

Rainfall frequency and extreme forecasts

—

wet days and wet spells outlooks

November 2015 to January 2016

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

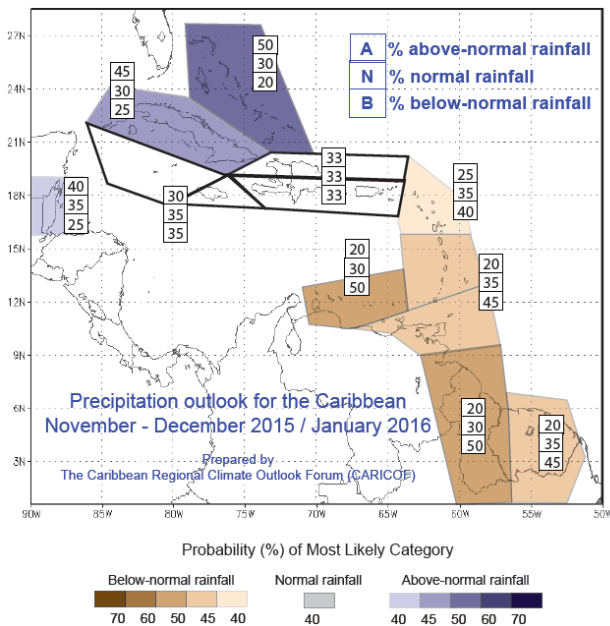
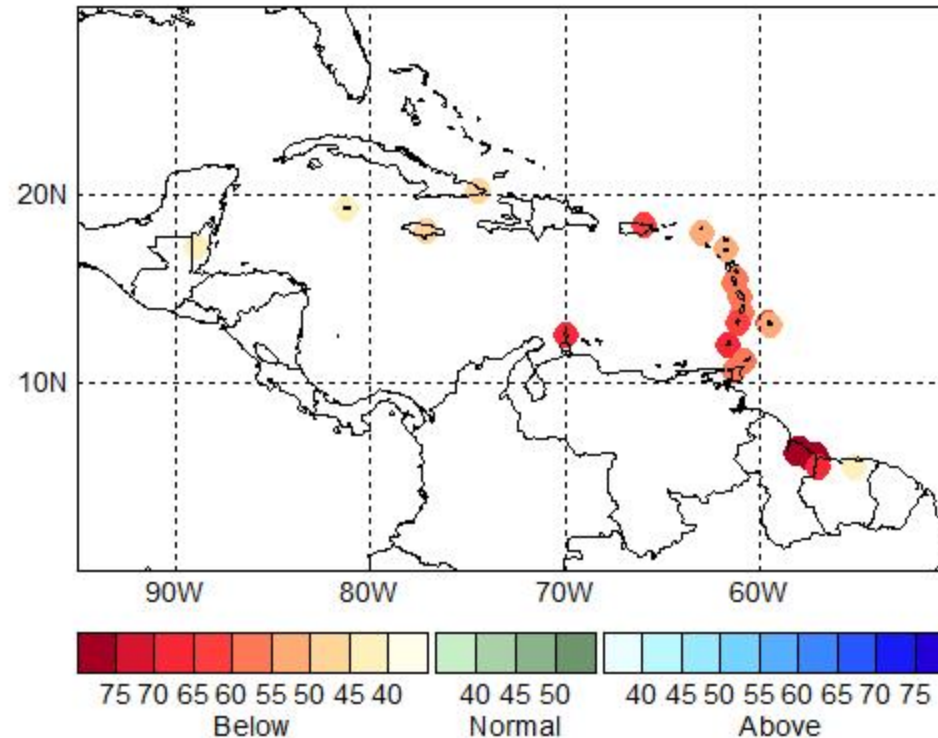
Forecast for: Nov-Jan 2015-6

USUALLY: Number of wet days decreases from November to January, except the Guianas where it increases.

FORECAST: November to January rainfall expected to be below- to normal in eastern and Southern Caribbean with **fewer wet days (*high confidence*)**, but above- to normal in Bahamas, Belize, Cuba.

IMPLICATION:
Fewer disruptions of outdoor activities.
Increasing surface dryness.

