

Meteorological Department Curaçao



Climatological Report 2012



Published by: The Meteorological Department Curaçao,
Seru Mahuma z/n,
Curaçao.
<http://www.meteo.an>
Facebook at <http://www.facebook.com/meteo.curaçao>

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Cover: Participants of the Seventh Meeting of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards for the Caribbean and other Adjacent Regions (ICG CARIB), which was held in early April 2012 in Curaçao.

Introduction

Climate Summary 2012

Globally

The World Meteorological Organization's Statement on the Status of the Global Climate indicates that 2012 joined the ten previous years as one of the warmest on record, despite the cooling influence of a La Niña episode early in the year. The 2012 global land and ocean surface temperature during 2012 is estimated to have been 0.45°C above the 1961–1990 average of 14.0°C. This is the ninth warmest year since records began in 1850 and the 27th consecutive year that the global land and ocean temperatures were above the 1961–1990 average, according to the statement. The years 2001–2012 were all among the top 13 warmest years on record.

Above-average temperatures were observed during 2012 across a great majority of the globe's land surface areas, most notably are North America, southern Europe, western Russia, parts of northern Africa and southern South America. Nonetheless, cooler than average conditions were observed across Alaska, parts of northern and eastern Australia, and central Asia.

Precipitation across the globe was slightly above the 1961-1990 long-term average. There were drier than average conditions across much of the central United States, northern Mexico, northeastern Brazil, central Russia, and south-central Australia. Wetter than average conditions were present across northern Europe, western Africa, north-central Argentina, western Alaska, and most of northern China.

Extreme Events: Hurricane *Sandy* killed close to 100 people and caused major destruction in the Caribbean and tens of billions of US dollars in damage and around 130 deaths in the eastern United States of America. Typhoon *Bopha*, the deadliest tropical cyclone of the year, hit the Philippines (twice) in December. During the year, the United States and south-eastern Europe experienced extreme drought conditions, while West Africa was severely hit by extreme flooding. The populations of Europe, northern Africa and Asia were acutely affected by extreme cold and snow conditions. Severe flooding occurred in Pakistan for a third consecutive year.

Caribbean Area

Hurricane Sandy was the main weather feature in 2012 in the Caribbean (69 casualties). It killed 52 people in Haiti, in Cuba (11), the Dominican Republic (2), the Bahamas (2), Jamaica (1) and the British Virgin Islands (1), when it moved from south to north over the central Caribbean in late October. Earlier in the season, Hurricane Ernesto moved through the Caribbean and made landfall on the Yucatan peninsula (Mexico) in the evening of August 7. There were twelve direct and indirect fatalities related to Ernesto in Mexico. Tropical Storm Isaac moved late August through the eastern and central Caribbean and was responsible for 29 fatalities in Haiti (24) and the Dominican Republic (5).

General Conditions in Curaçao

The climate for 2012 in Curaçao was about average with no significant extremes, which confirms the predicted weakening of the La Niña event and a return to average conditions in the tropical Pacific Ocean, as far as the sea surface temperature is concerned.



Hurricane Season 2012

The 2012 Atlantic Hurricane Season was expected to be less active than the previous two seasons. The main reason why the season would be less busy was the weakening of the La Niña event. La Niña conditions, where the sea surface water temperature near the equator, between the coast of Ecuador and the International Date Line, is lower than normal are favorable for the development of tropical cyclones over the tropical Atlantic Ocean and also the Caribbean Sea. Even the development of El Niño conditions was considered, where the sea surface water temperature in the same region is higher than average. In such a case atmospheric conditions are unfavorable for the formation of tropical cyclones in the Caribbean Area and the tropical Atlantic Ocean.

During most of 2012, a neutral situation existed in the equatorial section of the Pacific Ocean. Since no real El Niño condition developed, a larger than expected amount of tropical cyclones developed over the Atlantic Basin (North Atlantic Ocean, the Caribbean Sea and the Gulf of Mexico). Both the forecasters of the Colorado State University and the National Oceanic and Atmospheric Administration (NOAA) had to adjust their seasonal outlooks upward, after it became obvious that no significant El Niño event would develop.

The season had an early start. Prior to the official start of June 1, two tropical storms, *Alberto* and *Beryl*, developed in the second half of May 2012. Tropical storm *Beryl* made landfall in northern Florida on May 28 and developed huge amounts of rain in a large area in the southeastern United States. (see table 1.)

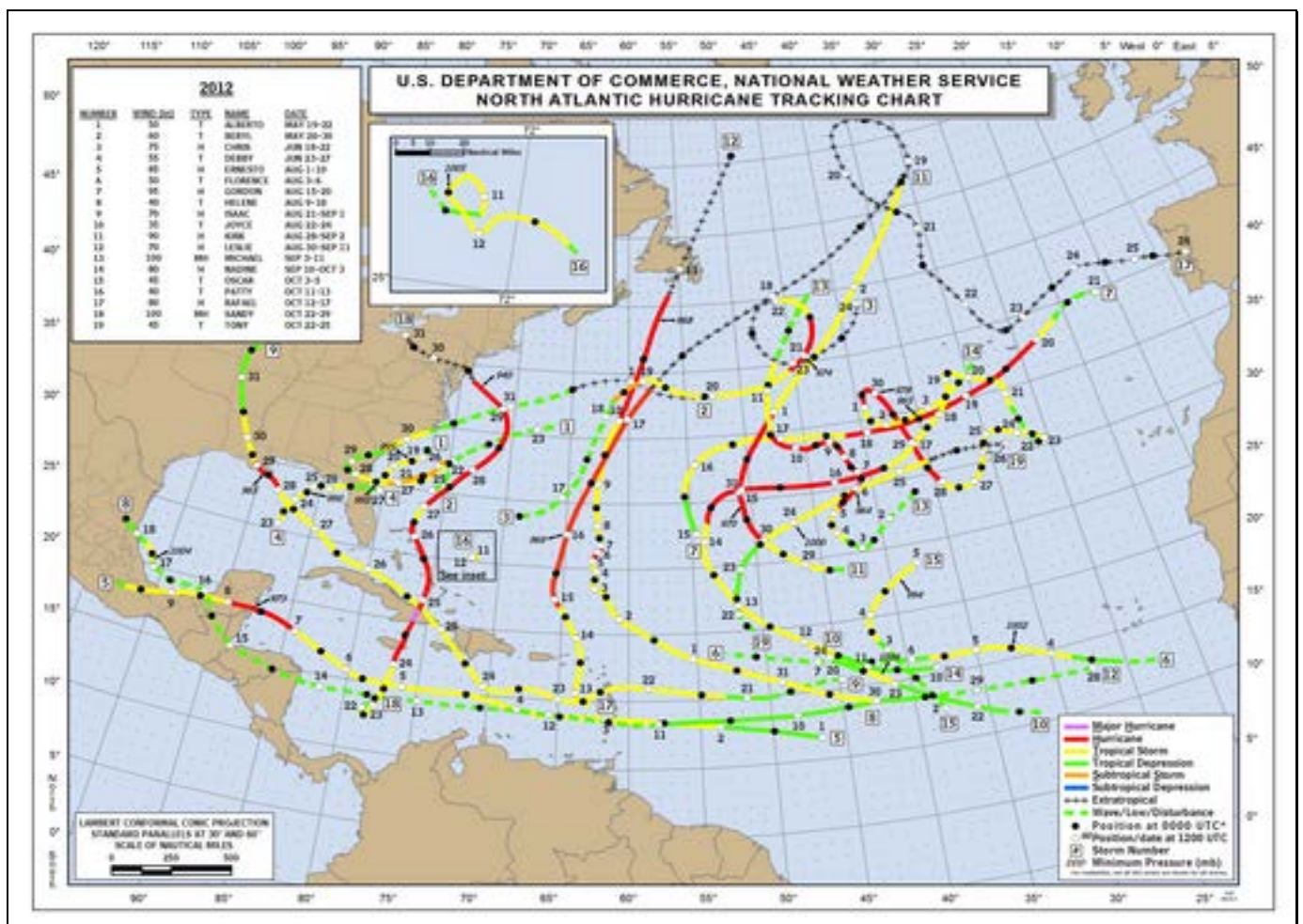
Table 1.

