SAINT LUCIA

HEALTH & CLIMATE CHANGE

COUNTRY PROFILE 2020

Small Island Developing States Initiative

World Health Organization | United Nations Framework Convention on Climate Change | Pan American Health Organization World Health Organization PAHO

CONTENTS

1 EXECUTIVE SUMMARY

2 KEY RECOMMENDATIONS

3 BACKGROUND

4 CLIMATE HAZARDS RELEVANT FOR HEALTH

8 HEALTH IMPACTS OF CLIMATE CHANGE

10 HEALTH VULNERABILITY AND ADAPTIVE CAPACITY

12 HEALTH SECTOR RESPONSE: MEASURING PROGRESS

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“Adapting, one individual,
one household,
one community,
one enterprise and
one sector at a time.”

—Saint Lucia Climate Adaptation Policy, 2015

EXECUTIVE SUMMARY

Despite producing very little greenhouse gas emissions that cause climate change, people living in small island developing States (SIDS) are on the front line of climate change impacts. These countries face a range of acute to long-term risks, including extreme weather events such as floods, droughts and cyclones, increased average temperatures and rising sea levels. Many of these countries already have a high burden of climate-sensitive diseases that may be exacerbated by climate change. Some of the nations at greatest risk are under-resourced and unprotected in the face of escalating climate and pollution threats. In recent years, the voice of the small island nation leaders has become a force in raising the alarm for urgent global action to safeguard populations everywhere, particularly those whose very existence is under threat.

Recognizing the unique and immediate threats faced by small islands, WHO has responded by introducing the WHO Special Initiative on Climate Change and Health in Small Island Developing States (SIDS). The initiative was launched in November 2017 in collaboration with the United Nations Framework Convention on Climate Change (UNFCCC) and the Fijian Presidency of the 23rd Conference of the Parties (COP23) to the UNFCCC, held in Bonn, Germany, with the vision that by 2030 all health systems in SIDS will be resilient to climate variability and climate change. It is clear, however, that, in order to protect the most vulnerable from climate risks and to gain the health co-benefits of mitigation policies, building resilience must happen in parallel with the reduction of carbon emissions by countries around the world.

The WHO Special Initiative on Climate Change and Health in SIDS aims to provide national health authorities in SIDS with the political, technical and financial support required to better understand and address the effects of climate change on health. A global action plan has been developed by WHO that outlines four pillars of action for achieving the vision of the initiative: empowerment of health leaders to engage nationally and internationally; evidence to build the investment case; implementation to strengthen climate resilience; and resources to facilitate access to climate finance. In October 2018, ministers of health gathered in Grenada to develop a Caribbean Action Plan to outline the implementation of the SIDS initiative locally and to identify national and regional indicators of progress.

As part of the regional action plan, small island nations have committed to developing a WHO UNFCCC health and climate change country profile to present evidence and monitor progress on health and climate change. This WHO UNFCCC health and climate change country profile for Saint Lucia provides a summary of available evidence on climate hazards, health vulnerabilities, health impacts and progress to date in health sector efforts to realize a climate-resilient health system.

KEY RECOMMENDATIONS

1 STRENGTHEN INTEGRATED RISK SURVEILLANCE AND EARLY WARNING SYSTEMS

Creation of a mechanism for knowledge management for development will contribute to the generation and dissemination of information on climate-related hazards and risks for the general population and sub-population groups. This will provide an integrated and advanced warning system, identify and promote best practices in health co-benefit responses, and strengthen networking to increase the prospect of sustainability of response actions. Training and development of system tools will enable continuous data collection from national, regional and international sources, including meteorological data, analysis and dissemination.

2 IMPROVE RESILIENCE OF HEALTH SECTOR INFRASTRUCTURE AND OPERATIONS

SMARTING[a] is important to ensure facilities are safe and operate efficiently. Expansion of the SMARTING project to include facilities across the island, including the main public hospital, will ensure the overwhelming majority of the population (including women, children and persons with disabilities) can access quality health care in both pre- and post-disaster periods. The remaining twenty seven (27) health facilities will be upgraded to improve safety in service delivery and to ensure they can structurally, non-structurally, and functionally withstand climate-related events.

3 ADDRESS BARRIERS TO ACCESSING INTERNATIONAL CLIMATE CHANGE FINANCE TO SUPPORT HEALTH ADAPTATION

This will entail development of the climate change mitigation–adaptation project portfolio. Financial and technical resources will be secured to develop the local human resource capacity to design projects, including ensuring training and coaching to craft the projects to ensure mitigation–adaptation gaps identified in the National Adaptation Plan Stocktaking, Climate Risk and Vulnerability Assessment Report are addressed and to also ensure the project is consistent with the Climate Change Adaptation Policy (2015).

