# Rainfall frequency and extreme forecasts

# Wet days and Wet spells Outlooks March to May 2025

**Dr. Cedric VAN MEERBEECK**<sup>1</sup>, **Dr. Teddy ALLEN**<sup>1</sup>, Dr. Simon MASON<sup>2</sup>, Dr. Ángel MUÑOZ<sup>2</sup>, Wazita Scott<sup>1</sup>, Dale Destin<sup>3</sup>

<sup>1</sup>Caribbean Institute for Meteorology and Hydrology (CIMH), Barbados <sup>2</sup>International Research Institute for Climate and Society (IRI), USA <sup>3</sup>Antigua and Barbuda Meteorological Services











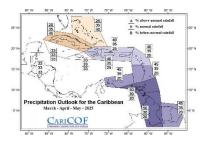




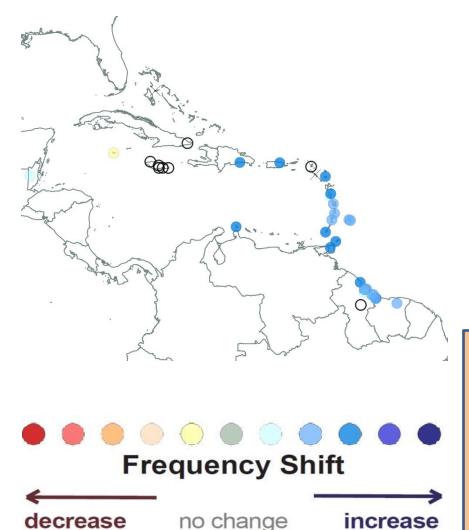
## Wet day frequency shifts

Forecast for: March to May 2025

#### Precipitation outlook



MAM 2025 Frequency of wet days



little indication

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 may be drier than the usual throughout The Bahamas and Cuba, but as wet as usual or wetter elsewhere.

• A faster than usual increase in the number of wet days towards May is expected across most of the region (medium to high confidence).

#### **IMPLICATIONS:**

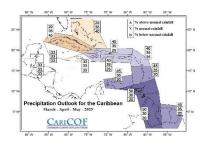
missing

- More frequent wet days than usual translates to an early transition into the wet season along with an increase in outdoor activity disruptions, but replenishing moisture to surfaces and vegetation.
- The above impacts make environmental conditions increasingly conducive to moisture-related pests, but decrease wildfire potential towards May.

## Wet spells frequency shifts

## Forecast for: March to May 2025

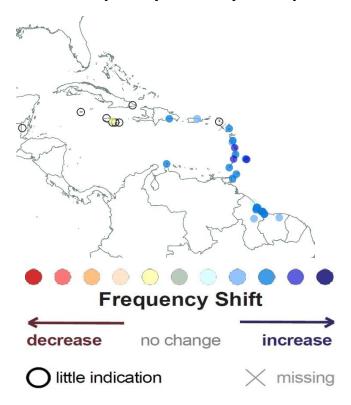
#### Precipitation outlook



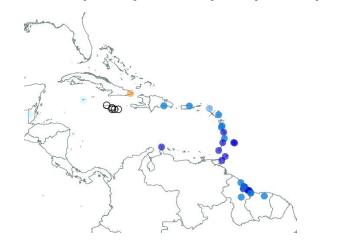
## Wet days outlook



MAM 2025 frequency of 7-day wet spells



#### MAM 2025 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 may be drier than the usual throughout The Bahamas and Cuba, but as wet as usual or wetter elsewhere.

• A faster than usual increase in the number of 7-day wet and very spells is expected across most of the region (medium to high confidence) but, possibly, a slower increase than usual in eastern Cuba and Jamaica (low confidence).

#### **IMPLICATIONS:**

- Water recharge rates in smaller and larger surface reservoirs and in rivers will likely accelerate from March into April and May, particularly in the southern Caribbean and the Guianas.
- Flooding potential is expected to rapidly increase from low or moderate in March, to high in April and May when the wet season returns.
- These trends may manifest much faster than in most years in the eastern and southern Caribbean and the Guianas.

## **Extreme wet spells frequency shifts**

Forecast for: March to May 2025

## Precipitation outlook

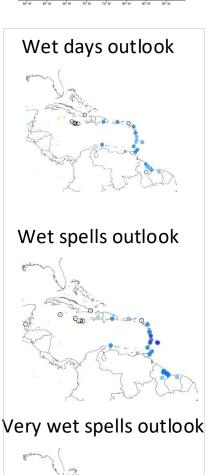


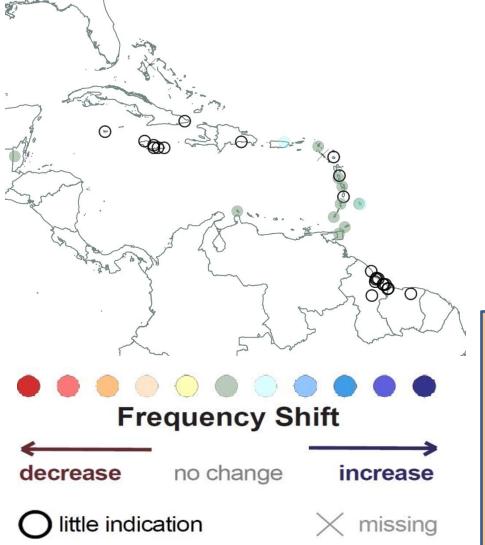
MAM 2025 frequency of extreme (top 1%) 3-day wet spells



FORECAST: MAM may be drier than the usual throughout The Bahamas and Cuba, but as wet as usual or wetter elsewhere.