Trop. Depr. Nr.	Name	Period	Min. Air pressure	Maximum wind
1	T.S. Alberto	May 19 - 22	995 hPa	95 km/hr
2	T.S. Beryl	May 26 - 30	992 hPa	115 km/hr
3	Hurricane Chris	June 18 - 22	974 hPa	135 km/hr
4	T.S. Debby	June 23 - 27	990 hPa	105 km/hr
5	Hurricane Ernesto	August 1 - 10	973 hPa	160 km/hr
6	T.S. Florence	August 3 - 6	1002 hPa	95 km/hr
7	Hurricane Gordon	August 15 - 20	965 hPa	175 km/hr
8	T.S. Helene	August 9 - 18	1004 hPa	75 km/hr
9	Hurricane Isaac	August 21 - September 1	965 hPa	130 km/hr
10	T.S. Joyce	August 22 - 24	1006 hPa	65 km/hr
11	Hurricane Kirk	August 28 - September 8	970 hPa	170 km/hr
12	Hurricane Leslie	August 30 - September 11	968 hPa	130 km/hr
13	Hurricane Michael	September 3 - 11	964 hPa	185 km/hr
14	Hurricane Nadine	September 10 - October 3	978 hPa	145 km/hr
15	T.S. Oscar	October 3 - 5	994 hPa	80 km/hr
16	T.S. Patty	October 11 - 13	1005 hPa	75 km/hr
17	Hurricane Rafael	October 12 - 17	969 hPa	145 km/hr
18	Hurricane Sandy	October 22 - 29	940 hPa	185 km/hr
19	T.S. Tony	October 22 - 25	1000 hPa	80 km/hr

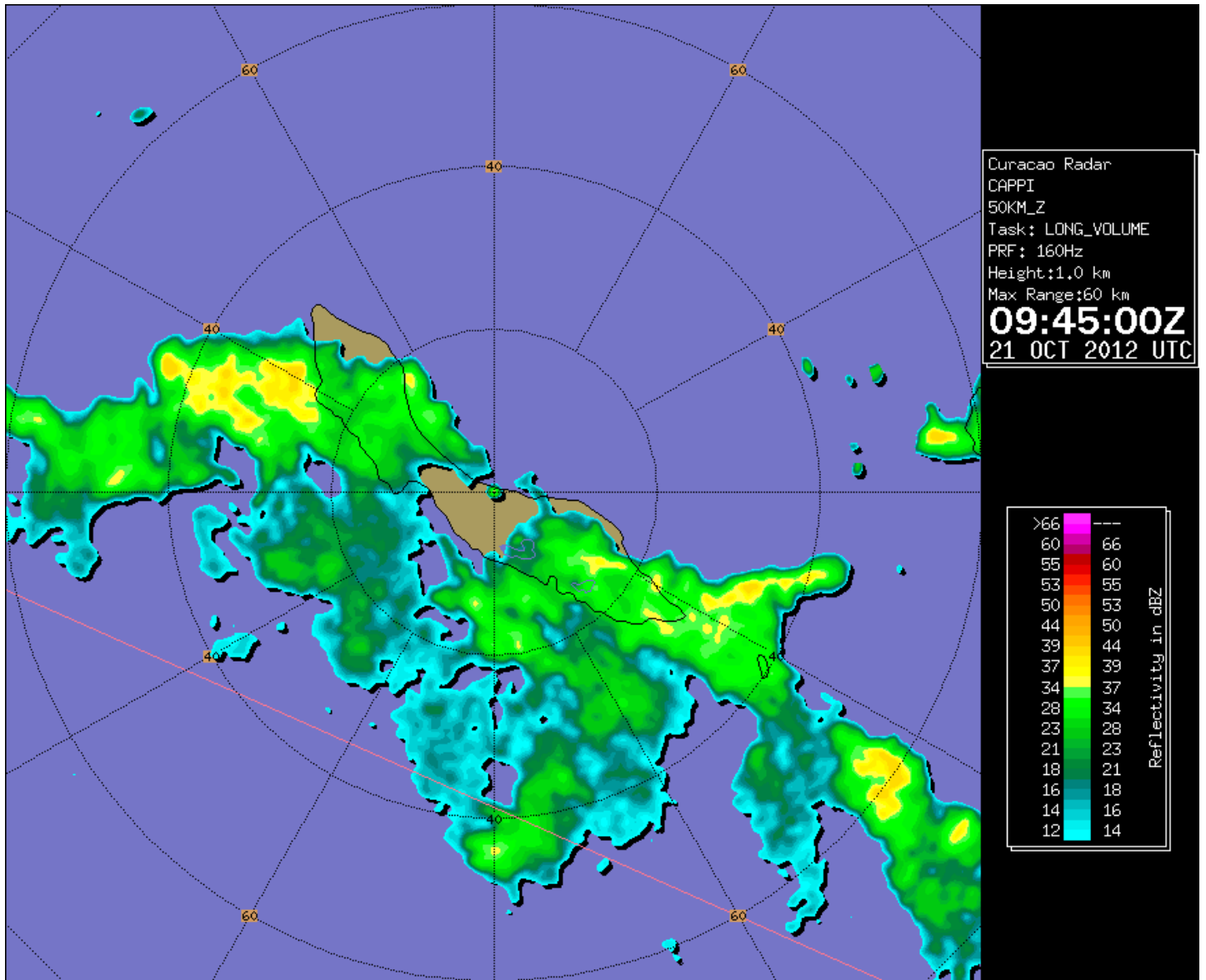
Tropical Depression *Five* developed on August 1 out of a tropical wave and was upgraded to Tropical Storm *Ernesto* on the next day. The Meteorological Department Curaçao (MDC) issued an Information Message on the same day for the SSS Islands. At no moment however any warnings were required for these islands. The tropical storm thereafter continued to move westward and passed between the ABC and the SSS Islands.

Another tropical wave was classified as Tropical Depression *Nine* on August 21. The MDC immediately issued a Tropical Storm Warning for the SSS Islands. This system was upgraded to Tropical Storm *Isaac* later in the day, as it approached the Eastern Caribbean Area. *Isaac* caused only minor damage on the SSS Islands, mainly by toppling a few trees and lamp posts. There were no human casualties. *Isaac* continued to move away toward the west and during the morning of August 23 the Tropical Storm Warning was discontinued for the SSS Islands.

An area of low pressure over the Eastern Caribbean Sea continued to develop and was classified during the early evening of October 12 as Tropical Storm *Rafael*. During that same evening the MDC issued a Tropical Storm Warning for the SSS Islands. After that, the center of this system passed just west of St. Maarten, Saba and St. Eustatius in a northerly direction. Despite this close call little significant weather was experienced on the islands except for some local flooding. The warnings were discontinued during the morning of October 14.



