Rainfall frequency and extreme forecasts

Wet days and Wet spells Outlooks August to October 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

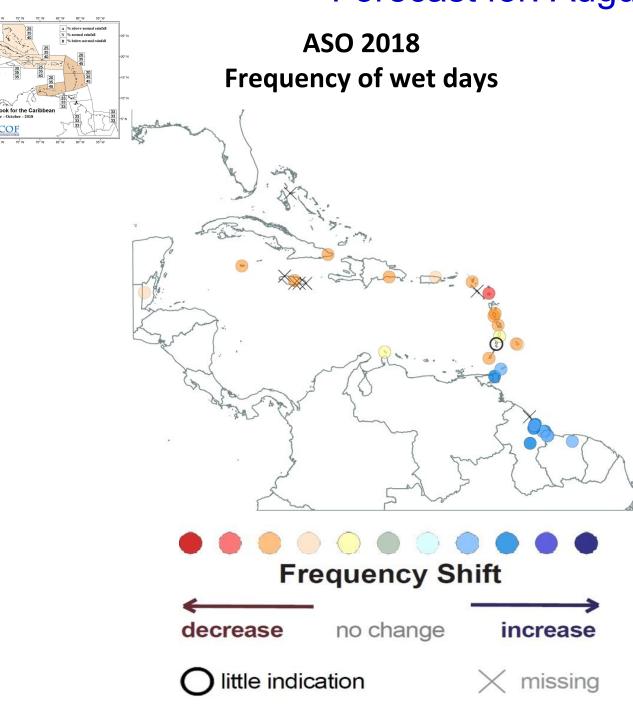








Precipitation outlook



Wet day frequency shifts Forecast for: August to October 2018

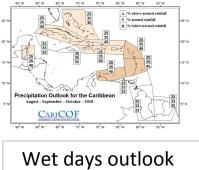
USUALLY: Out of 92 days in Aug-Sep-Oct, there are about 35 to 50 wet days in relatively flat areas of Belize and the islands, but 15 to 30 in mountainous areas and in coastal Guianas (ABC Islands: 10-20).

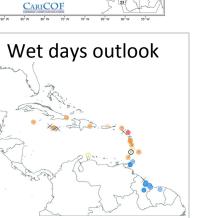
FORECAST: ASO rainfall may be drier than usual with fewer wet days across the region except for the Guianas and Trinidad & Tobago, where an increase in numbers of wet days is forecast (medium confidence).

IMPLICATIONS:

- Surface wetness increasing slower than usual in Belize and most of the Antilles.
- Less reliable rains than usual for agriculture except in Guianas and Trinidad & Tobago.
- Frequency of rainfall disruptions of outdoor activities peaking in October except in Guianas.

Precipitation outlook





Wet spells frequency shifts Forecast for: August to October 2018

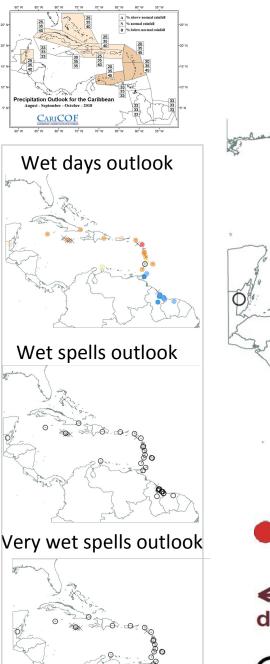
ASO 2018 frequency of 7-day wet spells Frequency Shift decrease no change increase O little indication \times missing ASO 2018 frequency of 7-day very wet USUALLY: Between 3 to 6 wet spells (coastal Guianas: 1-3) occur from August to October, with 1 to 4 of them ending up very wet (coastal Guianas: up to 2).

FORECAST: ASO rainfall may be drier than usual with fewer wet days across the region except for the Guianas and Trinidad & Tobago, where an increase in numbers of wet days is forecast (*medium confidence*). However, the forecast does not indicate any significant change from the usual number of wet spells and very wet spells (*low confid.*).

IMPLICATIONS:

- Recharge rates of large water reservoirs associated with the wet season potentially slower than usual.
- Long-term flooding potential associated with the peak season for wet spells.

Precipitation outlook



Extreme wet spells frequency shifts Forecast for: August to October 2018

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

Frequency Shift no change decrease increase little indication missing USUALLY: Up to 2 extreme wet spell occur between August to October, except in the Guianas where it is the dry season.

FORECAST: ASO rainfall may be drier than usual with fewer wet days across the region except for the Guianas and Trinidad & Tobago, where an increase in numbers of wet days is forecast (*medium confidence*). However, the forecast does not indicate any significant change from the usual number of wet spells, very wet spells and extreme wet spells (*low confid*.).

