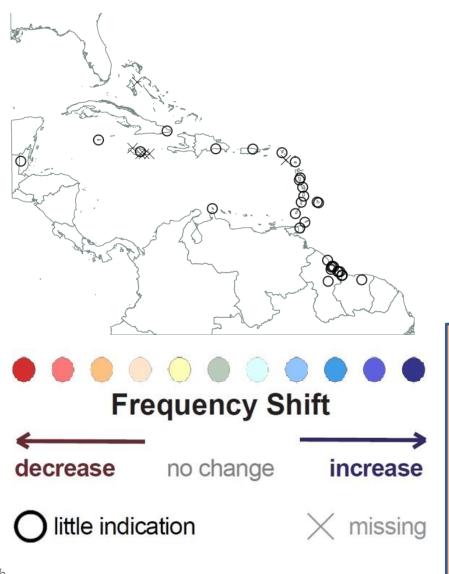
Precipitation outlook



Wet day frequency shifts

Forecast for: March to May 2018

MAM 2018 Frequency of wet days



USUALLY: Out of 90 days in Mar-Apr-May, there are about 15 to 30 wet days in low lying, 30-50 in mountainous locations (ABC Islands: 1-10; coastal Guianas: 30-50).

FORECAST: MAM rainfall is likely to be above- to normal in the Bahamas and most of the Greater Antilles, but below- to normal in the ABC Islands and the Lesser Antilles. The forecast indicates either the usual or slightly more wet days (low confidence).

IMPLICATION:

- Surface dryness increasing the usual way along the dry season.
- Rainfall disruptions of outdoor activities to become more frequent from April onwards in the Greater Antilles and the Guianas, and from May in the Lesser Antilles.

Precipitation outlook

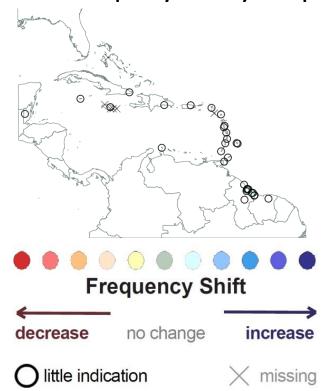




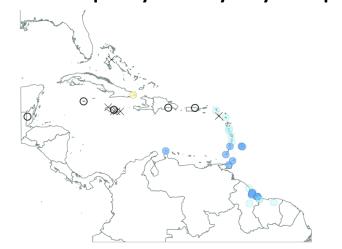
Wet spells frequency shifts

Forecast for: March to May 2018

MAM 2018 frequency of 7-day wet spells



MAM 2018 frequency of 7-day very wet spells



USUALLY: Up to 3 wet spells (coastal Guianas: up to 5) occur from Mar to May, with up to 2 of them ending up very wet (coastal Guianas: up to 3).

FORECAST: MAM rainfall is likely to be above- to normal in the Bahamas and most of the Greater Antilles, but below- to normal in the ABC Islands and Lesser Antilles. The forecast indicates either the usual or slightly more wet days and wet spells (low confidence) and a higher than usual number of very wet spells from St Maarten southward (low to medium confid.).

IMPLICATION:

- Usual depletion rates of large water reservoirs for the dry season.
- Some flood potential in Guianas associated with a high number of very wet spells.

caricof@cimh.edu.bb





Wet days outlook



Wet spells outlook



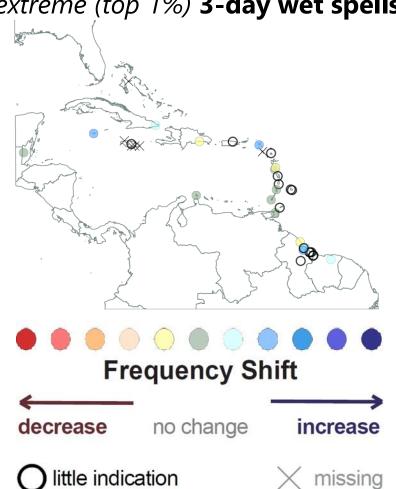
Very wet spells outlook



Extreme wet spells frequency shifts

Forecast for: March to May 2018

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



USUALLY: : Up to 1 extreme wet spell occurs from March to May. Virtually none in most other places.

FORECAST: MAM rainfall is likely to be above- to normal in the Bahamas and most of the Greater Antilles, but below- to normal in the Lesser Antilles. The forecast indicates either the usual or slightly more wet days and wet spells (low confidence) and a higher than usual number of very wet spells from St Maarten southward (low to medium confid.).

Little changes in number of extreme wet spells are forecast in most places, except for an increase in the Guianas (low confidence).

