



# **SURINAME** **NATIONAL DISASTER** **PREPAREDNESS BASELINE** **ASSESSMENT**

**A DATA-DRIVEN TOOL FOR  
ASSESSING RISK AND BUILDING  
LASTING RESILIENCE**







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- Vuurkorps Suriname (KBS)



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# LIST OF ABBREVIATIONS

**ABS:** Algemeen Bureau voor de Statistiek

**BCP:** Business Continuity Planning

**CCA:** Climate Change Adaptation

**CDEMA:** Caribbean Disaster Emergency Management Agency

**CDM:** Comprehensive Disaster Management

**CELOS:** Center for Agricultural Research at Anton de Kom University

**CCRIF SPC:** Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company

**CIP:** Inter-American Committee on Ports

**COG:** Continuity of Government

**COOP:** Continuity of Operations

**COP:** Common Operating Picture

**CRF:** Canada Caribbean Resilience Facility

**CREWS:** Climate Risk & Early Warning Systems

**CSSI:** Caribbean Safe School Initiative

**DEM:** Digital Elevation Model

**DM:** Disaster Management

**DM Law:** Disaster Management Law

**DMA:** Disaster Management Analysis

**DPC:** Directorate of Civil Protection

**DRR:** Disaster Risk Reduction

**EOC:** Emergency Operations Center

**EWS:** Early Warning Systems

**FAO:** Food and Agriculture Organization

**GCF:** Green Climate Fund

**GFDRR:** Global Facility for Disaster Reduction and Recovery

**GIS:** Geographic Information System

**HAZMAT:** Hazardous Materials

**ICS:** Incident Command System

**IDB:** Inter-American Development Bank

**IFRC:** International Federation of Red Cross and Red Crescent Societies

**ILO:** International Labour Organization

**IMF:** International Monetary Fund

**IOM:** International Organization for Migration

**IWMP:** Integrated Waste Management Plan

**MDS:** Meteorological Service Suriname

**MHEWS:** Multi-Hazard Early Warning System

**MOA:** Memorandum of Agreement

**MOU:** Memorandum of Understanding

**NCCR:** National Coordination Center for Disaster Relief

**NDPBA:** National Disaster Preparedness Baseline Assessment

**NEOC:** National Emergency Operations Center

**NGO:** Non-Governmental Organization

**OAS:** Organization of American States

**PAHO:** Pan American Health Organization

**PDC:** Pacific Disaster Center

**PPP:** Public-Private Partnerships

**PPP:** Purchasing Power Parity

**RDCS:** Regional Development Cooperation Strategy

**RRM:** Regional Response Mechanism

**RVA:** Risk and Vulnerability Assessment

**SAO:** Foundation for Labor Mobilization and Development

**SDG:** Sustainable Development Goal

**SNTA:** Suriname National Training Authority

**SOPs:** Standard Operating Procedures

**SRCC:** Sub-Regional Coordination Centre

**T&E:** Training and Exercise

**TAS:** Telecommunications Authority Suriname

**UNDP:** United Nations Development Programme

**UNDRR:** United Nations Office for Disaster Risk Reduction

**UNFCCC:** United Nations Framework Convention on Climate Change

**USAID:** United States Agency for International Development

**USSOUTHCOM:** United States Southern Command

**VEOCI:** Virtual Emergency Operations Center Interface

**WB:** World Bank

**WFP:** World Food Programme

**WHO:** World Health Organization

**WMO:** World Meteorological Organization



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**NDPBA**

# **EXECUTIVE SUMMARY**



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# EXECUTIVE SUMMARY

The Suriname National Disaster Preparedness Baseline Assessment (NDPBA) was completed in a partnership between the Pacific Disaster Center (PDC), the Nationaal Coördinatiecentrum voor Rampenbeheersing (NCCR) and the support of in-country stakeholders. The NDPBA looks at each country's unique hazard profile, cultural characteristics, geographical and geopolitical context, historical events, and other factors that could influence, both positively and negatively, a country's ability to effectively manage disasters. Strategic and tactical recommendations are developed based on the findings of the assessment and are aligned with the United Nations Sustainable Development Goals (SDGs) and the Sendai Framework for Disaster Risk Reduction.