Except for a few cases of temporary wind direction shifts and the development of a few thunderstorms during the passage of *Ernesto* and *Isaac*, there was little to report during the 2012 hurricane season in Bonaire and Curaçao. A tropical wave caused heavy thunderstorms and local flooding in the ABC Islands during the early morning of October 21 (see radar picture page 6). This system would become Hurricane *Sandy* after a few days, the second most expensive hurricane in the history of the United States.



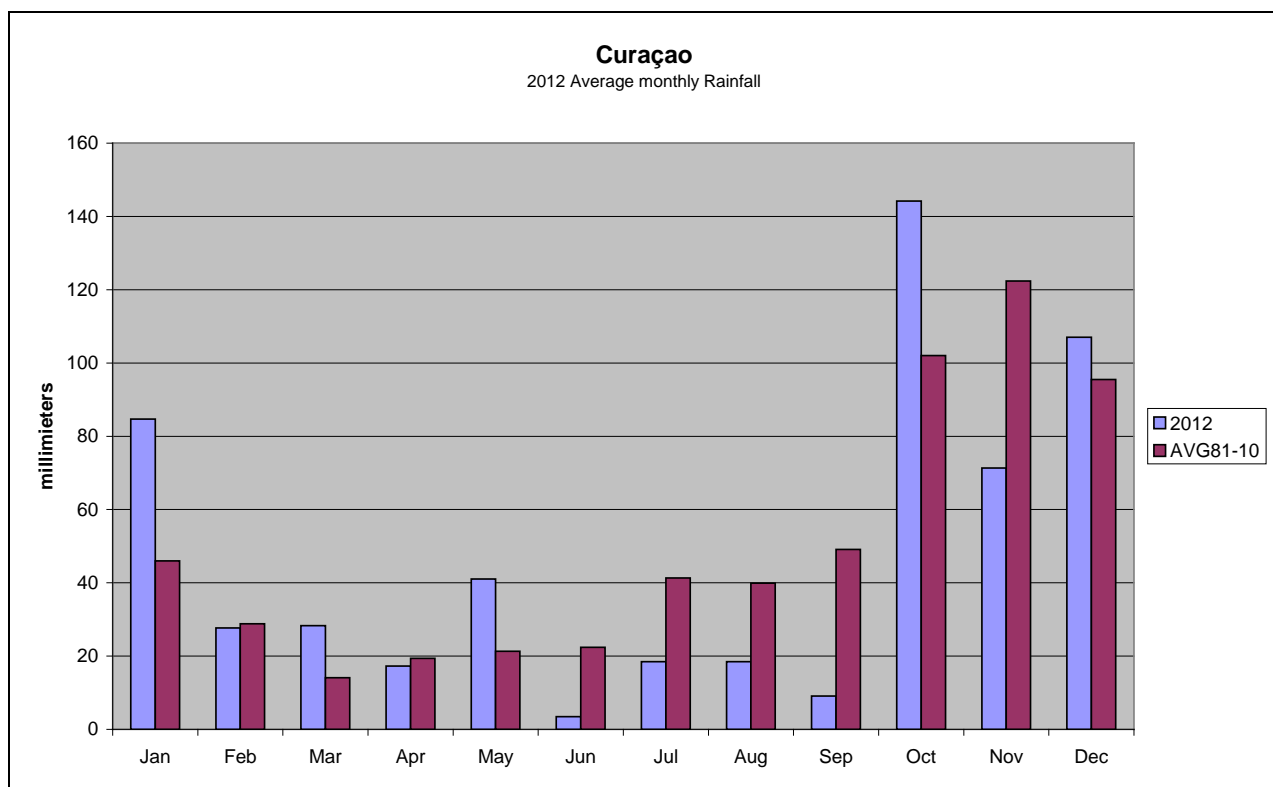
Curaçao Weather Radar
Date: 21 October 2012, 05:45 A.M. I.t.

Curaçao Climate

Rainfall

The rainfall total recorded at the Hato International Airport for the year 2012 was 440.0 mm. This was 26.7 % below average compared to the 30 year normal (1981-2010) The island average total rainfall for 2012 was 580 mm. (normal 555.2) this is 4.5% above normal.

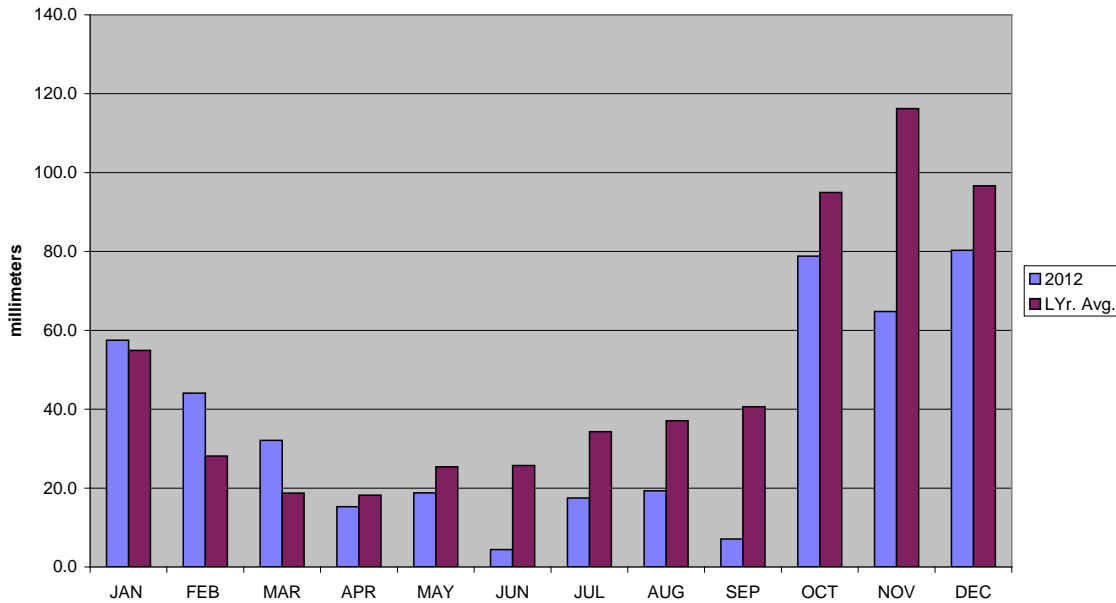
When analyzing the island rain gauge network, the rainfall station at Plantage Sumbu received the highest annual total of 702.6 mm. This is about 26.2% above the island average (1981-2010). According to the available data, rainfall station Grote Berg received the lowest annual total of 498.2 mm. The highest rainfall amounts were concentrated in the first month (Jan.) and latter part (Oct-Dec.) of the year. The maximum 24-hour rainfall for Curaçao was 87.1 mm and was measured at rainfall station Emaus (in Soto) on November 26. The highest monthly total for 2012 was 175.2 mm, measured in October at rainfall station Grote Berg. This same station measured within 24 hours 70.1 mm of rain between October 6, 08:00 a.m. and October 7, 08:00 am. The highest amount of rainy days (days with rainfall greater than or equal to 1.0 mm) for 2012 was 80 (normal 73 days) and was observed at rainfall station Van Engelen.



