

Rainfall frequency and extreme forecasts — wet days and wet spells outlooks ASO 2015

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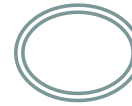
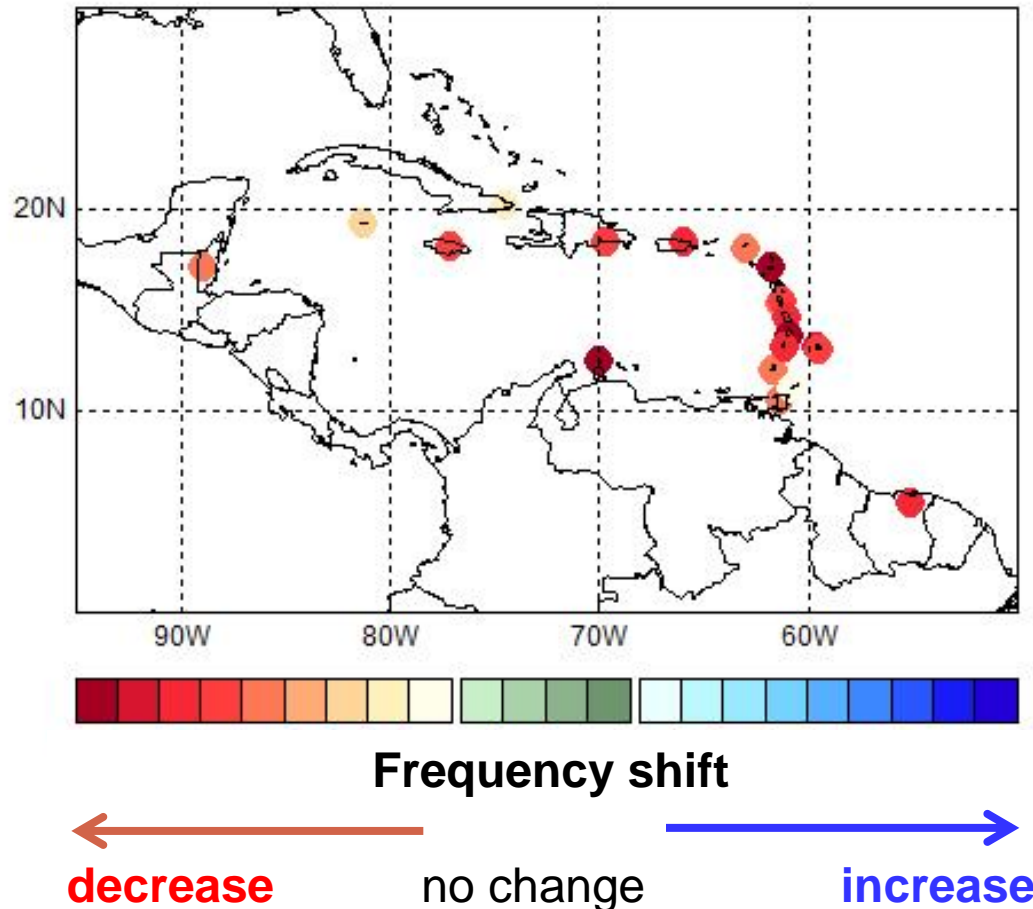
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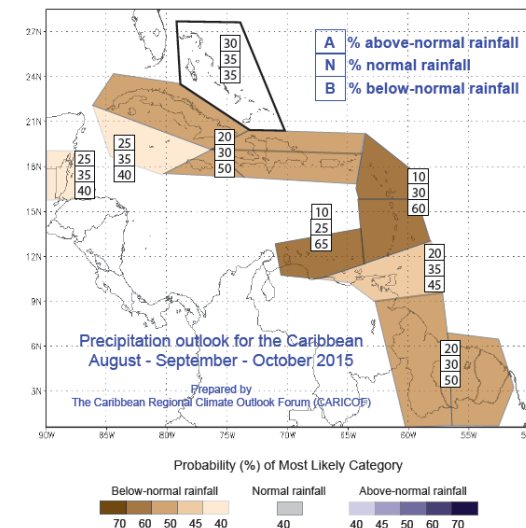