• No change in the frequency of extreme wet spells is expected across most of the region.





#### **IMPLICATIONS:**

 While the chance of extreme wet spells and the associated potential for flash floods and cascading hazards is low in March in most years, a rapid increase in April (primarily in the Greater Antilles and Guyana) or May (elsewhere) is forecasted to lead to high potential across most of the region.

March to May 2025	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)	
	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	
ntigua (VC Bird)	17-29	18-36	1.1-4.3	1.2-5.1	0.4-2.6	0.4-3.4	0-1	0-1.3	
ruba (Beatrix)	2-10	3-15	0.4-1.3	0.4-2.5	0-0.9	0.1-1.9	0-0	0-0	
arbados (CIMH)	14-28	16-35	0.4-2.6	0.8-3.8	0-1.7	0.2-2.7	0-0.5	0-0.2	
rbados (GAIA)	15-30	18-36	0.4-2.8	1-4.3	0-1.7	0.5-2.6	0-1	0-0.5	
lize (C. Farm)	10-22	9-22	0.4-1.9	0.5-2.2	0-1.3	0.1-1.4	0-0	0-0	
yman	9-22	8-24	0.9-2.6	0.8-3.1	0.4-1.6	0.3-2.2	0-1	0-1.1	
ba (Punta Maisi)	8-20	7-22	1.3-3.9	1.1-4.1	0.4-1.7	0.2-1.7	0-1	0-1.1	
om. Republic (Las Americas)	13-26	15-31	1.1-3.9	1.6-5.4	0.4-2.3	0.7-3.6	0-1	0-0.7	
ominica (Canefield)	22-35	23-38	0-2.5	0.2-3.3	0-1.6	0-2.2	0-0	0-0	
minica (Douglas Charles)	36-60	41-68	1.3-3.6	1.3-5.2	0-2.1	0.3-3	0-2	0-1.9	
enada (MBIA)	10-26	12-37	0-1.9	0.4-3.1	0-1.1	0-2.7	0-0	0-0	
yana_73	21-34	23-37	1.8-5.7	2.3-7.3	0.9-3	1.2-4.3	0-1	0-1.3	
yana (Albion)	28-45	30-49	1.9-4.3	2.5-5.8	0.9-3	1.4-3.9	0-1	0-1.4	
yana (Blairmont)	31-48	32-51	1.9-4.7	2.3-6	0.9-3	1.3-5.1	0-1	0-1.4	
yana (Charity)									
yana (Enmore)	32-44	33-50	1.8-4.7	1.9-5.9	0.9-2.6	1.1-3.3	0-1.3	0-1.4	
yana (Georgetown)	34-50	33-53	1.8-4.3	2.1-5.5	0.9-2.1	1.3-3.5	0-1	0-1.2	
yana (Greatfall)	39-60	30-67	2.1-5.2	2.1-6.4	0.8-3.4	1-5.8	0-2	0-2.6	
yana (New Amsterdam)	34-48	33-55	1.9-4.7	2.4-6	0.9-3	1.4-4.6	0-1	0-1.5	
yana (Skeldon)	34-49	35-54	1.8-5.1	2.5-7.1	0.9-3	1.2-4.6	0-1	0-1.1	
ıyana (Timehri)	35-54	36-56	1.7-4.7	2.3-5.7	0.5-2.6	1.2-4.5	0-2	0-1.7	
ıyana_Wales									
maica (Worthy Park)	20-33	20-35	2.1-4.3	1.7-4.4	0.7-2.6	0.4-3.2	0-1	0-1.5	
artinique (FDF Desaix)	29-47	29-52	0.9-3.4	1.1-4.5	0.4-1.9	0.6-2.7	0-0	0-0	
erto Rico (San Juan)	25-38	26-42	0.9-3.7	1.5-4.8	0.7-2.7	0.8-3.8	0-1.1	0-1.5	
Lucia (Hewanorra)	21-39	21-43	0.5-3	1-4	0-1.7	0.2-2.6	0-1	0-0.4	
Maarten (TNCM)	21-33	20-36	0.9-3	1-3.5	0.4-1.4	0.5-2	0-1	0-0.2	
Vincent (ET Joshua)	31-51	31-58	0.4-3	0.9-4.6	0-1.7	0.3-2.2	0-0	0-0	
riname (Zanderij)	48-61	47-65	2.6-5.9	2.7-7.1	1.7-3.5	1.2-5.3	0-2	0-2	
bago (ANR RobinNDJ)	14-31	16-40	0-1.7	0.6-2.8	0-0.9	0.2-1.6	0-0	0-0	
inidad (Piarco)	13-33	15-37	0.4-2.4	0.7-3.6	0-1.5	0.4-2.4	0-1	0-0.6	



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