

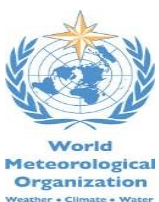


Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Country Profile:

St. Vincent and the Grenadines



1. PHYSICAL GEOGRAPHY

St. Vincent and the Grenadines consists of 30 islands, inlets, and cays, with a total land area of 345 Km². These islands are part of the Windward Island chain of the Lesser Antilles. St. Vincent, occupying the majority of the total land area, is located at latitude 13° 15' N, longitude 61° 12' W (UNFCCC 2000; McSweeney et al. 2010b). The other islands extend south for 75 km and form two thirds of the Grenadines archipelago. Neighboring islands include Grenada to the south, St. Lucia to the north and Barbados to the east. About 91 percent of the country's population lives on the main island, St. Vincent (UNFCCC 2000). The island of St. Vincent has a rugged terrain rising to an elevation of 1,234 m at the cone of the Soufriere volcano (UNFCCC 2000).

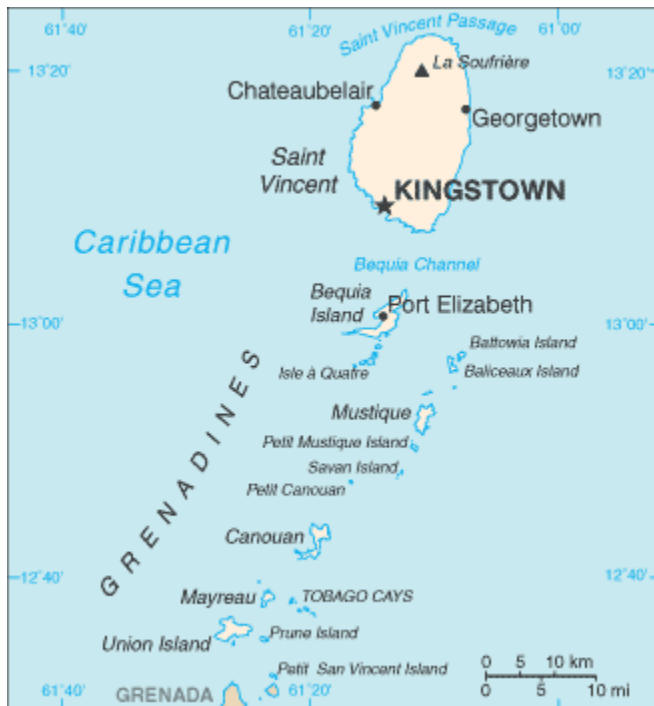


Figure 1 Map of St. Vincent and the Grenadines. (Credit: Wiki Commons)

The climate is tropical marine and the islands experience the year round warm and humid conditions. The annual rainfall totals over 2000 mm at low elevations on St. Vincent and up to over 4000 mm at the highest elevations, whereas rainfall is substantially lower in the Grenadines, which are semi-humid to semi-arid. The wet season runs from June to November, during which St. Vincent receives over 200 mm per month. Mean temperature is 26.8°C, dropping by only 2°C in the cooler months of December to March. (<http://rcc.cimh.edu.bb/>). Rich, volcanic soils and the elevated rainfall allow for dense rainforest in St. Vincent, with a drought tolerant natural vegetation type in the Grenadines.

2. CLIMATOLOGY

The St. Vincent and the Grenadines Meteorological Service (<http://www.slumet.gov.lc/>) operates the weather station located at the ET Joshua Airport and monitors the rainfall of at least 7 locations on the island of St. Vincent. Summarized rainfall and temperature climatology (1979-2015) for the station is given in Table 1.

The rainfall and temperature climatology at ET Joshua Airport (1981-2010) are presented in Figure 2, with summary statistics presented in Table 1. As a rugged island located between the Atlantic Ocean and the Caribbean Sea, annual precipitation totals are high in most places and significant in most months. Occasionally, the wet season starts in May. From June onwards, rainfall commonly hovers around 200 mm to 250 mm each month, with a range of around 200 mm (250 mm in October) between the 10th and the 90th percentile. The wettest months on record have occurred either in October or November. The annual temperature range is between 25.6°C in February and 27.7°C in September, with little fluctuation from May to October.

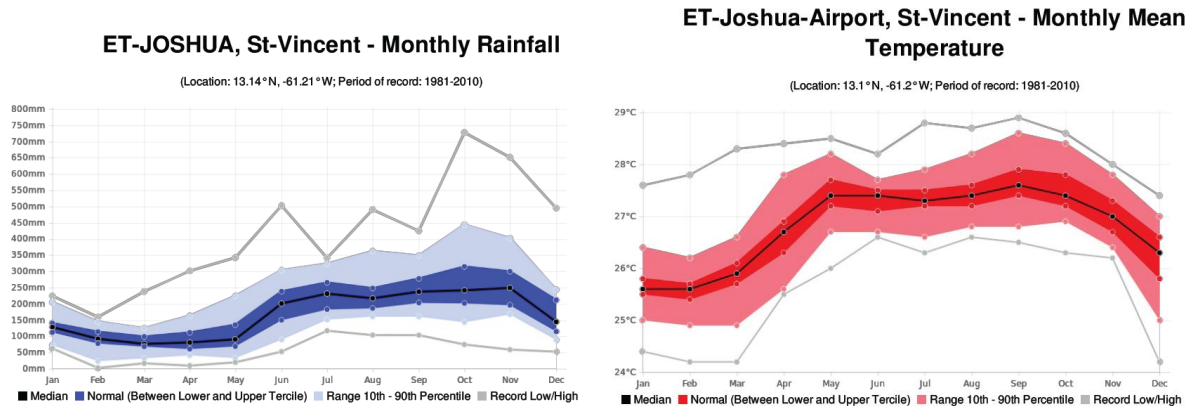


Figure 2 1981-2010 reference climatology of monthly rainfall totals (left) and mean near-surface air temperature (right) at the ET Joshua airport station on St. Vincent. Source: rcc.cimh.edu.bb (data from St. Vincent and the Grenadines Meteorological Office)