Forecasting wet day frequency within a season

ASO 2015 Wet days frequency shifts

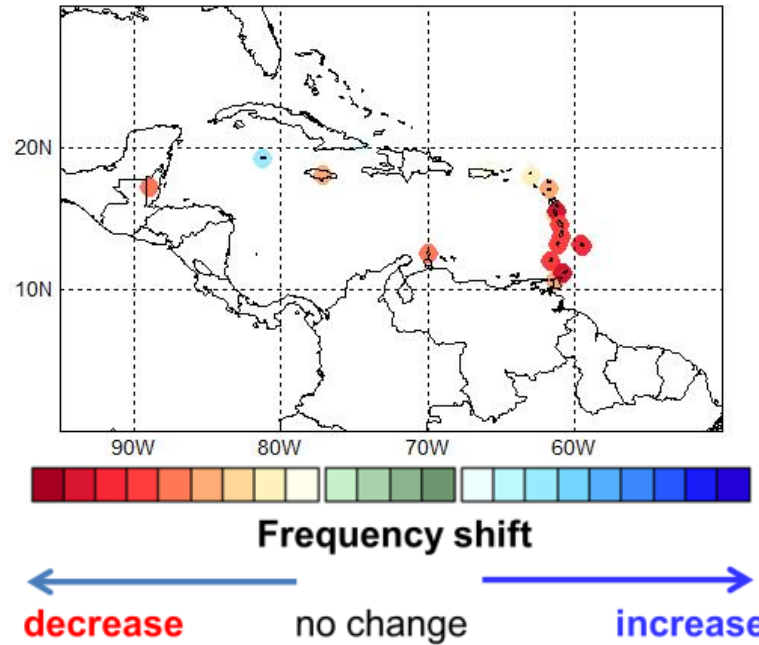


FORECAST: Region-wide, August to October rainfall expected to be below- to normal, with fewer wet days than usual.



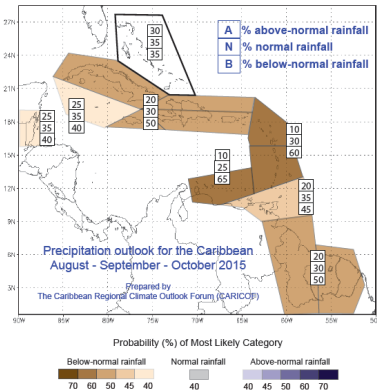
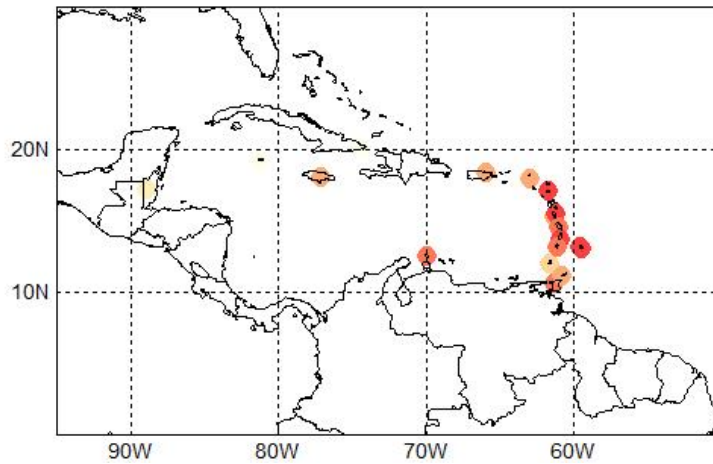
Forecasting shifts in wet spell frequency within a season

ASO 2015 frequency of 7-day wet spells

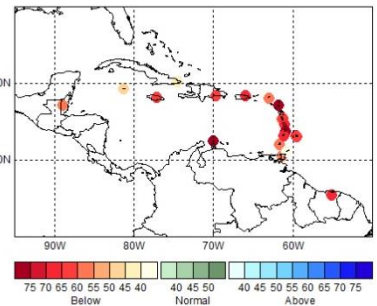


FORECAST: Region-wide, July to September rainfall expected to be below- to normal, with fewer wet days and wet spells than usual.

ASO 2015 frequency of 7-day very wet spells



ASO 2015 Wet days frequency shifts

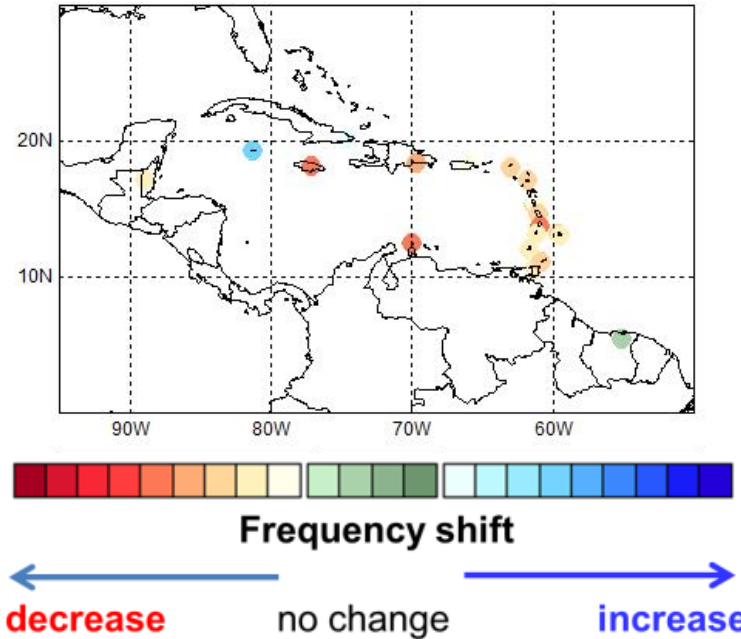
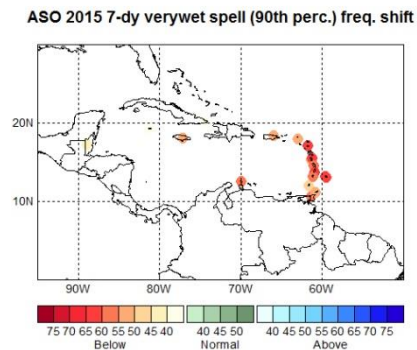
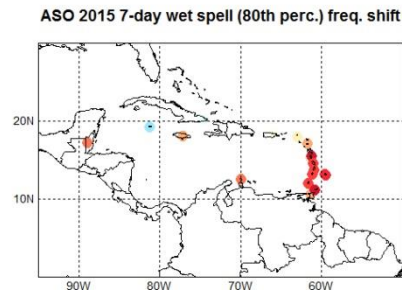
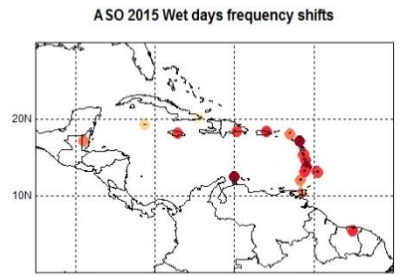
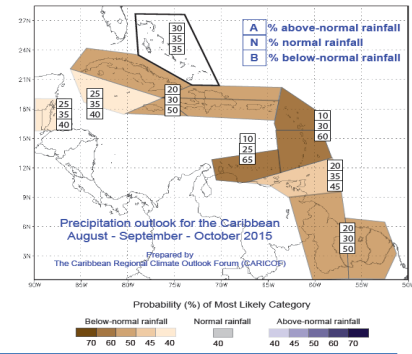