The assessment is comprised of two components: the Risk and Vulnerability Assessment (RVA) and the Disaster Management Analysis (DMA). The RVA looks at multi-hazard exposure, social-economic vulnerabilities and coping capacity. The DMA takes a qualitative approach to assess six subthemes— Enabling Environment; Institutional Arrangements; Disaster Governance Mechanisms; Capabilities and Resources; Capacity Development; and Communication and Information Management. The DMA results are used to contextualize the RVA findings, providing a comprehensive understanding of the current disaster management landscape. In coordination with NCCR, PDC utilized the assessment findings to develop recommendations and a Disaster Risk Reduction 5-Year Action Plan that allows for better targeted use of limited resources and identification of additional funding opportunities.

The RVA results underline Suriname's exposure to multiple hazards, with extreme heat, riverine and coastal flooding, mosquito-borne disease, and earthquake contributing to considerable exposure of people, buildings, and critical infrastructure. Susceptibility to these, and other hazards included in the assessment, highlights the importance of implementing preparedness strategies as well as risk reduction and climate adaptation initiatives. The assessment also identified vulnerabilities and coping capacities that contribute to multi-hazard risk across Suriname's districts. RVA Indicators showed that overcoming challenges related to education, population pressures, and economic constraints provides opportunities to reduce vulnerability across the country. In addition, improving public health capacity and access to energy and technology can bolster Suriname's coping capacity and disaster response capabilities. Endeavors to address these limitations, paired with efforts to mitigate hazard impacts, will strengthen the nation's overall resilience to disasters.

Suriname has made significant progress in disaster management, focusing on disaster risk reduction in alignment with international standards and through strategic partnerships. The Multi-Annual Development Plan 2022-2026 emphasizes reducing disaster impacts on vulnerable populations and limiting economic losses. The Environmental Framework Act 2020 further strengthens this commitment by establishing the National Environmental Authority, aimed at enhancing climate

change adaptation and building disaster-resilient infrastructure. However, the effectiveness of NCCR is hindered by the absence of an approved Disaster Management Law, which is crucial for delineating roles and resources, thus improving disaster preparedness and response across Suriname.

As Suriname faces an increased risk from climate change, there is an emerging need to establish a national climate and disaster risk financing strategy. Implementing the recommendations shared in this report will significantly advance Suriname's preparedness and disaster management capabilities.

The NDPBA was funded by the United States Government through the US Southern Command and was conducted in coordination with the U.S. Embassy in Suriname. Although NCCR was PDC's in-country partner during this project, the Center also developed relationships with multiple government and non-governmental agencies in Suriname that supported the data gathering and vetting process. A complete list of PDC's valued partners in the NDPBA effort is included in this report.