4 STRENGTHEN THE POLICY ENVIRONMENT TO UNDERSCORE HEALTH CO-BENEFITS IN MITIGATION STRATEGIES

This entails the revision of the Climate Change Adaptation Policy (2015) to incorporate health as a primary area of focus along with the current areas – economy, social systems and ecosystems. The revision of the policy will contribute to create a supportive environment for the development and implementation of health co-benefit projects.

[a] The Smart Hospital initiative builds on the Safe Hospital Initiative and focuses on improving hospitals resilience, strengthening structural and operational aspects and providing green technologies. Energy improvements include solar panels installations, electric storage batteries and low-consumption electrical systems, which, in addition to reducing energy consumption, reduce health sector carbon footprint in the environment and provide the hospital with energy autonomy, allowing it to continue running during emergencies and disasters.

WHO RESOURCES TO SUPPORT ACTION ON THESE KEY RECOMMENDATIONS:
https://www.who.int/activities/building-capacity-on-climate-change-human-health/toolkit/

BACKGROUND

Saint Lucia is a volcanic mountainous island, forming part of the Windward Islands, and bordered by the Caribbean Sea and Atlantic Ocean *(1,2)*. The heaviest rains usually fall between June and November, which typically come from tropical waves, depressions, storms and hurricanes, owing to its location within the Atlantic hurricane belt *(2)*. A significant proportion of Saint Lucia's population and its economic activities are located along the coast of the island. The country's economy has grown in recent years, owing largely to increasing tourism and construction activities *(3)*.

Climate change is projected to cause increased mean temperature, sea level rise, more extreme weather events, and changing precipitation patterns across Saint Lucia. With so much of the country's population and economic activity located along the coast, Saint Lucia is particularly vulnerable to the effects of climate change. Risks to the health of Saint Lucia's population include vector- and waterborne diseases, food insecurity, heat stress, respiratory illnesses, degradation of marine habitats, saline contamination of fresh water, and injuries and deaths from extreme weather events *(4)*.

The Government of Saint Lucia recognizes the threats posed by climate change and is committed to reducing its own greenhouse gas emissions, despite their small contribution to global emissions, and building resilience and implementing adaptation actions to counter the country's high vulnerability to climate change. Saint Lucia's nationally determined contribution (NDC) highlights the importance of the health co-benefits of climate mitigation and identifies human health as a key priority for adaptation implementation *(4)*.

HIGHEST PRIORITY CLIMATE-SENSITIVE HEALTH RISKS FOR SAINT LUCIA

Direct effects	
Health impacts of extreme weather events	✔
Heat-related illness	✔
Indirect effects	
Water security and safety (including waterborne diseases)	✔
Food security and safety (including malnutrition and foodborne diseases)	✔
Vector-borne diseases	✔
Air pollution	✔
Allergies	
Diffuse effects	
Mental/psychosocial health	✔
Noncommunicable diseases	
Mitigation actions to reduce emissions through sustainable procurement	
Mitigation measures to reduce emissions of health facilities	✔
Mitigation measures by coordinating with other sectors	

Source: Adapted and updated from the PAHO *Health and Climate Country Survey 2017 (5).*

CLIMATE HAZARDS RELEVANT FOR HEALTH

Climate hazard projections for Saint Lucia

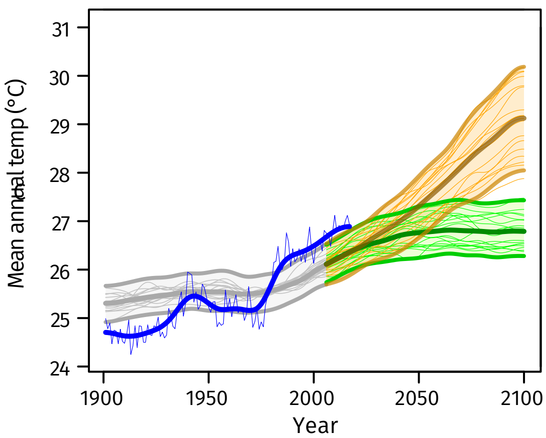
Country-specific projections are outlined up to the year 2100 for climate hazards under a 'business as usual' high emissions scenario compared to projections under a 'two-degree' scenario with rapidly decreasing global emissions (see Figures 1–5).

The climate model projections given below present climate hazards under a high emissions scenario, Representative Concentration Pathway 8.5 (RCP8.5 – in orange) and a low emissions scenario (RCP2.6 – in green).[a] The text describes the projected changes averaged across about 20 global climate models (thick line). The figures[b] also show each model individually as well as the 90% model range (shaded) as a measure of uncertainty and the annual and smoothed observed record (in blue).[c] In the following text the present-day baseline refers to the 30-year average for 1981–2010 and the end-of-century refers to the 30-year average for 2071–2100.

