

Rainfall frequency and extreme forecasts

—

Wet days and Wet spells Outlooks June to August 2020

**Dr. Cedric VAN MEERBEECK¹, Dr. Teddy ALLEN¹, Dr. Simon MSONN²,
Ángel MUÑOZ², Wazita Scott¹, Dale Destin³**

¹Caribbean Institute for Meteorology and Hydrology (CIMH), Barbados

²International Research Institute for Climate and Society (IRI), USA

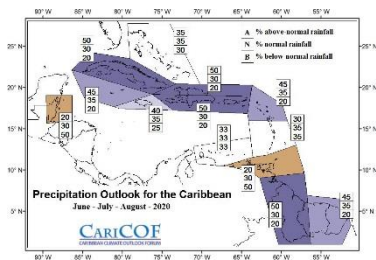
³Antigua and Barbuda Meteorological Services



Wet day frequency shifts

Forecast for: June to August 2020

Precipitation outlook



JJA 2020 Frequency of wet days



USUALLY: Out of 92 days in June-July-August, there are about 30 to 45 wet days in relatively flat areas of Belize and the islands, but 50 to 65 in mountainous areas and in the coastal Guianas (ABC Islands: 5-15).

FORECAST: JJA rainfall may be drier than usual in Belize and Trinidad and Tobago, with slightly fewer wet days than usual (*low to medium confidence*), but wetter than the usual in most other places, with a few more wet days than usual (*medium confidence*).

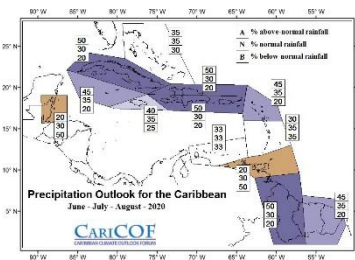
IMPLICATIONS:

- Increasingly frequent interruptions of outdoor activities on wet days.
- Environmental conditions for humidity related pests and diseases could be higher than in most years for the summer months.
- Wild fire potential decreasing faster than usual in this part of the wet season.

Wet spells frequency shifts

Forecast for: June to August 2020

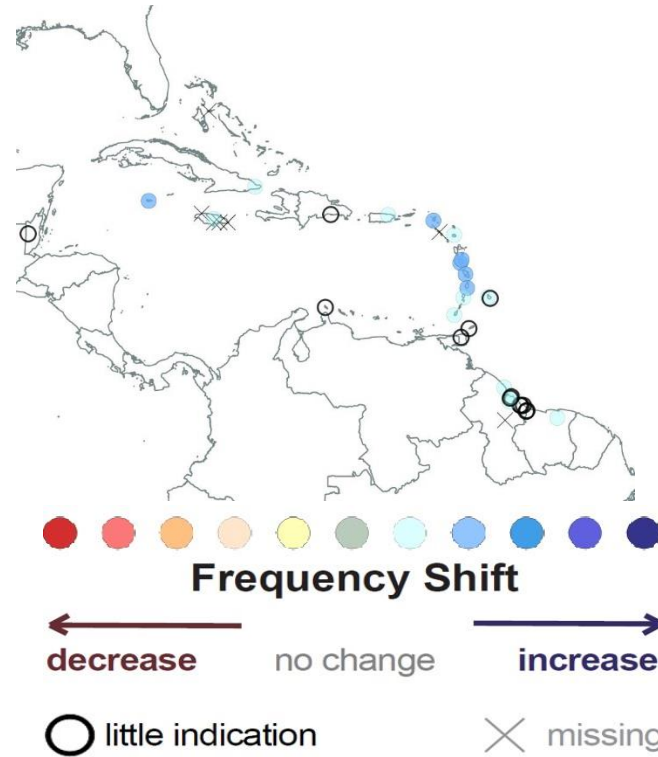
Precipitation outlook



Wet days outlook



JJA 2020 frequency of 7-day wet spells



JJA 2020 frequency of 7-day very wet spells



USUALLY: 3 to 6 wet spells (ABC Islands: up to 3) occur from June to August, with 1 to 3 of them ending up very wet (ABC Islands: up to 2).

FORECAST: JJA rainfall may be drier than usual in Belize and Trinidad and Tobago, with slightly fewer wet days than usual (*low to medium confidence*), but wetter than the usual in most other places, with a few more wet days, wet spells and very wet spells than usual (*medium confidence*).