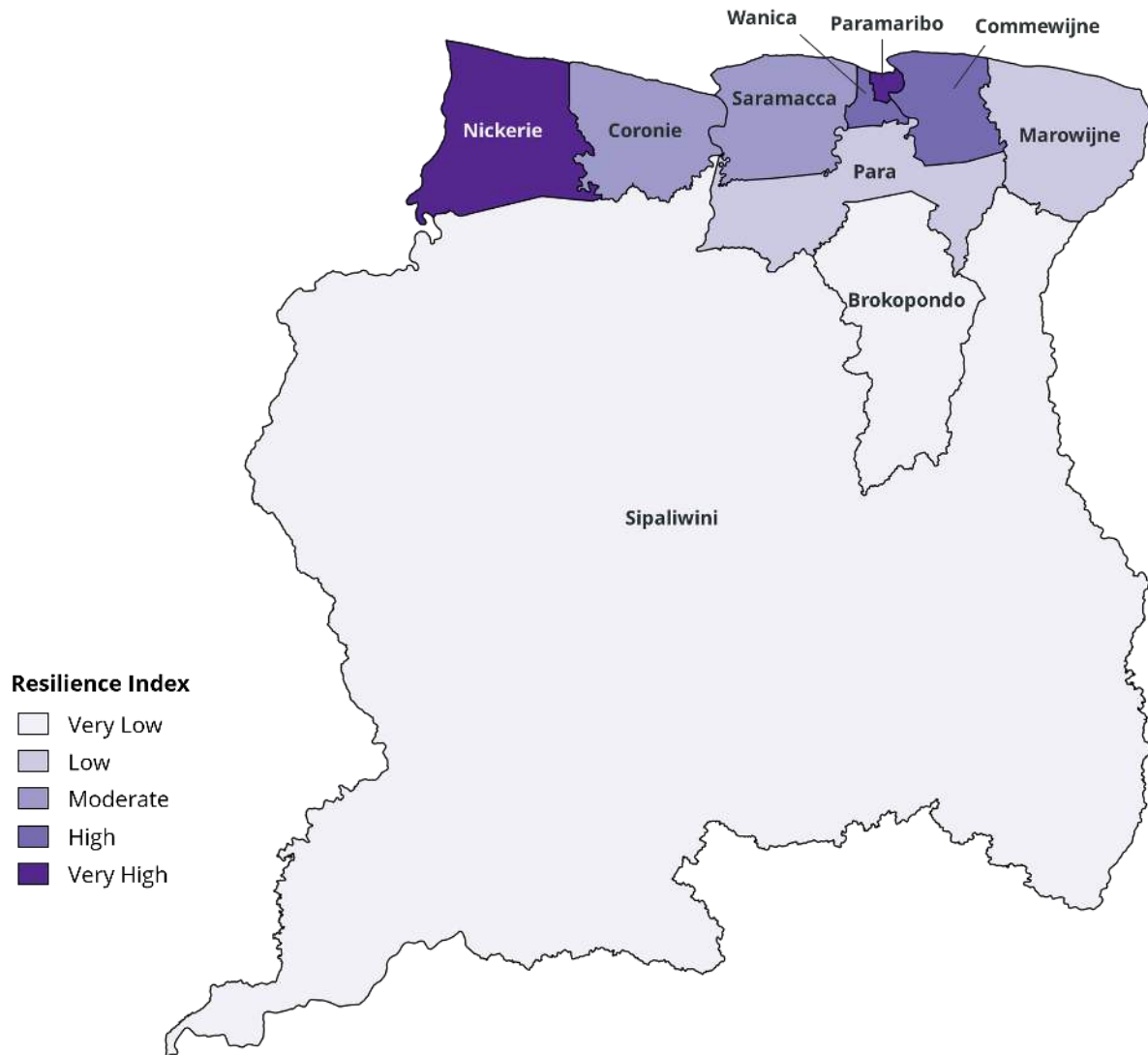
To access findings, recommendations, and data developed for this analysis, please visit PDC's all-hazard early warning and decision support application for disaster managers and humanitarian assistance practitioners, DisasterAWARE Pro® (<https://disasteraware.pdc.org/>).







# SUMMARY OF FINDINGS

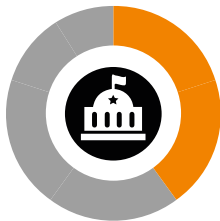




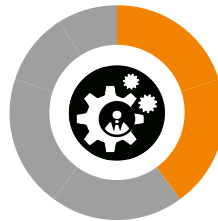
# DISASTER MANAGEMENT ANALYSIS

- Limited or No Capacity
- Early Capacity Development
- Achievement with Significant Limitation
- Substantial Progress with Some Limitation
- Advanced Capacity