Rainfall data from Hato station

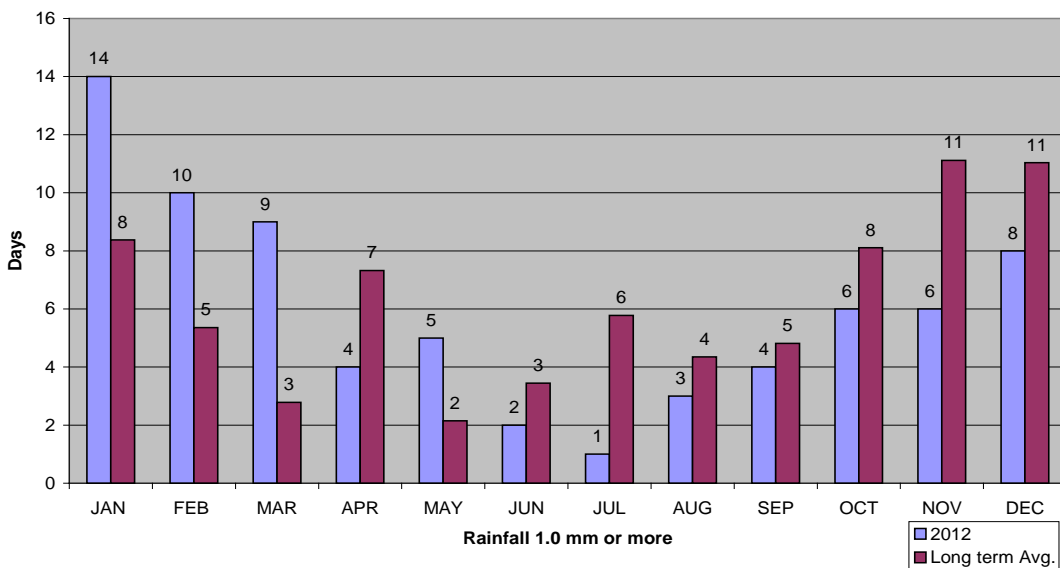
The annual rainfall total for Hato in 2012 was 440.0 mm, 25.5% below the long year average of 591 mm. The wettest month of 2012 was December with a monthly total of 80.3 mm and the driest month was June with 4.4 mm. The 24 hour maximum of 41.2 mm was recorded on December 22. The maximum intensity per minute of 2.0 mm/min. was recorded on October 25 at 10:01 A.M. The maximum rainfall duration was 54 minutes, also recorded on October 25.

Monthly Rainfall HATO Airport



The number of days with rainfall greater or equal to 1.0 mm was 72 days (normal 75). The number of hours with rainfall for 2012, recorded at Hato international Airport, was 330 hours (normal 481). The number of days with thunder was 32 (normal 23).

Days with Rainfall Hato 2012



Temperature

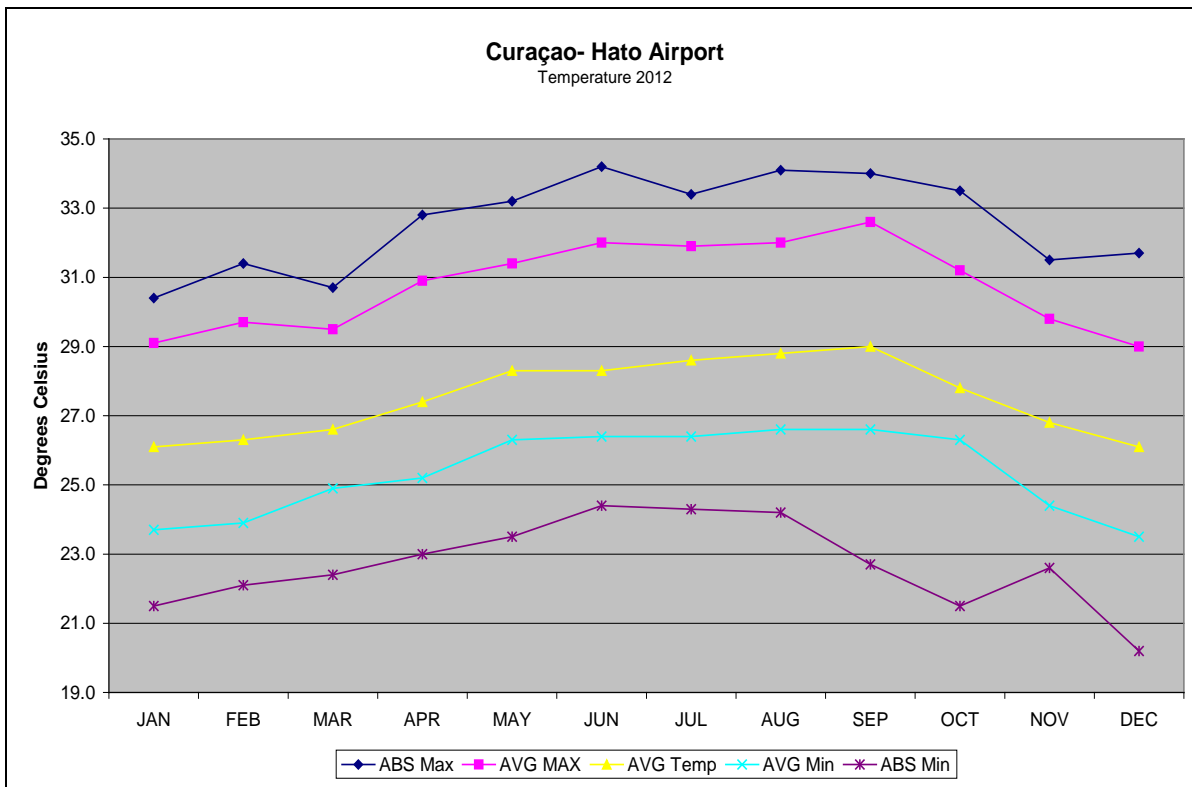
The average air temperature as recorded at Hato International Airport in the year 2012 was 27.5°C (normal 28.0°C). September recorded the highest average maximum air temperature of 32.6°C (normal: September 32.8°C).

The absolute maximum air temperature was 34.2°C and was recorded on June 17 at 14:06 local time.

The all-time absolute maximum air temperature of 38.3°C was recorded on September 11, 1996. The hottest day of 2012 was September 30 with a 24-hour average air temperature of 29.2°C.

January and December were the coolest months with a daily average temperature of 26.1°C. The month December had the lowest average minimum air temperature of 23.5°C.

The absolute minimum air temperature of 20.2 °C was recorded on December 3 at 06:41 local time. The all time absolute minimum air temperature was 17.0°C measured in March 1933. The coolest day of the year 2012 was on December 22 with a 24-hour average temperature of 23.6°C.