IMPLICATION: Flash flood potential is a concern across the region, though reduced in the Guianas which are entering their dry season.

August to October	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)		expected
2018	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	dxa
Antigua (VC Bird)	31-45	28-39	3-6	2.8-5.9	0.9-3.9	1.2-4	0-1	0-1.4	
Aruba (Beatrix)	9-21	7-23	1.7-5.1	1.6-5.4	0.4-3.4	0.7-3.8	0-2	0-1.1	e are
Barbados (CIMH)	37-50	33-47	4.3-6.9	4.1-6.9	2.1-4.3	2-4.3	0-2	0-1.5	none
Barbados (GAIA)	40-49	37-49	4.3-6.9	4.4-6.5	1.7-3.9	2-4.2	0-2	0-1.6	ŭ
Belize (C. Farm)	34-50	30-4 9	3-6.4	3-6	1.3-3.9	1.2-3.7	0-2	0-1.8	grey
Cayman	35-46	31-44	4.3-6.9	4.2-6.7	1.7-4.3	1.7-4.7	0-2	0-1.6	60
Cuba (Punta Maisi)	12-27	10-24	2.6-5.1	2.3-5.3	0.9-3.4	1.2-3.3	0-2	0-1.4	
Dom. Republic (Las Americas)	27-37	24-36	3.9-6	3.6-6.1	1.8-3.6	1.5-4.4	0-2	0-1.3	a) I
Dominica (Canefield)	45-61	41-56	3.5-6.3	3.1-7	1.7-4.5	1.7-4.7	0-2.5	0-2.1	ase
Dominica (Douglas Charles)	57-70	52-67	3.4-6.9	3.3-6.6	1.7-3.7	1.6-4	0-1	0-1.3	incre
Grenada (MBIA)	37-47	34-45	3.9-6.2	3.4-6.6	1.3-3.9	1.4-4.2	0-1.4	0-1.2	.Ĕ
Guyana_73	11-21	11-28	0.9-3	0.7-3.1	0-2.1	0.1-1.9	0-1	0-0.9	an
Guyana (Albion)	14-28	16-36	0.9-3.5	0.9-3.4	0.4-1.7	0.5-1.8	0-1	0-0	blue
Guyana (Blairmont)	19-32	19-35	0.9-3	1-2.9	0-1.3	0.2-1.5	0-0	0-0.1	ā
Guyana (Enmore)									dark
Guyana (Georgetown)	16-31	18-37	0.9-3	0.9-3.1	0.4-1.3	0.4-1.5	0-0	0-0.2	וס
Guyana (Greatfall)	22-38	26-49	0.4-2.6	0.7-2.8	0-1.3	0-1.3	0-0	0-0	
Guyana (New Amsterdam)	25-40	28-48	0.9-3	1.1-3.2	0.4-1.8	0.3-2	0-0.1	0-0.4	ُخ خ
Guyana (Skeldon)	20-28	19-33	0.4-3	0.8-2.9	0-1.3	0-1.4	0-0.1	0-0.4	enc
Guyana (Timehri)	21-31	20-34	0.9-3	1-3	0.4-1.7	0.6-1.7	0-1	0-0.6	b
Guyana_Wales	34-44	36-49	1.7-3.4	1.6-3.6	0.4-1.7	0.6-1.9	0-0	0-0	frequency,
Jamaica (Worthy Park)	27-38	28-42	1.7-3	1.3-3.4	0.1-1.7	0.2-1.7	0-0.2	0-0	in
Martinique (FDF Desaix)	30-47	26-42	3.4-6.4	3.1-6.4	1.3-3.9	1.4-4.3	0-2	0-1	ise
Puerto Rico (San Juan)	50-63	46-60	3.9-7.3	3.8-7	1.7-4.3	1.9-4.4	0-2	0-1.8	decrease
St. Lucia (Hewanorra)	39-51	36-48	3.4-5.6	2.7-5.6	0.9-3	1.3-3.4	0-1	0-1.3	lec
St. Maarten (TNCM)	44-58	41-55	3.9-6.4	3.5-6.8	2.1-3.9	1.6-4.7	0-2	0-1.6	a c
St. Vincent (ET Joshua)	34-49	31-47	2.6-5.6	2.6-6.3	0.9-3.4	1.1-3.6	0-1	0-1.1	is
Suriname (Zanderij)	53-63	53-65	3.4-6.9	3.3-6.8	1.7-3.4	1.7-4	0-2	0-1.7	Š
Tobago (ANR Robinson)	25-42	26-45	0.9-3.4	0.8-3	0.4-2.1	0.2-1.8	0-0.1	0-0.3	brown
Trinidad (Piarco)	44-55	45-60	3.9-5.6	3.4-6	1.3-3.4	1.2-3.8	0-1	0-1.4	





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