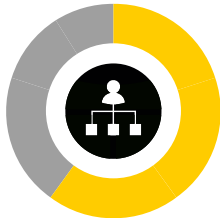
## STATUS



**Enabling Environment**



**Capabilities and Resources**



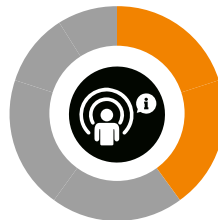
**Institutional Arrangements**



**Capacity Development**



**Disaster Governance Mechanisms**



**Communication and Information Management**

---

# RECOMMENDATIONS



These recommendations are included in greater detail in the body of the report. We hope that the Government of Suriname and key development and disaster management partners will leverage the results of this comprehensive assessment to enable a more robust and sustainable disaster risk-reduction effort in Suriname that will contribute to saving lives and property.

## IN LIGHT OF OUR FINDINGS, PDC MAKES THE FOLLOWING RECOMMENDATIONS:

---

# 1

Expand comprehensive hazard modeling capabilities to update and identify additional exposure zones that consider the unique characteristics and environmental conditions of Suriname.

---

# 2

Review and update the Draft Disaster Management Law to strengthen the legal instruments necessary for effective disaster management.

---

# 3

Strengthen the annual budget to directly support the NCCR with a focus on proactive funding structures and program requirements to meet the predicted escalation in climate-related hazards affecting Suriname.

---

# 4

Establish a national climate and disaster risk financing strategy to support long-term national economic and financial stability while adapting to climate change.

---

**5** Collaborate with the National Planning Office to coordinate and align multi-agency and cross-sector initiatives related to hazard mitigation, disaster risk reduction, climate change adaptation, and sustainable development to prevent duplication of effort and resources.

---

**6** Conduct a comprehensive planning audit to identify necessary plans that do not exist and update existing plans that have become outdated.

---

**7** Strengthen the institutional capacity of the NCCR and District disaster management capacity.

---

**8** Fortify Suriname's agricultural sector against climate-related challenges, fostering sustainable practices, resilient infrastructure, and adaptive strategies to ensure continuity and productivity in the face of adverse events.

---

**9** Conduct a formal review of current building codes and propose additional codes to consider climate change and the increase in the number and intensity of hazards expected to impact Suriname.

---

**10** Continue to develop capacity development in disaster risk reduction and disaster management plans and strategies to drive initiatives towards advanced capacity.

---

**11** Strengthen coordination and collaboration of disaster management and emergency service provisions across the nation.

---

**12** Strengthen primary health care services' capacity to continue operations under emergency conditions and during disaster response operations.

---

**13** Strengthen all-hazards monitoring and communications systems and data translation into comprehensive early warning systems (EWS) and capabilities.

---

**14** Establish a consolidated multi-agency disaster risk information system to support data sharing and evidence-based decision making.



---

**15**

Establish within the NCCR a centralized digital repository for disaster management supplies and resources to support strategic designation and maintenance inventories for resource allocation and tracking.

---

**16**

Formalize and expand a national, multiagency disaster training and exercise (T&E) program centralized and coordinated by NCCR.

---

**17**

Expand public outreach and preparedness campaigns for natural and manmade hazards affecting Suriname.

---

**18**

Boost community engagement in disaster risk reduction by including community leaders and vulnerable groups in the risk assessment, planning, and mitigation processes.

---

**19**

Adopt a comprehensive strategy to build public health capacity.

---

**20**

Promote comprehensive strategies to address and mitigate the impacts of coastal and inland flooding.

---

**21**

Monitor changes in population to support disaster management planning and promote sustainable development.

---

**22**

Promote youth education and engagement in disaster management.

---

**23**

Continue efforts to expand energy, transportation and information and communications technology services in underserved areas.

---

**24**

Reassess progress made toward disaster risk reduction and resilience goals.