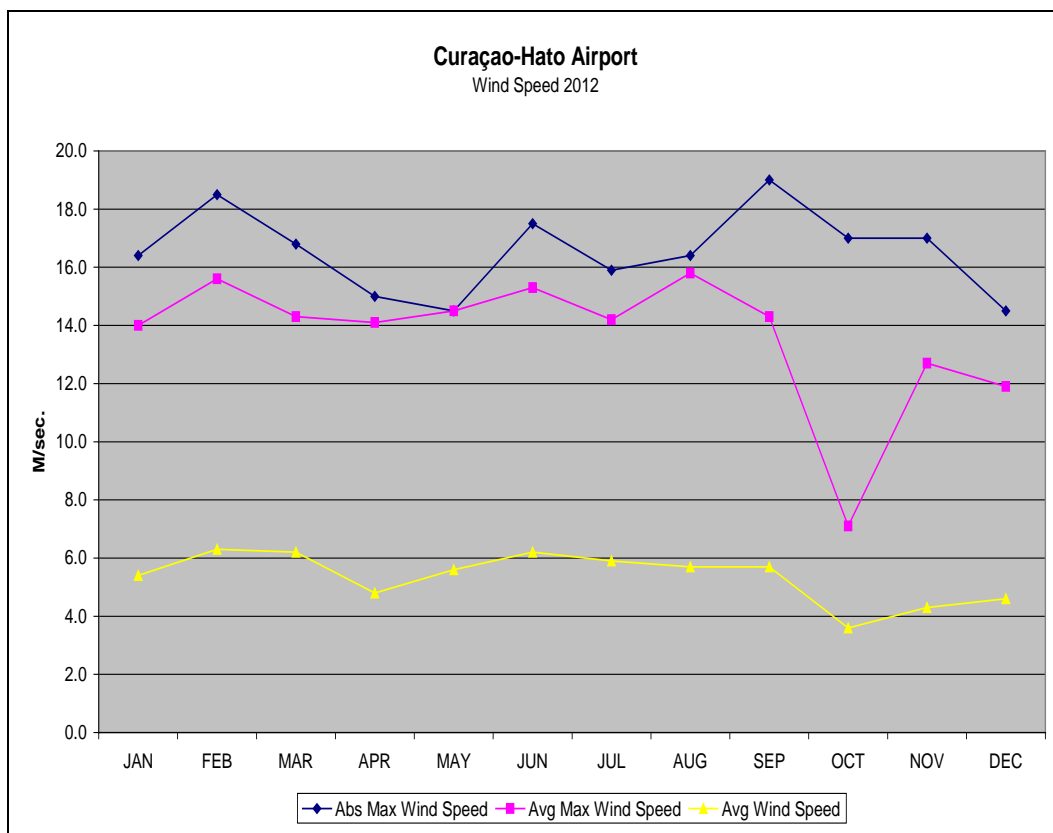
Wind

The average wind speed for the year 2012 was 5.4 m/sec (19.4 km/hr) (normal 6.6 m/sec-23.8 km/hr) at a height of 10 meters above surface level.

February had the highest monthly average wind speed of 6.3 m/sec (22.7 km/hr) and

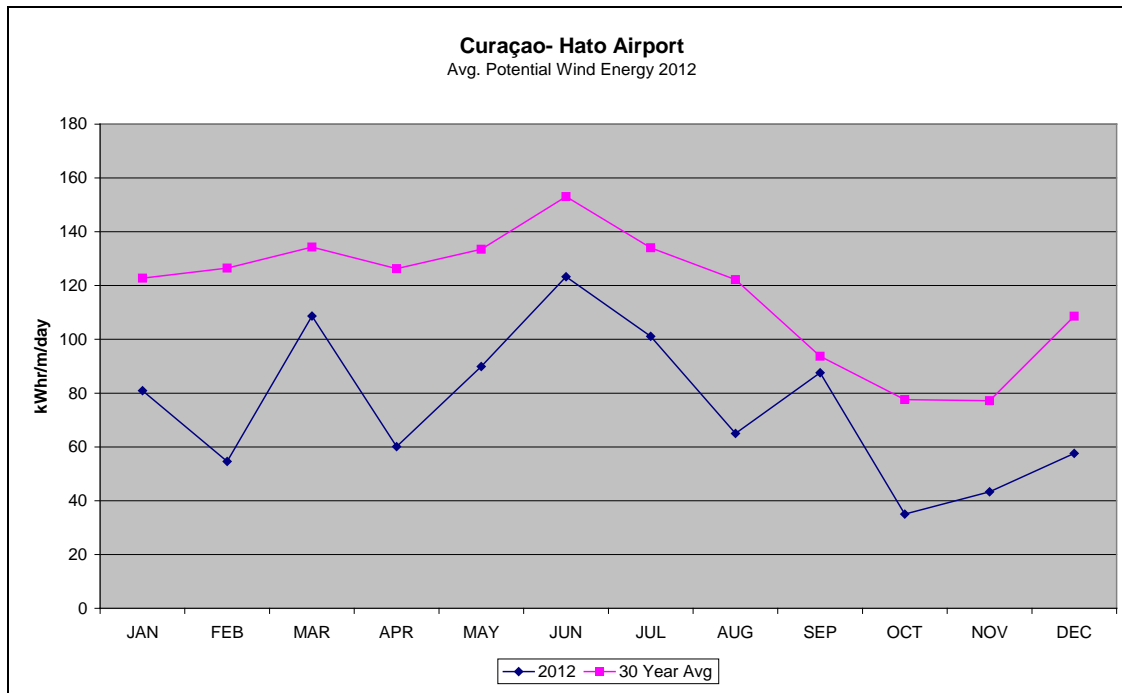
October had the lowest monthly average wind speed 3.6 m/sec (13.0 km/hr).

The highest wind gust 26.0 m/sec (93.6 Km/hr) was recorded on September 30 at several occasions between 9:25 am and 3:26 pm.



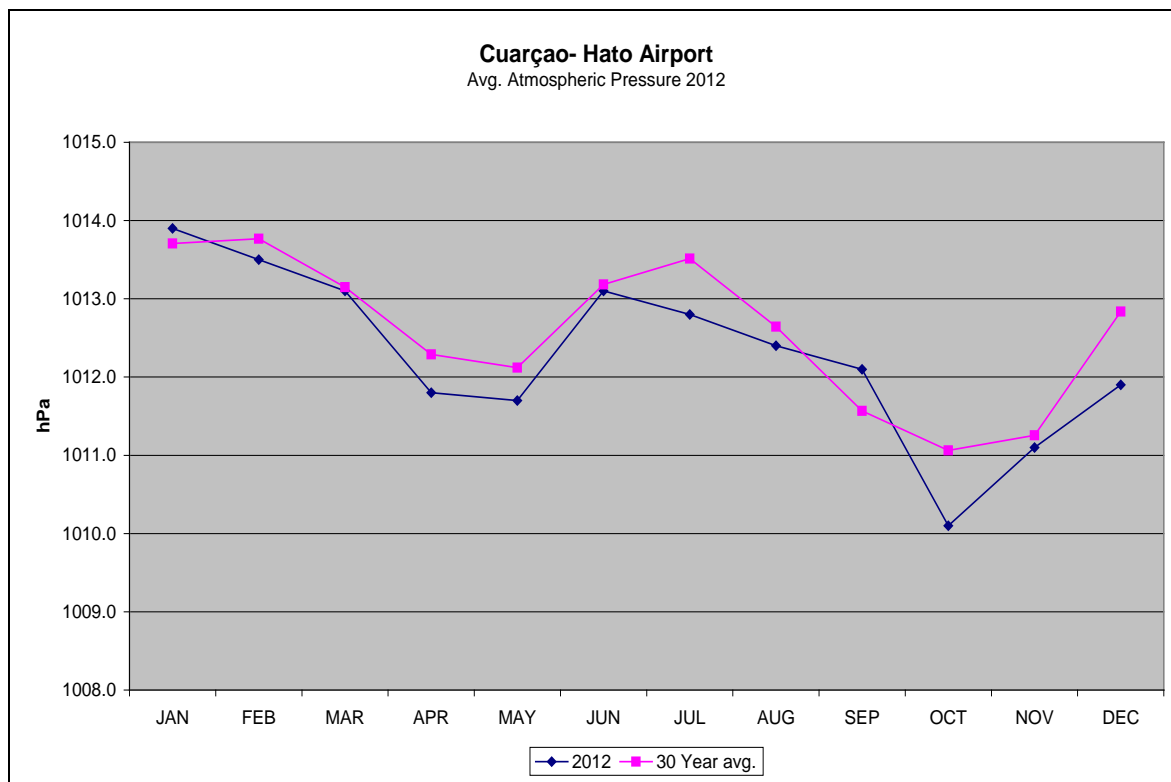
Potential Wind Energy

The total potential wind energy (at 10 meters height and wind speeds ≥ 4 m/sec) for the year 2012 was 1052.1 kWh/m². This total amount is about 43% below the normal value of 1830.9 kWh/m². The daily average for 2012 was 2.9 kWh/m²/day.