Forecasting shifts in *extreme* wet spell frequency within a season

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

FORECAST: Region-wide, July to September rainfall expected to be below- to normal, with fewer wet days, wet spells and **extreme wet spells** than usual.

Reduced flash flood potential throughout the region (with the possible exception of Cayman)

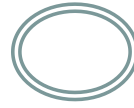


August to October 2015 Forecast

	Number of wet days		Number of 7-day wet spells (20% wettest)		Number of 7-day very wet spells (10% wettest)		Number of 3-day extremely wet spells (1% wettest)	
	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast
Antigua (VC Bird)	30-45	26-35	2.5-8	2.1-6.4	1-5	0-3.2	0-1.4	0-1.1
Aruba (Beatrix)	8-22	4-14	1-6	0.9-4.6	0-4.5	0-3.2	0-2	0-0.6
Barbados (CIMH)	37-50	29-44	4-9	3-7	2-6	0.8-4.8	0-2	0-1.7
Barbados (GAIA)	39-49	34-47	4-9	3.3-6.9	2-6	0.7-4.4	0-2	0-1.7
Belize (C. Farm)	33-50	27-46	3-7	2-6.2	1-5	0-4.6	0-2	0-1.6
Cayman	34-46	31-46	4-9.1	4.8-12.2	1.4-5.3	1.3-5.5	0-2	0-2.1
Cuba (Punta Maisi)	12-27	11-29	1-6	1.8-6.4	0-4.5	0-3.8	0-2	0-1.7
Dominica (Canefield)	45-61	40-56	4-11.4	2.3-12.7	1.4-8.2	0-7	0-2.5	0-1.9
Dominica (Douglas Charles)	57-70	51-67	3.4-8.8	1.8-5.8	2-5.1	0-4.1	0-1.1	0-1.3
Dom. Republic (Las Americas)	27-37	22-35					0-2	0-1.3
Grenada (MBIA)	37-47	32-46	3.5-7.6	2.1-6.3	1-4.5	0-4.8	0-1.6	0-1.1
Jamaica (Worthy Park)	29-48	23-41	3.5-8.5	1.9-7.1	1-4.5	0-4.3	0-2	0-0.8
Martinique (FDF Desaix)	50-63	44-58	4-8	2.5-6.6	2-5.5	0-4.7	0-2	0-1.7
Puerto Rico (San Juan)	39-51	32-46	3-6	2.5-6.2	0.5-3	0-3.3	0-1	0-1.3
St. Lucia (Hewanorra)	44-58	36-48	4-8.1	2.4-7	1.5-4.5	0-4	0-2	0-1.2
St. Maarten (TNM)	34-50	28-47	2-7	1.7-7.3	1-4.5	0-3.7	0-1.4	0-0.8
St. Vincent (ET Joshua)	53-64	48-60	3-8.5	1.8-6.8	1-6	0-4.2	0-2	0-1.7
Suriname (Zanderij)	25-42	18-34					0-0.1	0-0
Trinidad (Piarco)	43-56	38-53	3-7	2.1-5.8	1-5	0.5-3.7	0-1.4	0-1.2
Tobago (ANR Robinson)	37-52	35-51	4-6.5	2-5.1	1.5-4	0-3.9	0-1	0-1

brown is a decrease in frequency, **dark blue** an increase

Rainfall frequency forecasts



- A proof of concept
 - **YOUR INPUT:** threshold values (e.g. 100mm in 1 week) and duration of interest for wet spells
 - The more extreme, the less predictable.
 - Technical methodology for rainfall frequency prediction can be applied to dry spells and heat waves.



Thank you