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**NDPBA**

# **COUNTRY BACKGROUND**



# GEOGRAPHY

## Paramaribo

Capital City

**156,000 km<sup>2</sup>**

Land Area (60,232 mi<sup>2</sup>)

**7,820 km<sup>2</sup>**

Water Area (3,019 mi<sup>2</sup>)

**386 km**

Coastline (239.8 mi)

**97.4%**

Forest Area (% of land area) (2020)

**0.5%**

Agricultural Land (2020)

### Neighboring Countries

- Brazil
- Guyana
- French Guiana

### Administrative Divisions

- 10 Districts (Admin 1)
- 62 Resorts (Admin 2)



# DEMOGRAPHICS

**616,500**

Total Population (mid-year 2021, estimated)

**about 3.7 per km<sup>2</sup>**

Population Density (9.7 per mi<sup>2</sup>) (2021)

**66%**

Urban Population (2021)

**20%**

Rural Population (2021)

**14%**

Interior Population (2021)

**> 50%**

of the total population lives in Paramaribo

## Ethnic groups

**27.4%** Hindustani (East Indian)

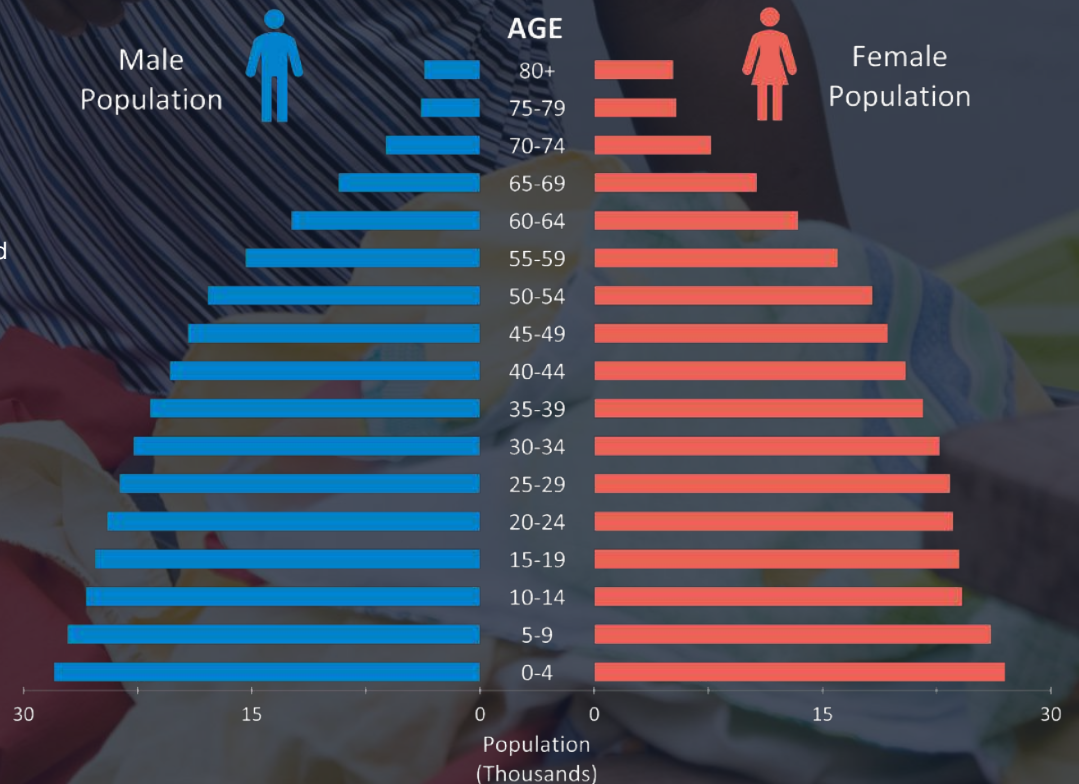
**21.7%** Maroon

**15.7%** Creole

**13.7%** Javanese

**13.4%** Mixed Ethnicity

**8.2%** Other or Unspecified



## Healthcare access



**3.6**

Physicians (per 10,000 persons) (2020, estimated)



**3.8**

Nurses and Midwives (per 1,000 persons) (2019)