Modelling uncertainties associated with the relatively coarse spatial scale of the models compared with that of small island States are not explicitly represented. There are also issues associated with the availability and representativeness of observed data for such locations.

Rising temperature

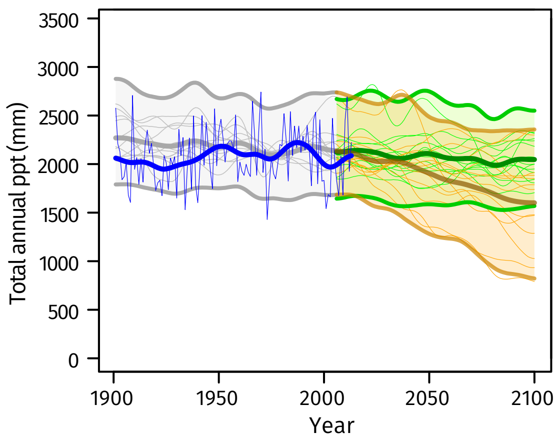
FIGURE 1: Mean annual temperature, 1900–2100



Under a high emissions scenario, the mean annual temperature is projected to rise by about 2.9°C on average by the end-of-century (i.e. 2071–2100 compared with 1981–2010). If emissions decrease rapidly, the temperature rise is limited to about 0.9°C.

Decreasing total precipitation

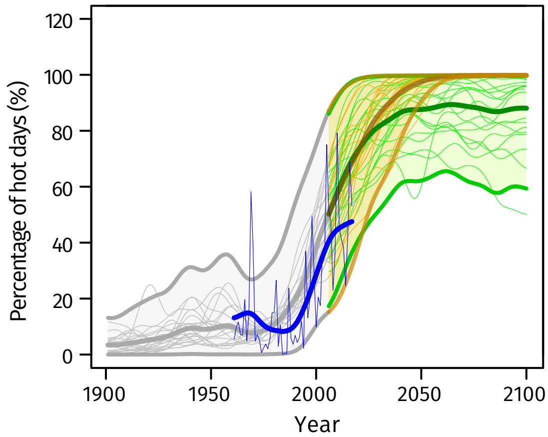
FIGURE 2: Total annual precipitation, 1900–2100



Total annual precipitation is projected to decrease by about 22% on average under a high emissions scenario, although the uncertainty range is large (-52% to +3%). If emissions decrease rapidly there is little projected change on average: a decrease of 5% with an uncertainty range of -15% to +5%.

More high temperature extremes

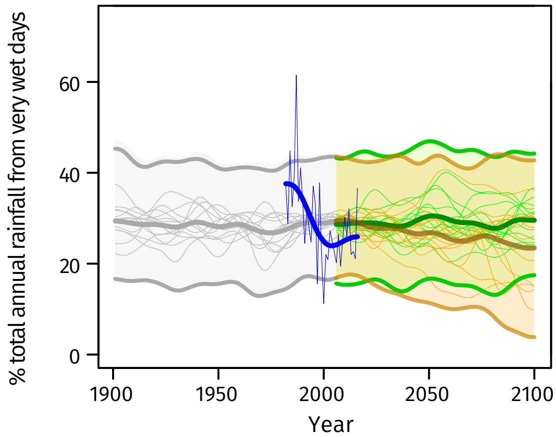
FIGURE 3: Percentage of hot days ('heat stress'), 1900–2100



The percentage of hot days[d] is projected to increase substantially from about 23% of all observed days on average in 1981–2010 (10% in 1961–1990). Under a high emissions scenario, almost 100% of days on average are defined as 'hot' by the end-of-century. If emissions decrease rapidly, about 90% of days on average are 'hot'. Note that the models tend to overestimate the observed increase in hot days (about 30% of days on average in 1981–2010 rather than 23%). Similar increases are seen in hot nights[d] (not shown).

Little change in extreme rainfall

FIGURE 4: Contribution of very wet days ('extreme rainfall' and 'flood risk') to total annual rainfall, 1900–2100

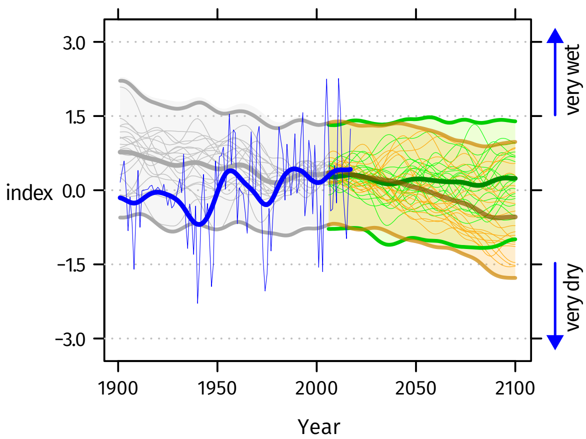


The proportion of total annual rainfall from very wet days[e] (about 30% for 1981–2010) could decrease a little by the end-of-century (to around 25% on average with an uncertainty range of about 5% to 45%), with little change if emissions decrease rapidly. Total annual rainfall is projected to decrease (see Figure 2).

