



Koninklijk Nederlands
Meteorologisch Instituut
Ministerie van Infrastructuur en Waterstaat

Hurricane season 2023

Caribbean Netherlands

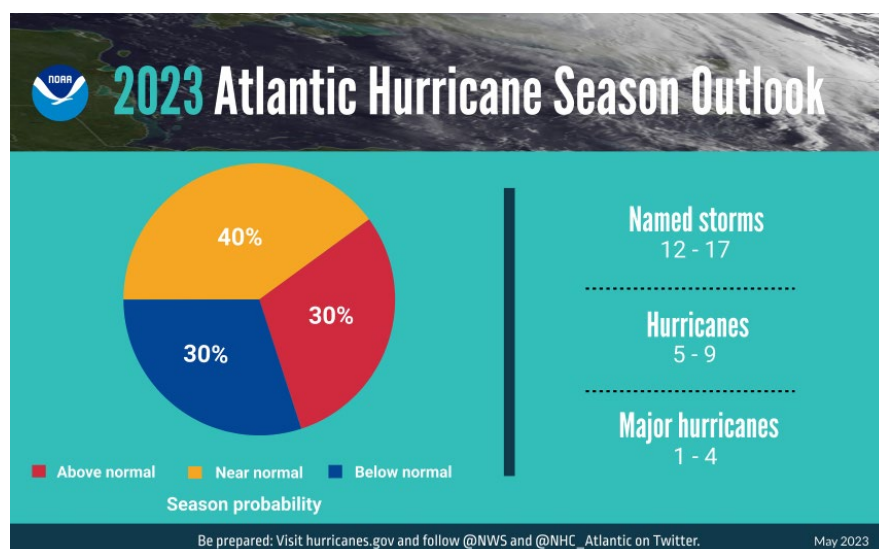
The official hurricane season for the North Atlantic Ocean & Caribbean Sea starts on the 1st of June and ends by the 30th of November. In general the highest storm activity is registered during the months of August, September and October.

NOAA forecasters with the Climate Prediction Center, a division of the National Weather Service, predict near-normal hurricane activity in the Atlantic this year.

NOAA's Climate Prediction Center is forecasting a likely range of 12 to 17 named storms, of which 5 to 9 could become hurricanes, including 1 to 4 major hurricanes (category 3, 4 or 5). An average hurricane season produces 14 named storms, of which 7 become hurricanes, including 3 major hurricanes. Please see as well:

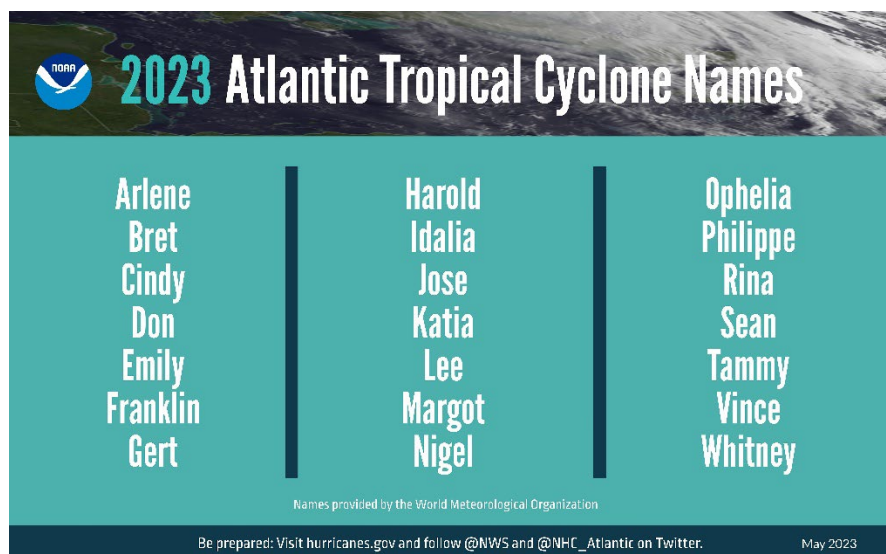
<https://www.noaa.gov/news-release/2023-atlantic-hurricane-season-outlook>

<http://www.cpc.ncep.noaa.gov/products/outlooks/hurricane.shtml>



Hurricane season probability and numbers of named storms. (NOAA)

For 2023 the following names are given to the storms:



alphabetical list of the 2023 Atlantic tropical cyclone names as selected by the World Meteorological Organization. (NOAA)

Color Coded Warning System

The KNMI warning system consists of six (6) color coded warning phases indicating the severity of the conditions and time left before a (potential) storm reaches the community.