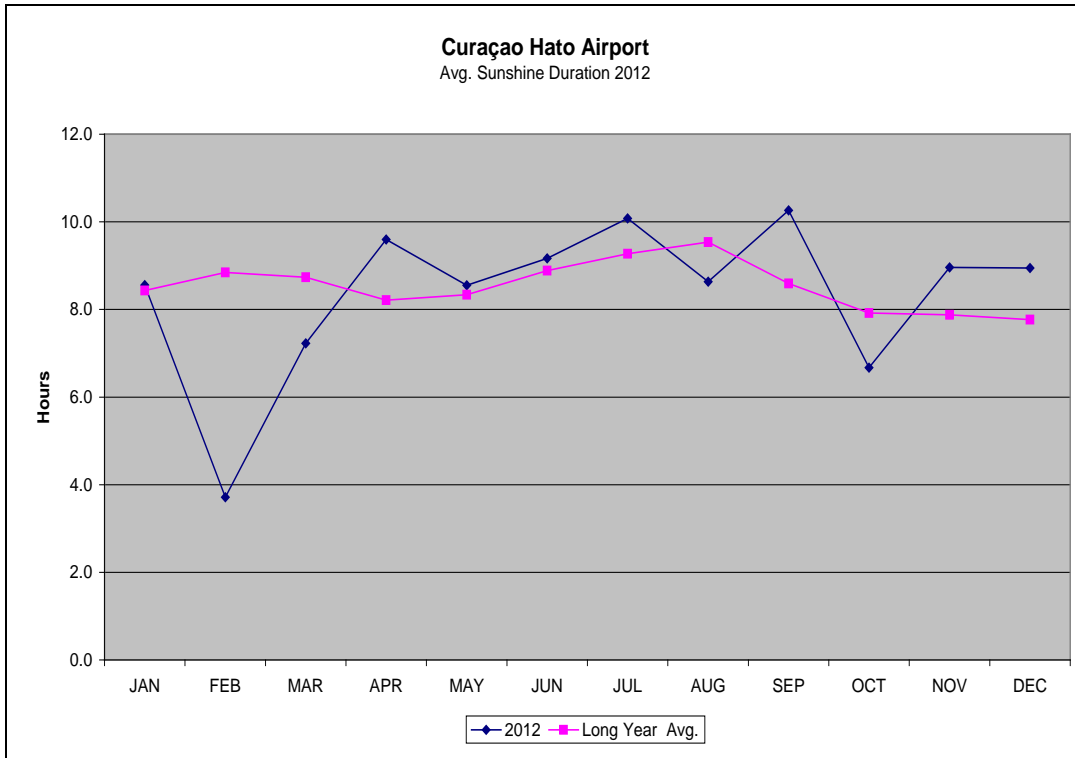
Atmospheric Pressure

The average atmospheric pressure recorded at Hato Airport in the year 2012 was 1012.3 hPa. The maximum atmospheric pressure of 1017.6 hPa was recorded on January 15 while the minimum of 1003.5 hPa was recorded on October 23. This low pressure event was related to the Tropical Wave, which later became Hurricane *Sandy* over the central and western Caribbean.



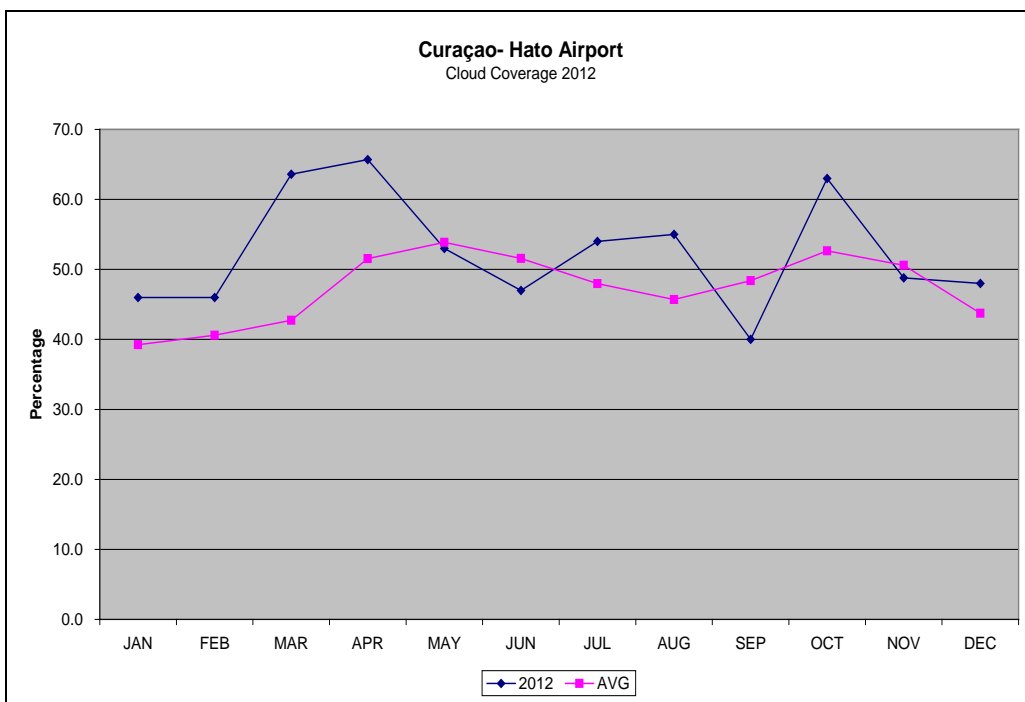
Sunshine Duration

The total sunshine duration for the year 2012 was 3066 hours (30 yr. mean 3153 hours). The average daily sunshine duration was 8 hours and 48 minutes. The sunniest month was September with a daily average sunshine duration of 10 hours and 16 minutes, while the month with the least sunshine was January with a daily average of 8 hours 23 minutes. The day with the maximum sunshine duration, 11 hours 54 minutes, was April 9, 2012.



Cloud Coverage

The average cloud cover for the year 2012 was 52.5%. The highest total cloud coverage per month, 65.7% was observed in April and the lowest cloud coverage for 2012, 40.0%, was observed in September.



Conclusion for 2012

Rainfall

From June through September the island average rainfall remained well below the long-term island average. The month of October showed a noticeable increase of almost 41% above the long year average for that month, whilst rainfall in November and December remained again below average. The three first months of 2012 and the month of May, showed an above average amount of days with rain, whilst for all other months the days with rainfall remained below the long year average. Overall the 2012 average rainfall did not exceed the long year average.

Temperature

The average air temperature remained around 0.5°C below the normal average of 28°C. The absolute maximum air temperature of 34.2 °C remained below the 1996 extreme of 38.3°C. Whilst the absolute minimum temperature of 20.2°C for 2012 remained well above the long year record of 17.0°C measured in the month of March 1933.

Wind

The average wind speed of 5.4 m/sec for 2012 also remained for 18% below the long-term normal of 6.6 m/sec.

Atmospheric pressure

The average atmospheric pressure of 1012.3 hPa remained slightly below the 30 year normal of 1012.5 hPa.

Sunshine Duration

The sunshine duration during 2012 remained near average with a few small crests during the month of April, July, September and November and a little dip occurred during the month of February.

We can conclude that:

The climate for 2012 in Curaçao was about average with no significant extremes.