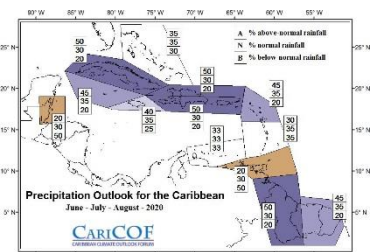
IMPLICATIONS:

- Potentially faster recharge of water reservoirs related to an increase in wet spells.
- Increasing flooding and landslide potential in the islands towards August.

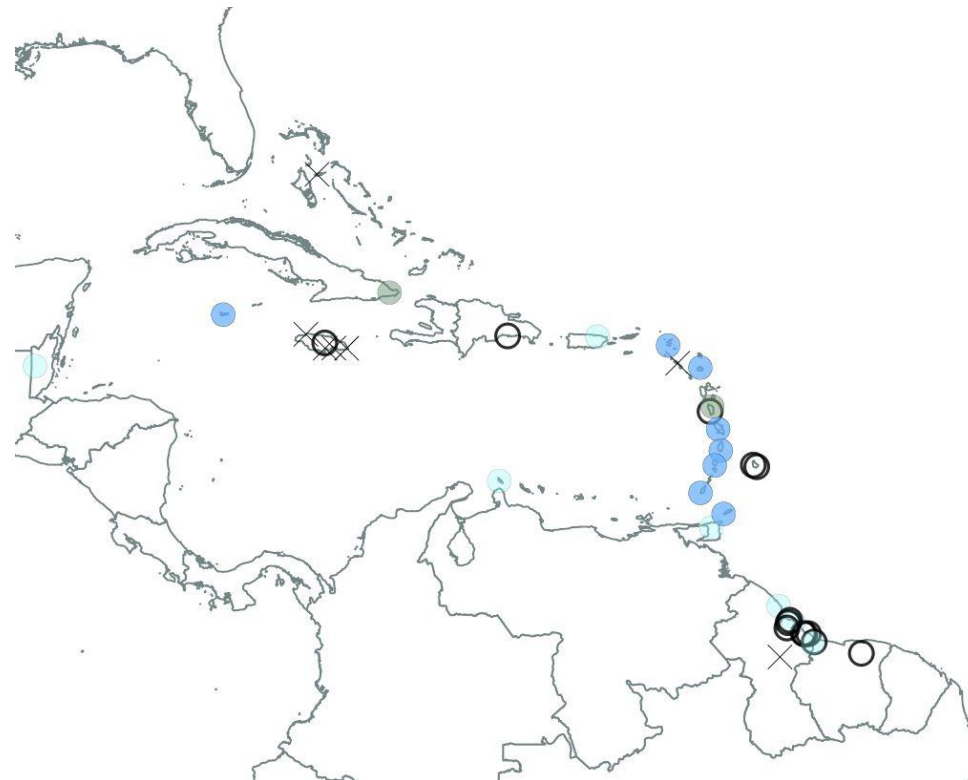
Extreme wet spells frequency shifts

Forecast for: June to August 2020

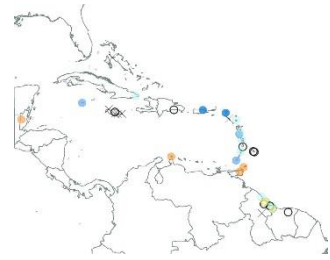
Precipitation outlook



JJA 2020 frequency of
extreme (top 1%) 3-day wet spells



Wet days outlook



Wet spells outlook



Very wet spells outlook



USUALLY: Up to 1 extreme wet spell occur between June to August (ABC Islands: up to 1).

FORECAST: JJA rainfall may be drier than usual in Belize and Trinidad and Tobago, with **slightly fewer wet days than usual** (*low to medium confidence*), but **wetter than the usual in most other places**, with a few more wet days, wet spells and very wet spells than usual (*medium confidence*).

An increase in the number of extreme wet spells is forecast for most Caribbean Islands (*medium confid.*).

IMPLICATION:

Flash flood potential is expected to be of growing concern throughout the period, especially from August onwards.