FIGURE 5: Standardized Precipitation Index ('drought'), 1900–2100

The Standardized Precipitation Index (SPI) is a widely used drought index which expresses rainfall deficits/excesses over timescales ranging from 1 to 36 months (here 12 months, i.e. SPI12).[f] It shows how at the same time extremely dry and extremely wet conditions, relative to the average local conditions, change in frequency and/or intensity.

Under a high emissions scenario, SPI12 values are projected to decrease to about -0.5 on average by the end of the century (2071–2100), with a number of models indicating substantially larger decreases and hence more frequent and/or intense drought. Year-to-year variability remains large with wet episodes continuing to occur into the future.



NOTES

a Model projections are from CMIP5 for RCP8.5 (high emissions) and RCP2.6 (low emissions). Model anomalies are added to the historical mean and smoothed.

b Analysis by the Climatic Research Unit, University of East Anglia, 2018.

c Observed historical record of mean temperature is from CRU-TSv3.26 and total precipitation is from GPCC. Observed historical records of extremes are from JRA55 for temperature and from GPCC-FDD for precipitation.

d A 'hot day' ('hot night') is a day when maximum (minimum) temperature exceeds the 90th percentile threshold for that time of the year.

e The proportion (%) of annual rainfall totals that falls during very wet days, defined as days that are at least as wet as the historically 5% wettest of all days.

f SPI is unitless but can be used to categorize different severities of drought (wet): +0.5 to -0.5 near normal conditions; -0.5 to -1.0 slight drought; -1.0 to -1.5 moderate drought; -1.5 to -2.0 severe drought; below -2.0 extreme drought.

Tropical cyclones

It is anticipated that the total number of tropical cyclones may decrease towards the end of the century. However, it is likely that human-induced warming will make cyclones more intense (an increase in wind speed of 2–11% for a mid-range scenario (i.e. RCP4.5 which lies between RCP2.6 and RCP8.5 – shown on pages 4–5) or about 5% for 2ºC global warming). Projections suggest that the most intense events (category 4 and 5) will become more frequent (although these projections are particularly sensitive to the spatial resolution of the models). It is also likely that average precipitation rates within 100 km of the storm centre will increase – by a maximum of about 10% per degree of warming. Such increases in rainfall rate would be exacerbated if tropical cyclone translation speeds continue to slow *(6–13)*.[a]

POTENTIAL FUTURE CHANGES IN TROPICAL CYCLONES: A GLOBAL PERSPECTIVE *(6–13)*[a]

The season for tropical cyclones in Saint Lucia is between June and November. Saint Lucia faces a high risk of tropical cyclones and landslides and ranks 5th among small states for climate-induced events. Among 182 countries in the Climate Risk Index, Saint Lucia was in the top 10% of countries that suffered losses to climate-related natural hazards during 1997–2016 *(14)*. Between 1980 and 2010, six major tropical cyclones along with three other climate-related natural hazards crossed or had effects on Saint Lucia's Exclusive Economic Zone (EEC) *(14)*. Four of the tropical cyclones occurred between 1999 and 2010.

Event	Year	Number of people affected	Damages and losses in % of GDP
Hurricane Allen	1980	80 000	69.3
Unnamed storm	1983	3000	0.8
Hurricane Gilbert	1988	...	0.7
Tropical Storm Debbie	1994	750	14.2
Hurricane Lenny	1999	200	2.2
Hurricane Ivan	2004	...	0.3
Hurricane Dean	2007	...	3.5
Hurricane Tomas	2010	172 370	28.4
Christmas Eve Trough	2013	19 984	8.0

Source: International Monetary Fund. Saint Lucia Climate Change Policy Assessment. IMF Country Report No. 18.181, (2018) *(14)*.

[a] Information and understanding about tropical cyclones (including hurricane and typhoons) from observations, theory and climate models has improved in the past few years. It is difficult to make robust projections for specific ocean basins or for changes in storm tracks. Presented here is a synthesis of the expected changes at the global scale.

Sea level rise

Sea level rise is one of the most significant threats to low-lying areas on small islands and atolls. Research indicates that rates of global mean sea level rise are almost certainly accelerating as a result of climate change. The relatively long response times to global warming mean that sea level will continue to rise for a considerable time after any reduction in emissions.