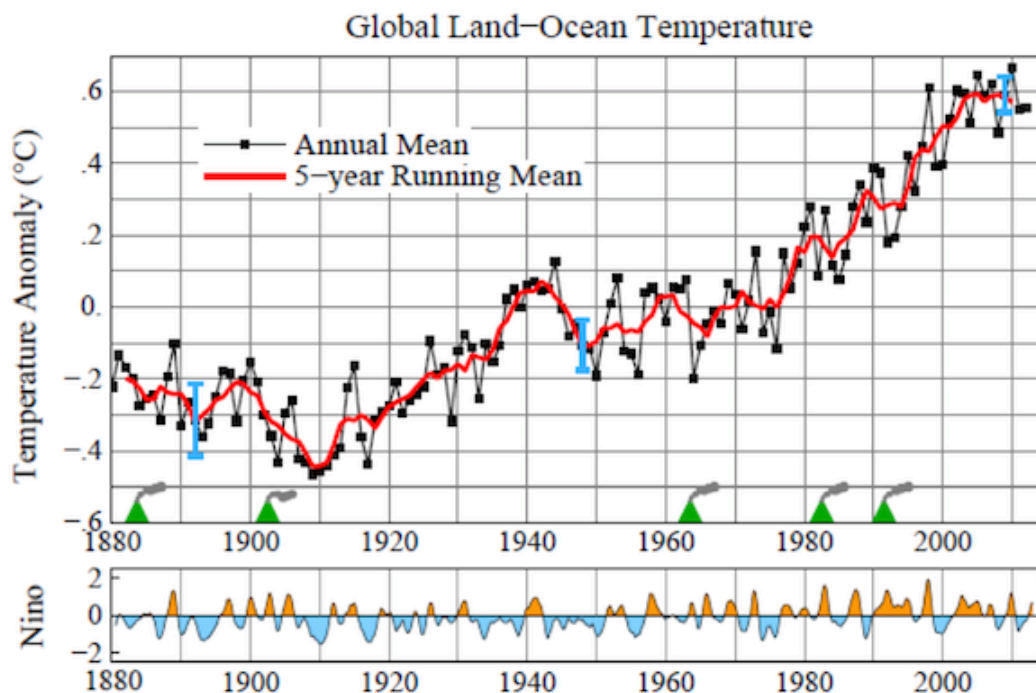
However, during the 2001 to 2010 decade some global climate extremes were observed of which also Curaçao had its fair share according to the following compilation (see next paragraph);



A Decade of Climate Extremes

The world has experienced its warmest decade in the period 2001-2010, since the start of modern measurements in 1850 (see NASA image below) . During this decade unprecedented high-impact climate extremes were experienced across the globe. These were the main findings of a 100 page report, *The global climate 2001-2010, A decade of extremes*, that was published on July 3rd 2013.

To come to this conclusion, experts across the globe analyzed global and regional precipitation, temperatures and extreme events such as heat waves, Hurricane events, floods and severe droughts. The results were alarming.



Upper graph: Red line depict 5 year running mean, Black line with markers depict annual mean, Green triangles with grey plume depict years with large volcanic activity influencing the overall global temperature.

Lower graph: {Orange (crests) depict El Niño years-Blue (depressions) depict La Niña years}

Image courtesy NASA

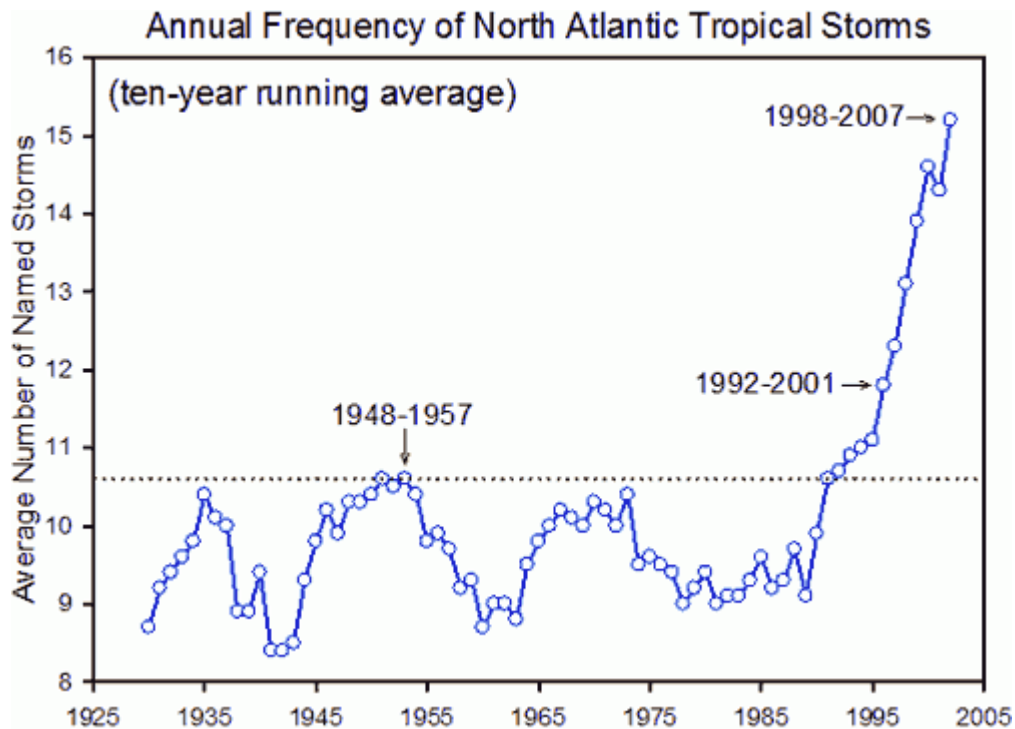
Climate variability is a natural phenomenon and is caused in part by the interactions between our atmosphere and oceans. Two such events are the El Niño and La Niña, which can be interpreted as some years being cooler than others (see lower part of the graph above). Between 2001 and 2010, there was only one moderate to strong El Niño event observed (in 2009/2010), which normally leads to higher temperatures. Much of the decade experienced either cooling La Niña conditions or neutral conditions.

Notwithstanding this fact, the results show that this decade was the warmest for both hemispheres and for both land and ocean surface temperatures.

The average land and ocean-surface temperature for the decade 2001-2010 was 0.47°C above the 1961-1990 global average. For many parts of the world the survey showed that all years of the decade, except for 2008, were amongst the 10 warmest years on record, with 2010 as the warmest. The record warming during this period was accompanied by a fast decline in the Arctic sea ice and glaciers, which resulted in a global mean sea level rise of 3 mm per year, about the double of the observed trend in the 20th century (1.6 mm per year). Considering precipitation, the results showed that the 2001-2010 decade was the second wettest since 1901, with 2010 going into the

history books as the wettest year since the start of instrumental records. According to the survey conducted, which resulted in the abovementioned report, floods were the most frequently experienced extreme event, while severe droughts affected more people than any other kind of natural disaster, due to their large scale and long lasting nature.

The amount of tropical cyclones did not stay behind in the North Atlantic Basin (see image below), while other Basins experienced a decline in tropical cyclone activity. According to the U.S. National Oceanic and Atmospheric Administration (NOAA), 2001-2010 was the most active decade since 1855 in the North Atlantic Basin. On average 15 named storms were recorded per year. This is well above the long-term average of 12 per year. 2005 went into the history books as the most active year up to this date. The reason for this increase in the North Atlantic basin is still being debated.