NDJ 2015-6 Wet days frequency shifts



Wet spells frequency shifts

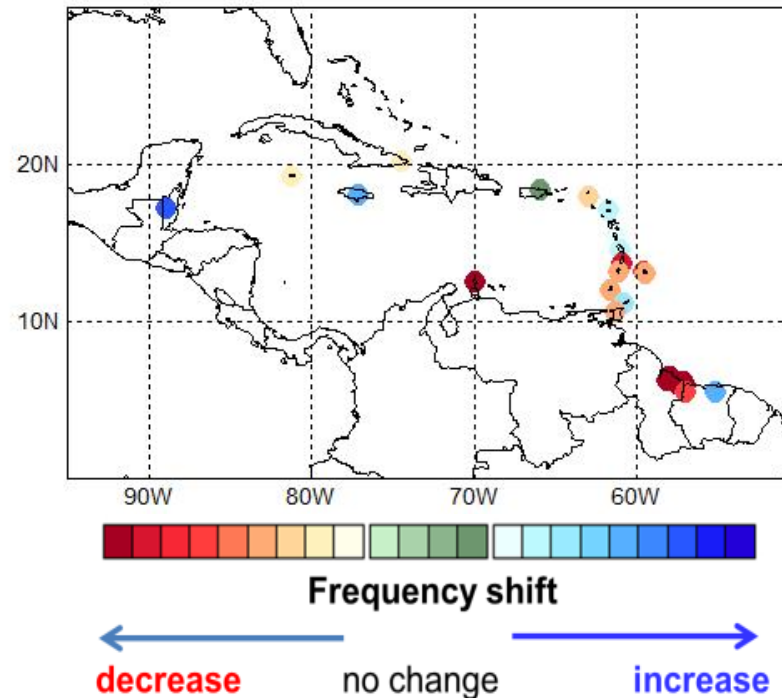
Forecast for: Nov-Jan 2015-6

USUALLY: Number of wet spells decreases from November to January, except the Guianas where it increases.

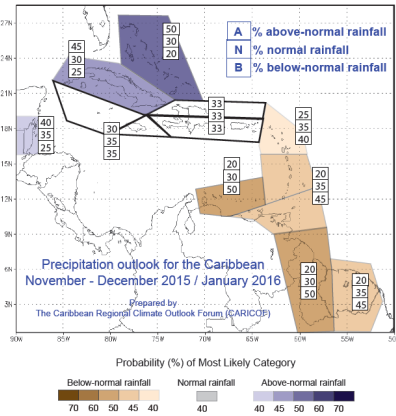
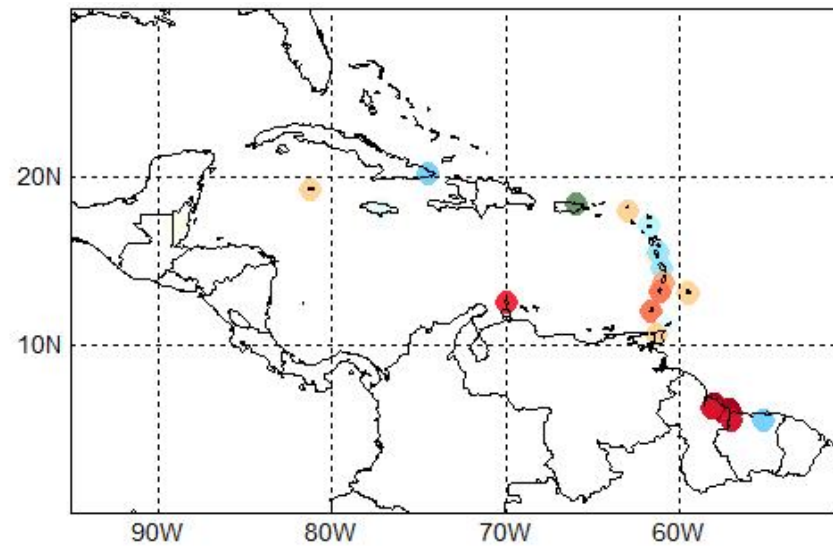
FORECAST: November to January rainfall expected to be below- to normal in eastern and Southern Caribbean with fewer wet days (*high confidence*) and wet spells (*medium confidence*), but above- to normal in Bahamas, Belize, Cuba.

IMPLICATION:
Reduced recharge of water reservoirs.