1.7 mm/year (±1.3)

Average change in Caribbean sea level over the period 1993–2010 *(15)*

with substantial spatial variability across the region

0.5–0.6 m

Further rise in the Caribbean by the end of the century *(16)*[a]

with variation amongst models and emissions scenarios

Impacts of sea level rise include

- Coastal erosion
- Ecosystem disruption
- Higher storm surges
- Population displacement
- Water contamination and disruption
- Mental health

[a] Estimates of mean net regional sea level change were evaluated from 21 CMIP5 models and include regional non-scenario components (adapted from WGI AR5 Figures 13–20). The range given is for RCP4.5 annual projected change for 2081–2100 compared to 1986–2005.

HEALTH IMPACTS OF CLIMATE CHANGE

Heat stress

Climate change is expected to increase the mean annual temperature and the intensity and frequency of heat waves, resulting in a greater number of people at risk of heat-related medical conditions. Heat waves, i.e. prolonged periods of excessive heat, can pose a particular threat to human, animal and even plant health, resulting in loss of life, livelihoods, socioeconomic output, reduced labour productivity, rising demand for and cost of cooling options, as well as contribute to the deterioration of environmental determinants of health (e.g. air quality, soil, water supply).

Heat stress impacts include:

- heat rash/heat cramps
- dehydration
- heat exhaustion/heat stroke
- death.

Particularly vulnerable groups are:

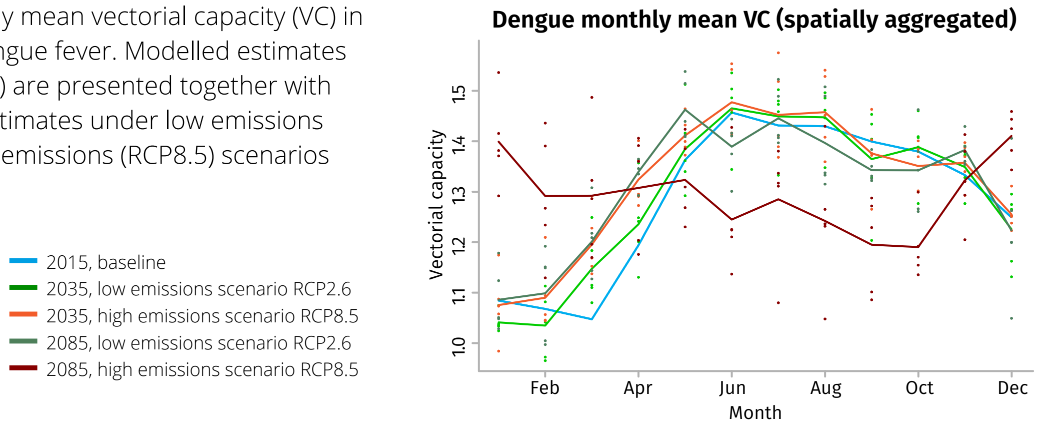
- the elderly
- children
- individuals with pre-existing conditions (e.g. diabetes)
- the socially isolated.

Infectious and vector-borne diseases

Some of the world's most virulent infections are also highly sensitive to climate: temperature, precipitation and humidity have a strong influence on the life-cycles of the vectors and the infectious agents they carry, and influence the transmission of water- and foodborne diseases *(17,18).*

Small island developing States (SIDS) are vulnerable to disease outbreaks. Climate change could affect the seasonality of such outbreaks, as well as the transmission of vector-borne diseases. Figure 6 presents modelled estimates for Saint Lucia of the potential risk of dengue fever transmission under high and low emission scenarios.[a] The seasonality and prevalence of dengue transmission may change with future climate change, but Saint Lucia is consistently highly suitable for dengue transmission under all scenarios and thus vulnerable to outbreaks *(19–22).*[b,c]

FIGURE 6: Monthly mean vectorial capacity (VC) in Saint Lucia for dengue fever. Modelled estimates for 2015 (baseline) are presented together with 2035 and 2085 estimates under low emissions (RCP2.6) and high emissions (RCP8.5) scenarios



[a] A suite of mathematical models was systematically developed, then applied and interpreted by a team of researchers at Umeå University (Sweden) to assess the potential for mosquito-borne disease outbreaks (e.g. dengue, chikungunya, Zika and malaria) in terms of climate-dependent VC. The baseline year is 2015, Climatic Research Unit CRU-TSv4.01. Future projections are represented for two emissions futures (Representative Concentration Pathways: RCP2.6, RCP8.5), five climate change projections (Global Climate Models: gfdlesm2m, hadgem2-es, ipsl-cm5a-lr, miroc-esm-chem, noresm1-m). (2018) Umeå University, Sweden.

[b] Given the climate dependence of transmission cycles of many vector-borne diseases, seasonality of epidemic risk is common; however, many SIDS, due to tropical latitudes, tend to have less seasonality than more temperate areas.

[c] The actual occurrences/severity of epidemics would be quite different for each disease in each setting and could depend greatly on vector- and host-related transmission dynamics, prevention, surveillance and response capacities that are not captured in this model.