Phase	Definition:
	No threat
Information --- <i>Be Alert!</i> ---	A Storm or Tropical Cyclone might threaten the community within 48 tot 72 hours
Watch --- <i>Prepare Yourself!</i> ---	Storm or Tropical Cyclone conditions might threaten the community within 48 hours
Warning --- <i>Protect Yourself!</i> ---	Storm or Tropical Cyclone conditions expected within the next 36 hours
Strike --- <i>Seek Cover!</i> ---	Storm or Tropical Cyclone conditions expected within 6 to 9 hours
Advisory --- <i>Carefull!</i> ---	Heavy rainfall and or rough sea conditions are expected. No Tropical Storm or hurricane is expected

Guideline: might means $\geq 10\%$ chance, expected means $\geq 50\%$ chance

During the Information phase (Yellow Phase) KNMI will provide 2 times per day a *Tropical Cyclone Bulletin (TCB)*. During the phases from "Watch" to "Strike" (Orange to Purple) this number increases to 4 times per day to provide the latest available information. These phases and the TCB will be initiated by KNMI in coordination with the National Hurricane Center (NHC). A *TCB* describes the warning, expected Wind, Rainfall and Maritime conditions. The TCB will be in the English language. See the example on the next pages.

Tasks KNMI and NHC

KNMI is working closely with the NHC in monitoring and issuing warnings for tropical storms and hurricanes. The NHC is monitoring the Atlantic basin (RA-IV) for the occurrence of tropical storms and hurricanes. KNMI indicates which warnings are required for the special municipalities (Bonaire, Saba and Sint Eustatius) and coordinates and discuss these with the NHC so that these warnings are included in the NHC bulletins. Specific warnings for the

islands (what can you expect in terms of weather conditions) are included by KNMI in the bulletins and communicated with the islands themselves (the so-called key messages).

Important information websites

NOAA National Hurricane Center: <http://www.nhc.noaa.gov>

KNMI expectations and warnings: <https://www.knmidc.org>

Example Tropical Cyclone Bulletin

TROPICAL CYCLONE BULLETIN NO. 10

WARNING MESSAGE NO. 5

Date: Monday September 18, 2017 **Time:** 16:30 local time

Key Messages:

- **Hurricane watch in effect for dangerous hurricane Maria**
- **Maria is expected to pass 70 miles (112 km) south of St. Eustatius on Tuesday September 19, 16:00**
- **Tropical storm winds are expected from Tuesday September 19, 12:00 until Wednesday September 20, 06:00**
- **20-30% risk Hurricane force winds (CAT-1, gusts 85 mph/140 km/h) from Tuesday September 19, 18:00 until Wednesday September 20, 00:00**
- **Dangerous 25 ft high waves expected from Tuesday 06:00 till Wednesday 18:00, especially during the nearest approach on Tuesday 16:00**
- **Accumulated rainfall 4-6 inch, possibly up to 8 inch, forecasted with risk of life-threatening flash floods and mud slides**

Effect on local conditions

Winds:

Tuesday morning easterly winds will increase to tropical storm conditions (maximum gusts 60 mph – 100 km/h) and may continue till the early night to Wednesday. In this period there is a small risk (20-30%) for hurricane wind conditions (CAT-1), with gusts up to 85 mph - 140 km/h from Tuesday afternoon. From Wednesday morning wind speeds are expected to decrease to normal conditions. Wind will turn from East to South during Wednesday afternoon and evening.

Seas:

A dangerous storm surge accompanied by large and destructive waves will raise water levels by as much as 6 to 9 ft above normal tide levels near where the center of Maria moves across the Leeward Islands.

Rainfall:

Maria is expected to produce total rain accumulations of 4 to 6 inches with isolated maximum amounts of 8 inches. Rainfall could cause life-threatening flash floods and mudslides.

Local authorities and residents of Saba and St. Eustatius are advised to continue monitoring the further progress of this weather system and to take all necessary measures to safeguard life and property.

Center's latest and forecast positions:

SABA:

Till Sat Sep 23 14:00 AST, the nearest position is estimated at:

Mon Sep 18 17:00 AST 15.1N 60.7W Category 4 Hurricane 390 km (243 mi) SE of Saba

Tue Sep 19 02:00 AST 15.7N 61.9W Category 4 Hurricane 258 km (160 mi) SE of Saba

Tue Sep 19 14:00 AST 16.5N 63.3W Category 4 Hurricane 126 km (78 mi) S of Saba
 Wed Sep 20 02:00 AST 17.3N 64.7W Category 4 Hurricane 160 km (99 mi) WSW of Saba
 Wed Sep 20 14:00 AST 18.2N 66.2W Category 4 Hurricane 320 km (199 mi) W of Saba

ST. EUSTATIUS:

Till Sat Sep 23 14:00 AST, the nearest position is estimated at:

Mon Sep 18 17:00 AST 15.1N 60.7W Category 4 Hurricane 360 km (224 mi) SE of St. Eustatius
 Tue Sep 19 02:00 AST 15.7N 61.9W Category 4 Hurricane 230 km (143 mi) SSE of St. Eustatius
 Tue Sep 19 14:00 AST 16.5N 63.3W Category 4 Hurricane 115 km (72 mi) SSW of St. Eustatius
 Wed Sep 20 02:00 AST 17.3N 64.7W Category 4 Hurricane 184 km (114 mi) W of St. Eustatius
 Wed Sep 20 14:00 AST 18.2N 66.2W Category 4 Hurricane 350 km (218 mi) WNW of St. Eustatius

Definitions:

HURRICANE WATCH: A warning for hurricane conditions, including sustained winds within the range ≥ 118 km/h (≥ 74 mph) (≥ 64 knots) are possible in specified areas in 48 hours or less.

Next bulletin:

Monday September 18, 2017, 22:30 local time