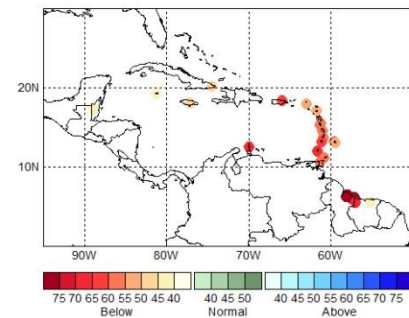
NDJ 2015-6 frequency of 7-day wet spells



NDJ 2015-6 frequency of 7-day very wet spells



NDJ 2015-6 Wet days frequency shifts



Extreme wet spells frequency shifts

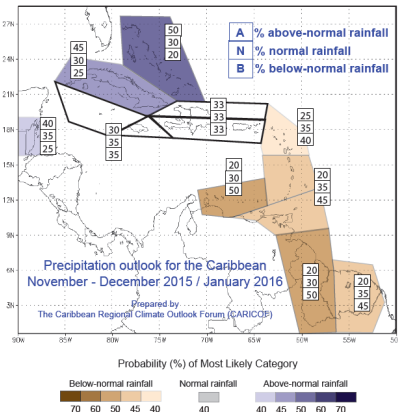
Forecast for: Nov-Jan 2015-6

USUALLY: Few wet spells occur after November, except in the Guianas.

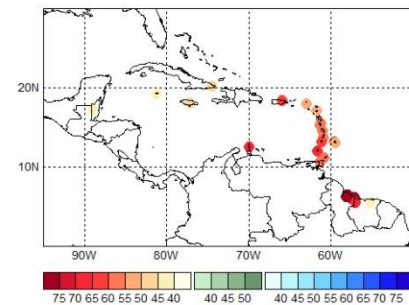
**NDJ 2015 frequency
of extreme (top 1%)
3-day wet spells**

FORECAST: November to January rainfall expected to be below- to normal in eastern and Southern Caribbean with **fewer wet days** (*high confidence*), wet spells (*medium confidence*) and extreme wet spells (*low confidence*), but above- to normal in Bahamas, Belize, Cuba.

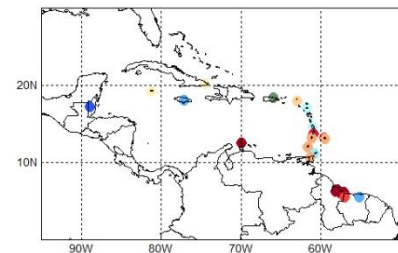
IMPLICATION:
Limited flash flood potential.



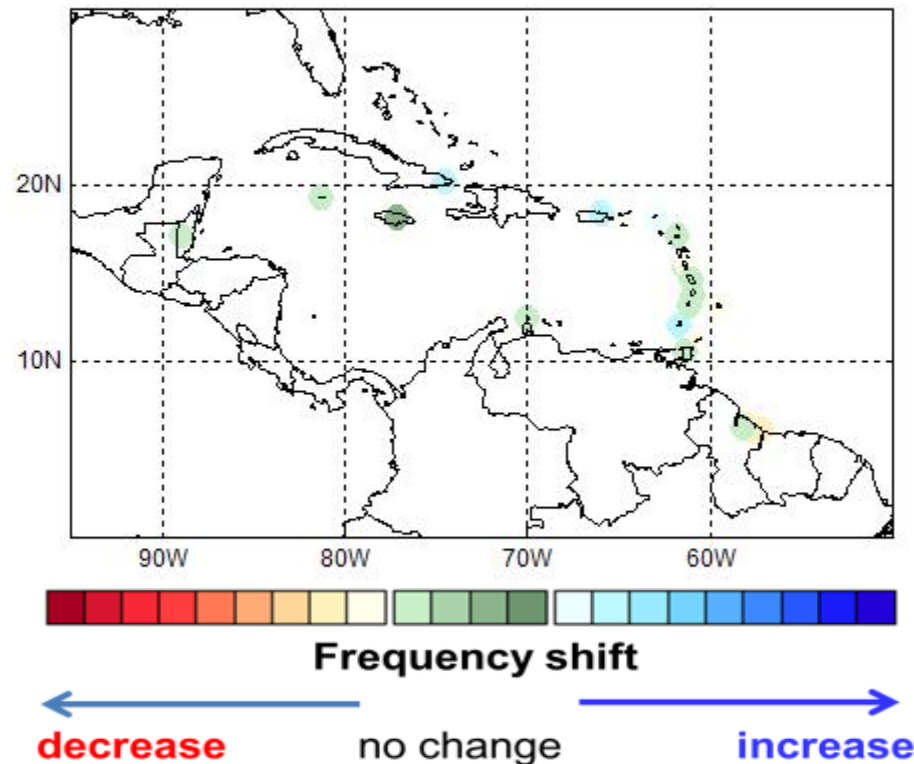
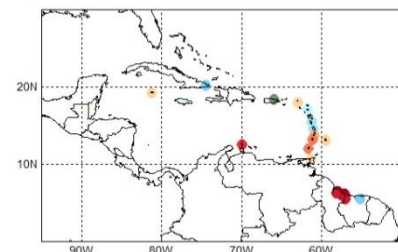
NDJ 2015-6 Wet days frequency shifts



