Rainfall frequency and extreme forecasts

wet days and wet spells outlooks August to October 2017

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 2017

ASO 2017 Frequency of wet days



USUALLY: Out of 92 days in Aug-Sep-Oct, there are about 35 to 50 wet days (coastal Guianas: 15-30; ABC Islands: 10-20).

FORECAST: ASO rainfall is likely to be aboveto normal in the ABC Islands, the Guianas, Trinidad & Tobago, Cayman, Hispaniola, Leeward Islands and US C'bean Terr.,but below- to normal in the Bahamas.We forecast slightly more wet days in the islands north of Martinique, but fewer wet days in Belize, and most places south of Martinique (medium to high confidence).

IMPLICATION:

- Frequent rainfall disruptions of outdoor activities, especially in Sept.-Oct.
- Surface wetness makes environmental conditions more conducive to mosquito breeding and moisture related pests.

Precipitation outlook



Wet days outlook

Wet spells frequency shifts Forecast for: August to October 2017



USUALLY: Between 3 and 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 is likely to be aboveto normal in the Antilles (except Trinidad & Tobago), The Bahamas and Belize, but below-normal in Trinidad & Tobago. We forecast slightly more wet days in the islands north of Martinique, but fewer wet days in Belize, and most places south of Martinique (medium to high confidence). By contrast, we forecast the usual number of wet and very wet spells (low confid.).

IMPLICATION:

 Recharge of large water reservoirs associated with wet season.

Precipitation outlook









Very wet spells outlook



Extreme wet spells frequency shifts Forecast for: August to October 2017

ASO 2017 frequency of *extreme (top 1%)* 3-day wet spells



USUALLY: Up to 2 extreme wet spells occur from August to October, except in the Guianas where it is the dry season.

FORECAST: ASO rainfall is likely to be above- to normal in the Antilles (except Trinidad & Tobago), The Bahamas and Belize, but below-normal in Trinidad & Tobago. We forecast slightly more wet days in the islands north of Martinique, but fewer wet days in Belize, and most places south of Martinique (medium to high confidence). By contrast, we forecast the usual number of wet, very wet and extremely wet spells (low confid.).

IMPLICATION: Flash flood potential is a concern throughout the region.

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)	
2017	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast
Antigua (VC Bird)	31-45	34-47	3-6	3-6.2	0.9-3.9	1.3-4.2	0-1	0-1.7
Aruba (Beatrix)	9-21	6-21	1.7-5.1	1.6-5.3	0.4-3.4	0.9-3.7	0-2	
Barbados (CIMH)	37-50	34-50	4.3-6.9	4-7.1	2.1-4.3	2-4.4	0-2	0.2-2
Barbados (GAIA)	40-49	37-50	4.3-6.9	4.4-6.7	1.7-3.9	2-4.3	0-2	
Belize (C. Farm)	34-50	29-49	3-6.4	3-6.1	1.3-3.9	1.2-3.8	0-2	0-2.2
Cayman	35-46	36-52	4.3-6.9	4.4-7	1.7-4.3	1.6-4.9	0-2	0-2
Cuba (Punta Maisi)	12-27	16-37	2.6-5.1	2.4-5.7	0.9-3.4	1.2-3.5	0-2	
Dom. Republic (Las Americas)	27-37	27-42	3.9-6	3.7-6.2	1.8-3.6	1.6-4.5	0-2	0.1-1.5
Dominica (Canefield)	45-61	45-61	3.5-6.3	2.9-7	1.7-4.5	1.6-4.8	0-2.5	
Dominica (Douglas Charles)	57-70	57-74	3.4-6.9	3.3-6.8	1.7-3.7	1.6-4.1	0-1	0-1.4
Grenada (MBIA)	37-47	34-48	3.9-6.2	3.1-6.4	1.3-3.9	1.3-4.2	0-1.4	0-1.4
Guyana_73	11-21	7-20	0.9-3	0.6-2.9	0-2.1	0.2-1.9	0-1	
Guyana (Albion)	14-28	11-28	0.9-3.5	1-3.4	0.4-1.7	0.5-1.8	0-1	
Guyana (Blairmont)	19-32	15-29	0.9-3	0.8-2.7	0-1.3	0.2-1.4	0-0	
Guyana (Enmore)								
Guyana (Georgetown)	16-31	13-28	0.9-3	0.9-2.9	0.4-1.3	0.3-1.4	0-0	0-0.3
Guyana (New Amsterdam)	22-38	16-32	0.4-2.6	0.6-2.6	0-1.3	0.1-1.3	0-0	
Guyana (Skeldon)	25-40	20-38	0.9-3	1.1-3.4	0.4-1.8	0.3-2.1	0-0.1	
Guyana (Timehri)	20-28	17-30	0.4-3	0.7-2.9	0-1.3	0-1.4	0-0.1	0-0.1
Jamaica (Worthy Park)	21-31	17-30	0.9-3	0.9-2.8	0.4-1.7	0.5-1.7	0-1	
Martinique (FDF Desaix)	34-44	29-42	1.7-3.4	1.5-3.5	0.4-1.7	0.5-1.9	0-0	
Puerto Rico (San Juan)	27-38	24-36	1.7-3	1.4-3.6	0.1-1.7	0.2-1.9	0-0.2	
St. Lucia (Hewanorra)	30-47	33-53	3.4-6.4	3.3-6.6	1.3-3.9	1.5-4.3	0-2	0-2.1
St. Maarten (TNCM)	50-63	47-62	3.9-7.3	3.7-6.9	1.7-4.3	1.9-4.5	0-2	0-2.2
St. Vincent (ET Joshua)	39-51	39-52	3.4-5.6	2.6-5.8	0.9-3	1.3-3.5	0-1	0-1.5
Suriname (Zanderij)	44-58	40-54	3.9-6.4	3.3-6.8	2.1-3.9	1.6-5	0-2	
Tobago (ANR Robinson)	34-49	37-56	2.6-5.6	2.9-6.6	0.9-3.4	1.1-3.8	0-1	0-1.2
Trinidad (Piarco)	53-63	49-62	3.4-6.9	3.2-6.8	1.7-3.4	1.7-4.1	0-2	0-2.2

grey none are expected

dark blue an increase,

brown is a decrease in frequency,