June to August 2020

Antigua (VC Bird)

Aruba (Beatrix)

Barbados (CIMH)

Barbados (GAIA)

Belize (C. Farm)

Cayman

Cuba (Punta Maisi)

Dom. Republic (Las Americas)

Dominica (Canefield)

Dominica (Douglas Charles)

Grenada (MBIA)

Guyana_73

Guyana (Albion)

Guyana (Blairmont)

Guyana (Charity)

Guyana (Enmore)

Guyana (Georgetown)

Guyana (Greatfall)

Guyana (New Amsterdam)

Guyana (Skeldon)

Guyana (Timehri)

Guyana_Wales

Jamaica (Worthy Park)

Martinique (FDF Desaix)

Puerto Rico (San Juan)

St. Lucia (Hewanorra)

St. Maarten (TNCM)

St. Vincent (ET Joshua)

No. of wet days

Climatology

Forecast

26-42

28-43

6-16

4-16

34-50

33-50

36-47

36-50

33-48

30-46

27-41

27-46

7-15

8-18

No. of 7-day wet spells (20%
wettest)

Climatology

Forecast

1.8-4.7

2.2-5

0.4-3.4

0.7-4.2

2.6-6.4

3.1-6.9

3-5.5

3.3-6

2.6-5.7

2.5-6.5

2.9-5.8

2.9-6.7

0.9-3.4

1.1-3.7

No. of 7-day very wet spells
(10% wettest)

Climatology

Forecast

0.9-3

1-3.4

0-2.1

0.1-2.1

0.9-3

1.2-3.9

0.9-2.7

1-3.4

1.3-3.4

1-3.6

0.9-3.4

1.4-4.8

0-1.3

0.1-2

No. of 3-day extremely wet
spells (1% wettest)

Climatology

Forecast

0-1

0-0.5

0-0.3

0-0.1

0-1

0-0.9

0-1

0-1.2

0-1.4

0-1.8

0-1

0-1.1

0-0.5

0-0.2

19-34

21-37

50-67

49-72

53-69

54-74

42-51

41-56

25-35

26-40

37-52

38-57

44-60

45-63

41-57

42-62

51-63

48-66

46-60

44-60

45-52

43-54

55-68

54-70

51-64

49-65

24-38

23-43

51-63

50-68

31-50

33-59

40-57

40-59

29-44

28-52

55-67

52-71

1.8-5

2.1-5.7

3.9-6.7

4-7.5

2.2-5.6

2.4-6.2

3.9-6.3

3.8-6.8

3.3-5.6

3-6

3.4-6.8

3.6-6.7

3.5-6.9

3.2-7.4

3.1-6

3.1-6.7

3.2-5.6

3-6.3

3.8-6.2

3.2-6.7

3.1-6.4

2.8-6.7

3.4-5.9

3.4-6.4

3.5-6

3.4-6.8

2.1-4.7

2.3-5.7

3-6

3.7-6.4

2.5-5.5

2.6-5.9

2.9-5.6

3.5-6.4

1.7-4.7

2-5.1

3.1-5.6

2.9-6

0.6-3

1-4

1.7-4.5

1.4-5.2

0.9-2.9

0.9-3.8

1.7-3.6

1.3-4.4

1.3-3.4

1.4-4.9

1.7-3.8

1.8-4.3

1.3-3.9

1.7-4.6

1-3.4

1.1-4.7

1.3-3

1.4-4

1.3-3.2

1.7-4.2

1.2-4

1.2-4.8

1.3-3.6

1.5-4.5

1-3.4

1.1-5

1-2.9

1.2-3.5

1.3-3

1.5-3.1

1.2-3.1

1.1-3.9

0.9-2.6

1.2-3.6

0.4-2.5

0.6-3.4

1-3.2

1-3.5

0-1

0-1.4

0-1.3

0-1.5

0-0

0-0

0-1

0-1.7

0-1

0-1.1

0-1.1

0-1.6

0-1

0-1.7

0-1.1

0-1.4

0-1

0-1.1

0-1

0-1.1

0-1.8

0-1.8

0-1

0-1.3

0-1.8

0-1.5

0-1

0-1.7

0-1

0-1.8

0-1

0-0.9

0-1

0-0.7

0-1

0-0.7

0-1.1

0-1.5

grey none are expected

blue an increase,

brown is a decrease in frequency,



CARICOF
CARIBBEAN CLIMATE OUTLOOK FORUM

caricof@cimh.edu.bb

rcc.cimh.edu.bb

Caribbean Institute for Meteorology and Hydrology

TEL: (246) 425-1362/3 | FAX: (246) 424-4733