NDJ 2015-6 7 day wet spell freq. shift



NDJ 2015-6 7-dy very wet spell (90 perc.) freq. shift



November to January 2015-6 Forecast	Number of wet days in NDJ 2015-6		Number of 7-day wet spells in NDJ 2015-6 (20% wettest)		Number of 7-day very wet spells in NDJ 2015-6 (10% wettest)		Number of 3-day extremely wet spells in NDJ 2015-6 (1% wettest)	
	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast
Antigua (VC Bird)	28-44	24-41	2-5	2.1-5.5	0-3	0-3.2	0-1	0-0.9
Aruba (Beatrix)	18-46	12-30	2-11	0.8-4.2	0-6.4	0-3.4	0-2.5	0-1.8
Barbados (CIMH)	30-47	26-42	1-6	0.7-3.9	0-3	0-3.1	0-1	0-1
Barbados (GAIA)	31-45	27-42	2-6	1.4-4.9	0-4	0-3.2	0-1.5	0-1.2
Belize (C. Farm)	30-46	24-46	1.7-6.6	3.1-9.2	0.6-4	0-3.6	0-1	0-1
Cayman	18-26	13-29	0-3.4	0-3.4	0-3	0-1.9	0-1.5	0-1.4
Cuba (Punta Maisi)	17-29	14-27	3-5.6	2.2-6.1	1-4	1.3-4.7	0-1	0-1.3
Dominica (Canefield)	40-54	37-51	2-6.5	1.4-5.7	0-3	0-3.2	0-1.1	0-0.1
Dominica (Douglas Charles)	55-67	50-64	1.9-5.5	1.6-5.9	0-3.4	0.7-4.1	0-1	0-1.1
Dom. Republic (Las Americas)								
Grenada (MBIA)	29-43	23-39	2-6.3	0-5.3	0.6-3.7	0-2.6	0-1.2	0-1.8
Guyana (Albion)	26-49	19-35	1-5.4	0-2.1	0-4	0-1.6	0-1	0-1
Guyana (Blairmont)	30-55	23-39	0.7-6	0-2.8	0-3.4	0-1.1	0-2	0-1.5
Guyana (Georgetown)	36-60	30-46	1-7	0-3	1-5.4	0-2.3	0-3	0-1.9
Guyana (New Amsterdam)	30-51	24-39	1.6-6.2	0-3	0-5	0-1.6	0-2	0-1.6
Guyana (Timehri)	40-64	34-49	1-7	0-3.1	0-4	0-1.9	0-1	0-1.2
Jamaica (Worthy Park)	21-28	16-29	5-9	5.2-12	1.7-6	1.9-6.7	0-1	0-0
Martinique (FDF Desaix)	48-62	43-60	1-3	0.8-3.7	0-2	0-1.9	0-1	0-1.2
Puerto Rico (San Juan)	36-51	31-47	13-13	0-0	13-13	0-0	0-1	0-1.3
St. Lucia (Hewanorra)	38-52	32-48	13-14	12.4-13.2	13-14	12.6-13.4	0-1	0-1.1
St. Maarten (TNCM)	34-52	29-48	13-13.3	11.6-13.8	13-13.4	11.7-13.8	0-1	0-2
St. Vincent (ET Joshua)	50-66	44-59	13-14	12-13.9	13-14	12-13.9	0-1.5	0-1.3
Suriname (Zanderij)	38-52	36-53	13-13.3	12.9-13.7	13-13.2	12.9-13.6		
Tobago (ANR Robinson)	35-46	31-44	13-13.3	12.8-13.7	13-13.4	12.7-13.6	0-1	0-1.4
Trinidad (Piarco)	36-51	33-46	13-13.3	12.6-13.4	13-13.4	12.6-13.4	0-1	0-1.3