Noncommunicable diseases, food and nutrition security

Small island developing States (SIDS) face distinct challenges that render them particularly vulnerable to the impacts of climate change on food and nutrition security including: small, and widely dispersed, land masses and populations; large rural populations; fragile natural environments and lack of arable land; high vulnerability to climate change, external economic shocks, and natural disasters; high dependence on food imports; dependence on a limited number of economic sectors; and distance from global markets. The majority of SIDS also face a 'triple-burden' of malnutrition whereby undernutrition, micronutrient deficiencies and overweight and obesity exist simultaneously within a population, alongside increasing rates of diet-related noncommunicable diseases.

Climate change is likely to exacerbate the triple-burden of malnutrition as well as the metabolic and lifestyle risk factors for diet-related noncommunicable diseases. It is expected to reduce short- and long-term food and nutrition security both directly, through its effects on agriculture and fisheries, and indirectly, by contributing to underlying risk factors such as water insecurity, dependency on imported foods, urbanization and migration, and health service disruption. These impacts represent a significant health risk for SIDS, with their particular susceptibility to climate change impacts and already over-burdened health systems, and this risk is distributed unevenly, with some population groups experiencing greater vulnerability.

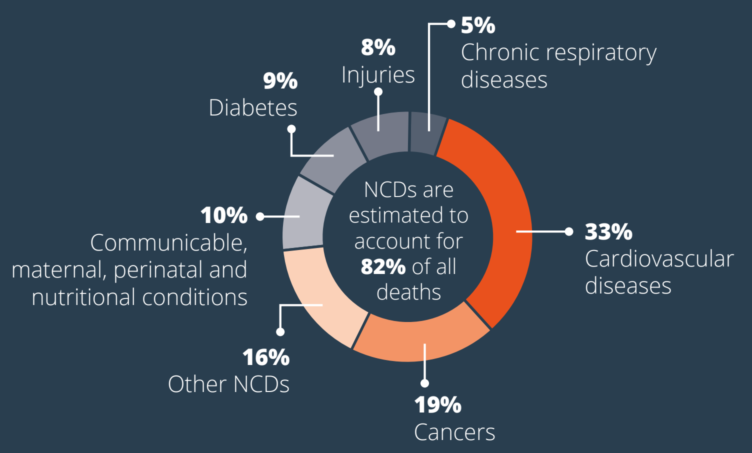
NONCOMMUNICABLE DISEASES IN SAINT LUCIA (2016)

Total population
178 000 *(23)*

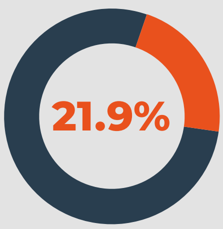
Total deaths
1300 *(23)*

Healthy life expectancy
66.4 years *(24)*

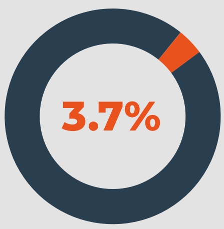
PROPORTIONAL MORTALITY (2016) *(23)*



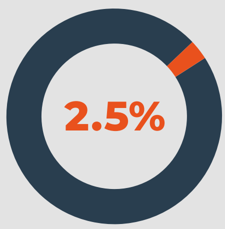
MOTHER AND CHILD HEALTH



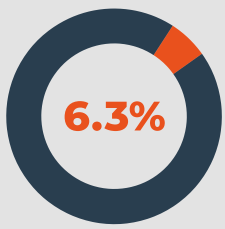
Iron deficiency anaemia in women of reproductive age (2016) *(26)*



Wasting in children under five years of age (2012) *(27)*



Stunting in children under five years of age (2012) *(27)*



Overweight in children under five years of age (2012) *(27)*

HEALTH VULNERABILITY AND ADAPTIVE CAPACITY

SDG indicators related to health and climate change

Many of the public health gains that have been made in recent decades are at risk due to the direct and indirect impacts of climate variability and climate change. Achieving Sustainable Development Goals (SDGs) across sectors can strengthen health resilience to climate change.

1. NO POVERTY

Proportion of population living below the national poverty line (2016) *(27)*

25%

3. GOOD HEALTH AND WELL-BEING

68

Universal Health Coverage Service Coverage Index (2017)[a] *(28)*

5.3%

Current health expenditure as percentage of gross domestic product (GDP)[b] *(29)*

16.6

Under-five mortality rate (per 1000 live births) (2017) *(30)*

6. CLEAN WATER AND SANITATION

Proportion of total population using **at least basic drinking-water services** (2017)[c] *(31)*

98%

Proportion of total population using **at least basic sanitation services** (2017)[c] *(31)*

88%

13. CLIMATE ACTION

Total number of weather-related disasters recorded between 2000 and 2018[d] *(32)*

7

Highest total number of persons affected by a single weather-related disaster between 2000 and 2018[d] *(32)*

Entire population of approximately

181 000

a The index is based on low data availability. Values greater than or equal to 80 are presented as ≥80 as the index does not provide fine resolution at high values; 80 should not be considered a target.

b This indicator is not an SDG indicator.

c Data for safely managed drinking-water and sanitation services are not consistently available for all SIDS at this time, therefore 'at least basic services' has been given for comparability.

d Data for SDG13.1 are currently not available. Alternative indicators and data sources are presented.