Courtesy PEW center

Curaçao

Curaçao has also known its fair share of extremes during the last decade. Analyzing the data available for Hato Airport Curaçao, we come to the conclusion that the last decade can be characterized as a warm one, with 6 years (2000, 2001, 2004, 2006, 2003, 2007) ranking in the top 10 of highest maximum temperatures, as measured since 1918. 2007 and 2003 ranked the fourth and fifth highest maximum temperatures, with recorded temperatures of 36.9°C in

October 2007 and 36.7°C in September 2003. The highest temperature ever recorded in Curaçao was in September 1996 and was 38.3°C.

Furthermore, two significant events, with highest precipitation in 24 hours, were recorded in this decade. One event occurred in November 2004, where 81.2 mm was recorded, while the other event occurred in November 2010, with a total amount of 106.8 mm. The latter event can be attributed to the passage of then Tropical Storm Tomás, which later on became a hurricane. Tropical storm Tomás caused the second highest precipitation amount in Curaçao for Hato, while both events are in the top 10 of highest precipitation events since 1969.

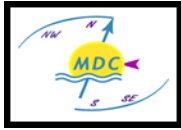


The aftermath of Tomás: bird's eye view of Salina (Curaçao) during the morning of November 2, 2010.

Looking at the overall picture, the last decade can be characterized as a generally wet one, with 4 years in the top 10 of the highest number of wet days. 2004 had the second highest number since 1956, 104 rain days. The highest number of wet days for Curaçao was recorded in 1988, a strong La Niña year, and totaled 117 days.

Notwithstanding, Curaçao has also known severe drought in the last decade. The years 2001, 2003 and 2009 were among the top 10 years of lowest number of rain days, with 2001 the lowest (44) and 2003 the second lowest (47), as rendered from measurements taken since 1956. The 2003 and 2009 drought events can be attributed to a moderate El Niño in 2002-2003 and a moderate to strong El Niño in 2009-2010.

As can be seen, many of the extreme events can be explained by natural variability of the climate system. However, it is a fact that rising atmospheric concentrations of greenhouse gases also affects the climate system. Clearly identifying the respective roles being played by climate variability and human induced climate change is still one of the main challenges being faced by researchers today.

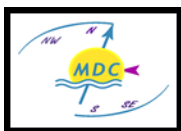


METEOROLOGICAL DEPARTMENT CURAÇAO CLIMATOLOGICAL TABLE 2012

Absolute Minimum Temperature (°C)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Abs. Min.
CURAÇAO 2012	21.5	22.1	22.4	23.0	23.5	24.4	24.3	24.2	22.7	21.5	22.6	20.2	20.2
Record	19.0	19.0	17.0	20.1	20.2	20.8	21.6	20.6	21.5	20.0	20.0	19.9	17.0
Year			1933										
Average Minimum Temperature (°C)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	23.7	23.9	24.9	25.2	26.3	26.4	26.4	26.6	26.6	26.3	24.4	23.5	25.4
Long Year Avg.	24.4	24.5	24.9	25.6	26.3	26.5	26.1	26.5	26.6	26.2	25.6	24.9	25.7
Average Temperature (°C)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	26.1	26.3	26.6	27.4	28.3	28.3	28.6	28.8	29.0	27.8	26.8	26.1	27.5
Long Year Avg.	26.5	26.6	27.1	27.6	28.3	28.5	28.4	28.7	28.9	28.5	27.9	27.0	27.8
Average Maximum Temperature (°C)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	29.1	29.7	29.5	30.9	31.4	32.0	31.9	32.0	32.6	31.2	29.8	29.0	30.8
1981-2010 Avg.	29.9	30.1	30.7	31.4	32.0	32.1	32.1	32.7	32.8	32.1	31.1	30.3	31.4
Absolute Maximum Temperature (°C)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Abs. Max.
CURAÇAO 2012	30.4	31.4	31.2	32.8	33.2	34.2	33.4	34.1	34.0	33.5	31.5	31.7	34.2
1981-2010 Record	33.0	33.2	33	34.7	36.1	37.5	35.0	37.4	38.3	36.9	35.6	33.3	38.3
Year									1996				

Rainfall in mm.													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
CURAÇAO 2012	57.5	44.1	32.1	15.3	18.8	4.4	17.5	19.3	7.1	78.8	64.8	80.3	440.0
1981-2010 Avg.	46.0	28.8	14.1	19.4	21.3	22.4	41.3	39.7	49.1	102.0	122.4	95.5	600.6
Average air pressure (Hpa.)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	1013.9	1013.5	1013.1	1011.8	1011.7	1013.1	1012.8	1012.4	1012.1	1010.1	1011.1	1011.9	1012.3
1981-2010 Avg.	1013.7	1013.8	1013.2	1012.3	1012.1	1013.2	1013.5	1012.6	1011.6	1011.1	1011.3	1012.8	1012.5
Average Wind Speed at 10 m. height (in m/sec.)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	5.4	6.3	6.2	4.8	5.6	6.2	5.9	5.7	5.7	3.6	4.3	4.6	5.4
1981-2010 Avg.	6.3	6.6	6.5	6.3	6.3	6.9	6.4	6.2	5.6	5.2	5.2	6.0	6.2
Average Wind Direction at 10 m. height (in m/sec.)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	103.0	95.9	93.0	99.0	102.3	108.5	102.4	108.4	102.6	102.9	97.2	98.2	101.1
1981-2010 Avg.	87.6	87.4	86.5	86.3	89.5	92.7	90.5	90.2	90.7	88.9	86.7	87.0	88.7
Absolute Maximum Wind Speed at 10 m. (in m/sec.)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Max.
CURAÇAO 2012	16.4	18.5	16.8	15.0	14.5	17.5	15.9	16.4	19.0	17.0	17.0	14.5	19.0
Absolute Max.	19.5	19.0	24.9	19.0	20.0	21.6	25.7	21.1	19.0	22.1	22.6	23.1	25.7





METEOROLOGICAL DEPARTMENT CURAÇAO
CLIMATOLOGICAL TABLE 2012 (CONTINUED)

Avg. Sunshine duration in hours													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	8.6	3.7	7.2	9.6	8.6	9.2	10.1	8.6	10.3	6.7	9.0	8.9	8.4
1981-2010 Avg.	8.5	8.9	8.8	8.3	8.6	8.9	9.4	9.8	8.7	8.0	7.8	8.0	8.6
Cloud Coverage(in %)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	46	46	64	66	53	47	54	55	40	63	49	48	53
1981-2010 Avg.	45.7	42.3	58.3	43.1	47.5	54.5	49.9	45.0	44.2	36.4	36.8	41.4	46.1
Avg. Evaporation (in mm/day)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	6.9	6.3	7.2	6.9	8.2	7.7	7.6	8.2	6.7	5.7	3.8	4.0	6.6
1981-2010 Avg.	5.6	6.3	7.2	7.6	7.8	8.1	7.8	8.1	7.7	6.3	5.2	5.1	6.9
Potential Wind Energy (in KWhr/m/day)													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	80.9	54.6	198.9	60.1	89.9	123.3	101.1	65	87.6	35.0	43.3	57.6	83.1
Long Year Avg.	121.0	121.9	134.5	122.3	129.4	150.1	132.0	118.5	92.4	74.6	74.5	106.4	114.8
Avg. Sunshine duration in hours													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg.
CURAÇAO 2012	8.6	3.7	7.2	9.6	8.6	9.2	10.1	8.6	10.3	6.7	9.0	8.9	8.4
1981-2010 Avg.	8.5	8.9	8.8	8.3	8.6	8.9	9.4	9.8	8.7	8.0	7.8	8.0	8.6

Abs. Max = Absolute maximum

Abs. Min = Absolute minimum

Avg. = Average

Record= Long Year Record