Table 1. Summary statistics of rainfall and temperature for the ET Joshua Airport on St. Vincent

Station Name	ET Joshua Airport (Year/Month of Occurrence)
Mean Annual Rainfall	2144.7 mm (1979-2015)
Wettest year / Month / three month period	3029.5 mm (2010) / 727.9 mm (Oct. 1998) / 1432.9 mm (Oct. to Dec. 1998)
Driest Year / Month / three month period	594.1 mm (1997) / 2.7 mm (Feb. 2010) / 44.7 mm (Feb. to Apr. 1987)
Mean Temperature	26.8 °C (1979-2015)
Warmest Year / Month / three month period	27.9 °C (2010) / 29.4 °C (Jul. 1979) / 29.1 °C (Jun. to Aug. 1979)
Coldest Year / Month / three month period	26.1 °C (2000) / 24.2°C (on 4 occasions) / 24.7 °C (Jan. to Mar. 2001)

Source: <http://rcc.cimh.edu.bb/>

3. SOCIO-ECONOMIC LANDSCAPE

The population of St. Vincent and the Grenadines was estimated at around 109,400 in 2014 (<http://data.worldbank.org/country/st-vincent-and-the-grenadines>). The islands' 2012 HDI of 0.733—puts St. Vincent and the Grenadines in the high human development category—positioning the country at 83 out of 187 countries and territories (UNDP 2013). The (2014) GDP was estimated by the World Bank at USD 729.3 million (USD 6,610 / capita). Tourism is the most important economic sector both in terms of its contribution to GDP, foreign exchange revenue and employment of the labour force and is concentrated in the Grenadines.

4. KEY NATIONAL STAKEHOLDERS AND THEIR NEEDS

A 2015-2016 survey of user climate information needs in the Caribbean captured responses from 8 sectoral users representing the agriculture, water and disaster risk management sectors. Two representatives from the agriculture and water sectors participated in stakeholder interviews in 2016, while there was no representation in focus group discussions convened in May 2016.

Users obtain climate information from the Caribbean Institute for Meteorology and Hydrology, the National Meteorological and Hydrological Services and government agencies and departments.

Users believe that climate services are of high value in their organisation's operations and planning and as such, they routinely try to integrate climate information considerations into their professional decisions to inform day-to-day strategic planning in their organisations. For agricultural stakeholders, climate information is considered for "fertilizer application or water harvesting". Another Agriculture stakeholder reported that "...the CaricOF Precipitation & Drought Outlook was used last Friday in a Press Conference to alert the public of the impending drought conditions that will persist during this dry season". A Water stakeholder reported that climate information "...assists in the drought management strategy for the island".

Users identified the complexity of technical jargon, an inappropriate level of detail of climate information, as well as, a lack of in-house expertise in their organisations to use climate information as barriers. Going forward, they called for more country-specific information that gives details of localised conditions, more specific information on variables important to their work (specifically on evapotranspiration, relative humidity and sunshine hours), as well as, an "inter-sectoral national committee for data sharing".

5. RANGE OF CLIMATE SERVICES

As of September 2015, the St. Vincent & the Grenadines Meteorological Office (SVGMO) categorised itself as a Category 2 climate services provider offering a basic range of climate services and products, as well as, climate predictions. The SVGMO provides a monthly weather bulletin, an Agro-Meteorological Bulletin, seasonal rainfall, temperature and drought outlooks, a drought and precipitation statement and wet and extremely wet spells outlooks.

The SVGMO has been delivering climate information for 1 to 3 years.

The socio-economic sectors that benefit from climate services are the agriculture, water, disaster risk management, health, tourism sectors, as well as, the public at large. Other sectors that could potentially benefit from climate services in the future are the construction and financial sectors. The SVGMO does not routinely collect feedback from users and St. Vincent and the Grenadines is yet to convene a National Climate Outlook Forum.

SVGMO recommendations for improving its climate services capability include:

1. Building the capacity of the SVG Met Office to be able to provide its own national forecast as an independent forecasting office;
2. Expansion of the observation network with more field equipment to measure a wider range of climatic parameters. In this regard, the setup of the recently acquired equipment at the new airport is desired. New parameters to be measured including soil temperature, solar radiation and sunshine hours;
3. Conducting routine assessments of the network;
4. Increasing routine interaction/feedback between the met office and users of climate information feedback with users as well as greater collaboration needed with sectoral users to better ascertain their needs;
5. A dedicated research division with a clear long-term strategy, funding to conduct research, and also the capacity to establish collaborative relationship with tertiary institutions for the conduct of applied research;
6. Training and capacity building in the development of climate products, as well as, the interpretation of climate information; and
7. Setting up a dedicated website.

6. REFERENCES

United Nations Development Programme (UNDP). 2013. Human Development Report 2012. The Rise of the South: Human Progress in a Diverse World. Explanatory note on 2013 HDR composite indices-St. Lucia

Web Sites

<http://carogen.cimh.edu.bb/>

<http://rcc.cimh.edu.bb/>

<http://www.slumet.gov.lc/>

[http://data.worldbank.org/country/St. Vincent and the Grenadines](http://data.worldbank.org/country/St.Vincent.and.the.Grenadines)