Health workforce

Public health and health care professionals require training and capacity building to have the knowledge and tools necessary to build climate-resilient health systems. This includes an understanding of climate risks to individuals, communities and health care facilities and approaches to protect and promote health given the current and projected impacts of climate change.

HUMAN RESOURCE CAPACITY (2018)

80%

International Health Regulations (IHR) Monitoring Framework Human Resources Core Capacity ***(33)***

No

"Does your human resource capacity as measured through the IHR adequately consider the human resource requirements to respond to climate-related events?" ***(34)***

No

"Is there a national curriculum developed to train health personnel on the health impacts of climate change?" ***(34)***

HEALTH WORKFORCE (PER 10 000 POPULATION, 2014) ***(35)***

N/A

Medical doctors

15.9

Nurses and midwives

N/A

Environmental and occupational health and hygiene professionals

While there are no specific WHO recommendations on national health workforce densities, the 'Workload Indicators of Staffing Need' (WISN) is a human resource management tool that can be used to provide insights into staffing needs and decision making. Additionally, the National Health Workforce Accounts (NHWA) is a system by which countries can progressively improve the availability, quality and use of health workforce data through monitoring of a set of indicators to support achievement of universal health coverage (UHC), SDGs and other health objectives. The purpose of the NHWA is to facilitate the standardization and interoperability of health workforce information. More details about these two resources can be found at: https://www.who.int/activities/improving-health-workforce-data-and-evidence.

Health care facilities

Climate change poses a serious threat to the functioning of health care facilities. Extreme weather events increase the demand for emergency health services but can also damage health care facility infrastructure and disrupt the provision of services. Increased risks of climate-sensitive diseases will require greater capacity from often already strained health services. In small island developing States, health care facilities are often in low-lying areas, subject to flooding and storm surges, making them particularly vulnerable.

N/A

Health centres per 100 000 population (N/A) ***(35)***

34

Assessed SMART health facilities ***(36)***[a]

3

Designated SMART health facilities ***(36)***[a]

[a] See SMART Hospitals Toolkit - Health care facilities are smart when they link their structural and operational safety with green interventions, at a reasonable cost-to-benefit ratio. https://www.paho.org/disasters/index.php?option=com_content&view=article&id=1742:smart-hospitals-toolkit&Itemid=1248&lang=en

HEALTH SECTOR RESPONSE: MEASURING PROGRESS

The following section measures progress in the health sector in responding to climate threats based on country reported data collected in the 2018 WHO Health and Climate Country Survey *(34)*. Key indicators are aligned with those identified in the Caribbean Action Plan.

Empowerment: Progress in leadership and governance

National planning for health and climate change

Has a national health and climate change strategy or plan been developed?[a]	✗
Title: N/A Year: N/A	
Content and implementation	
Are health adaptation priorities identified in the strategy/plan?	✗
Are the health co-benefits of mitigation action considered in the strategy/plan?	✗
Performance indicators are specified	✗
Level of implementation of the strategy/plan	✗
Current health budget covers the cost of implementing the strategy/plan	✗

✓=yes, ✗=no, O=unknown, N/A=not applicable

[a] In this context, a national strategy or plan is a broad term that includes national health and climate strategies as well as the health component of national adaptation plans (H-NAPs).

National progress

The National Adaptation Plan (NAP) 2018–2028 is the overarching strategic document to guide the development of sector-specific implementation of adaptation plans. For the health sector, a Sectoral Adaptation Strategy and Action Plan (SASAP) will be developed, including the specific strategies to address potential and current climate change impacts on the sector. The Department of Economic Development, Transport and Civil Aviation (Saint Lucia's National Designated Authority (national designated authority to the Green Climate Fund (GCF)), in collaboration with the Ministry of Health and Wellness and the Department of Sustainable Development, will prepare a concept proposal under the GCF Readiness and Preparatory Support Programme (national adaptation planning funds) to develop the health SASAP.

Intersectoral collaboration to address climate change[a]

Is there an agreement in place between the ministry of health and other sectors in relation to health and climate change policy?