IMPLICATION: Flash flood potential is becoming a concern after March, and especially in May in the Greater Antilles.

March to May	No. of wet days Climatology Forecast		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)		expected
2018									
			Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	dy
Antigua (VC Bird)	17-29	15-33	1.2-3.9	1.5-2.8	0.4-2.4	0.4-2.4	0-1	0-1.3	
Aruba (Beatrix)	2-9	2-12	0.4-1.3	0.7-2.9	0-0.9	0-1.2	0-0	0-0	are
Barbados (CIMH)	14-28	14-32	0.4-2.2	0.7-1.9	0-1.6	0-1.8	0-0.9	0-0.3	none
Barbados (GAIA)	15-29	15-33	0.4-2.4	0.9-2.3	0-1.6	0.3-1.8	0-1	0-0.4	
Belize (C. Farm)	10-22	9-21	0.4-1.9	0.5-1.7	0-1.3	0-1.3	0-0		grey
Cayman	9-22	9-23	0.9-2.4	0.4-1.5	0.4-1.7	0.4-1.8	0-1	0-1.3	₽
Cuba (Punta Maisi)	8-20	7-21	1.3-3.9	1.7-2.9	0.4-1.7	0.4-2	0-1	0-1.2	-5
Dom. Republic (Las Americas)	13-26	13-28	1.2-3.7	1.3-2.8	0.4-2.2	0.6-2.7	0-1	0-0.4	increase,
Dominica (Canefield)	22-35	22-38	0-2	0.5-2.4	0-1.4	0-1.4	0-0		cre
Dominica (Douglas Charles)	36-60	35-62	1.3-3.4	1.3-3.2	0-2	0.2-2.3	0-1.7	0-1	
Grenada (MBIA)	10-26	9-29	0-1.4	0.3-2	0-0.9	0-1.4	0-0		an
Guyana_73	19-34	19-33	1.7-5.7	2.2-5	0.9-2.9	1-3.5	0-1	0-1.6	plue
Guyana (Albion)	27-45	27-45	1.7-4.3	1.6-3.9	0.9-2.8	1.1-2.9	0-1	0-1.5	Š
Guyana (Blairmont)	31-48	30-51	1.9-4.8	1.7-4.3	0.9-3	1-3.6	0-1	0-1.5	dark
Guyana (Enmore)	31-44	29-46	1.7-4.7	1.7-3.6	0.9-2.6	0.9-3.1	0-1.1	0-1.8	
Guyana (Georgetown)	34-50	30-50	1.3-4.2	1.5-4	0.9-2.1	1.1-2.8	0-1	0-1.3	×
Guyana (New Amsterdam)	33-48	29-51	1.7-4.7	1.7-4.4	0.9-3	1.1-3.3	0-1	0-1.3	frequency,
Guyana (Skeldon)	33-50	31-50	1.8-5.1	2-5	0.9-3	1.1-3.6	0-1	0-0.9	due
Guyana (Timehri)	35-55	34-54	1.7-4.8	1.5-4.3	0.4-2.6	0.9-3.1	0-1.9	0-2	fre
Jamaica (Worthy Park)	20-33	19-33	2.1-4.3	1.2-2.9	0.8-2.7	0.6-3	0-1	0-1.4	.⊑
Martinique (FDF Desaix)	28-47	27-51	0.9-2.7	1-2.3	0.4-1.4	0.4-1.7	0-0		ecrease
Puerto Rico (San Juan)	25-38	23-39	0.9-3.8	1.3-2.7	0.8-2.6	0.7-2.9	0-1.3	0-1.6	re
St. Lucia (Hewanorra)	21-39	19-40	0.4-2.7	1.1-2.7	0-1.6	0.1-1.7	0-0.9	0-0.8	dec
St. Maarten (TNCM)	21-33	20-37	0.9-3	1.2-3.7	0.4-1.5	0.5-1.8	0-0.9	0-0.3	Ф
St. Vincent (ET Joshua)	31-53	27-56	0.4-2.7	0.9-3.1	0-1.4	0-1.5	0-0.1	0-0.2	n is
Suriname (Zanderij)	47-60	45-62	2.5-5.7	2.2-5.7	1.6-3.3	1.2-4.1	0-1.9	0-2.2	brown
Tobago (ANR Robinson)	14-31	13-33	0-1.7	0.3-1.3	0-0.9	0-1	0-0	0-0	br
Trinidad (Piarco)	12-32	12-33	0.3-2.6	0.6-2.7	0-1.3	0-1.6	0-0.7	0-0	



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