Sector[b]	Agreement in place
Transportation	✗
Electricity generation	✗
Household energy	✗
Agriculture	✗
Social services	✗
Water, sanitation and wastewater management	✗

✔=yes, ✗=no, O=unknown, N/A=not applicable

[a] Saint Lucia's Climate Change Adaptation Policy of 2015, recognizes the health sector as critical. It indicates that "the Policy will promote links with, but will in no way supersede, more specific international, regional and national instruments and plans across specific sectors that pertain to weather and climate, including: water, agriculture, energy, forestry and land use, health, coastal zone management, marine ecosystems, ocean management, tourism, and transport". It speaks to, among others, implementing adaptation measures "protecting human health from climate change-related diseases" and the need to monitor and evaluate public health in the face of climate change". The Ministry of Health is also a long-standing member on the Cabinet-approved National Climate Change Committee (NCCC).

[b] Specific roles and responsibilities between the national health authority and the sector indicated are defined in the agreement.

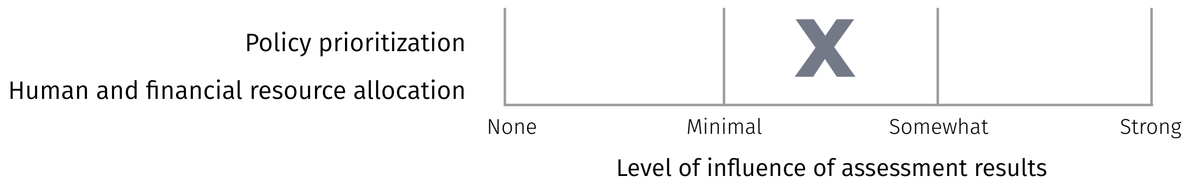
Evidence: Building the investment case

Vulnerability and adaptation assessments for health

Has an assessment of health vulnerability and impacts of climate change been conducted at the national level?[c] ✔

TITLE: 1. Vulnerability and Adaptation Assessment of the Health Sector
2. Saint Lucia's National Adaptation Plan Stocktaking, Climate Risk and Vulnerability Assessment Report

Have the results of the assessment been used for policy prioritization or the allocation of human and financial resources to address the health risks of climate change?



✔=yes, ✗=no, O=unknown, N/A=not applicable

[c] Saint Lucia has prepared Vulnerability and Adaptation Assessments as part of its National Communications to the UNFCCC that include a component of health. This was done for the first (2001), second (2011) and third (2017) National Communications. In 2011, ECLAC estimated the economic impact of climate change on the health sector in Saint Lucia. The ECLAC study had a special focus on the costs of gastroenteritis, schistosomiasis, ciguatera poisoning, meningococcal meningitis, cardiovascular diseases, respiratory diseases and malnutrition under climate change scenarios in the country.

Implementation: Preparedness for climate risks

Integrated risk monitoring and early warning

Climate-sensitive diseases and health outcomes	Monitoring system in place[a]	Monitoring system includes meteorological information[b]	Early warning and prevention strategies in place to reach affected population
Thermal stress (e.g. heat waves)[c]	✗	✗	✗
Vector-borne diseases	✓	✗	✓
Foodborne diseases	✓	✗	✓
Waterborne diseases	✓	✗	✓
Nutrition (e.g. malnutrition associated with extreme climatic events)	✗	✗	✗
Injuries (e.g. physical injuries or drowning in extreme weather events)	✗	✗	✗
Mental health and well-being	✗	✗	✗
Airborne and respiratory diseases	✓	✗	✓

✓=yes, ✗=no, O=unknown, N/A=not applicable

[a] A positive response indicates that the monitoring system is in place, it will identify changing health risks or impacts and it will trigger early action

[b] Meteorological information refers to either short-term weather information, seasonal climate information or long-term climate information.

[c] The Meteorological Department collects temperature data that can be utilized by the Department of Health for monitoring heat-related illnesses.

Emergency preparedness

Climate hazard	Early warning system in place	Health sector response plan in place	Health sector response plan includes meteorological information
Heat waves	✓[a]	✗	✗
Storms (e.g. hurricanes, monsoons, typhoons)	✓	✓	✓
Flooding	✓	✓[b]	✓
Drought	✓	✓[b]	✓

✓=yes, ✗= no, O=unknown, N/A=not applicable

[a] National Emergency Management Organisation (NEMO).

[b] Yes included in multi-hazard plan.

Resources: Facilitating access to climate and health finance

International climate finance

Are international funds to support climate change and health work currently being accessed?	✓

If yes, from which sources?

- [ ] Green Climate Fund (GCF)
- [ ] Global Environment Facility (GEF)
- [x] Other multilateral donors
- [ ] Bilateral donors
- [ ] Other: ____________________

Funding challenges

Greatest challenges faced in accessing international funds

Lack of information on the opportunities		Lack of country eligibility	✓
Lack of connection by health actors with climate change processes		Lack of capacity to prepare country proposals	✓
Lack of success in submitted applications	✓	None (no challenges/challenges were minimal)	
Other (please specify):		Not applicable	

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