**29**

Hospital Beds (per 10,000 persons) (2020, estimated)



**15.4**

Infant Mortality Rate (per 1,000 live births) (2021)



**96**

Maternal Mortality Rate (modeled estimate per 100,000 live births) (2020)

## Wash access

**69.5%**

Households with Piped Water (2018)

**64.1%**

Household Population with E. Coli in Drinking Water (2018)

**85.5%**

Households with Flush Toilets (to Sewer or Septic System) (2018)

**80.4%**

Households with a Handwashing Facility with Soap and Water (2018)

## Access to information

**95%**

Adult Literacy Rate (2021)

**97%**

Net Attendance Ratio for Primary School (2018)

**32%**

Upper Secondary Education Completion Rate (2018)

**66%**

Population Using the Internet (2021)

**81%**

Access to Electricity (2023)



# ECONOMY

## Key Economic Indicators and Key Exports

**16,260**

GNI per Capita Purchasing Power Parity (current international \$) (2022)



**3%**

Real GDP Growth (annual percent change) (2024)

**52.4%**

Inflation Rate (consumer prices, annual %) (2022)

**55%**

Labor Force Participation Rate, (ages 15+) (2022 estimate)

**8.6%**

Unemployment, Total (% of total labor force) (2022 estimate)

### Major Exports (2021)



Gold



Rough Wood



Refined Petroleum



Excavation Machinery



Rice

### Major Imports (2021)



Refined Petroleum



Excavation Machinery



Delivery Trucks



Cars



Rolled Tobacco

### Sectors (% of GDP)



**44.8%**

Industry (including construction) (2022)



**44.7%**

Services (2022)



**8.1%**

Agriculture, Forestry, and Fishing (2022)

# KEY INFRASTRUCTURE

## Logistics and Transportation

 **1**

**Medium Airport**  
Johan Adolf Pengel  
International Airport

 **2**

**Small Airports**  
Zorg en Hoop Airport  
Major Henk Fernandes  
(Nieuw Nickerie) Airport

 **50**


**Local Airstrips**

 **1**


**Medium Port**  
Paramaribo

 **1**

**Small Port**  
Nieuw Nickerie

 **4**

**Very Small Ports**  
Moengo  
Paranam  
Smalkalden  
Wageningen

 **14,145 km**  
Canals (8,789 mi)

## Emergency Services

**8** 

Hospitals

**52** 

Clinics

**25** 

Police Stations

**10** 

Fire Stations

**1** 

Emergency  
Operations Centers

## Other Key Infrastructure

**12** 

Power Plants

**74** 

Schools and Universities

**24** 

Dams and Sluices

**660 km<sup>2</sup>** 

Registered Mining Area  
(255 mi<sup>2</sup>)



# DISASTER MANAGEMENT

## Recent Major Disaster Impacts

Year	Type	Deaths	Injured	Affected	Total Affected
2015	Floods, storms and heavy winds	1	3	790	794
2016	Floods, storms and heavy winds	-	2	36	38
2017	Floods, storms and heavy winds	-	-	109	109
2018	Floods, storms and heavy winds	-	-	22	22
2019	Floods, storms and heavy winds	-	-	74	74
2021	Floods, storms and heavy winds	-	-	10,100	10,100
2023	Floods, storms and heavy winds	-	-	9,000	9,000

### Major Capacity improvements/milestones:

Suriname has implemented protective legislation through the Environmental Framework Act 2020. The Act addresses integration and involvement of indigenous and tribal peoples, ensuring information and education on activities within communities is widespread and accessible for effective decision-making and informed consent.

In 2019, Suriname became party to the Antigua and Barbuda Declaration on School Safety, the Caribbean Safe School Initiative (CSSI), and secured the endorsement of the twelve CARICOM Ministries of Education. Serving as an instrumental document for the country, this declaration forms the cornerstone for the systematic implementation of strategies focused on disaster risk reduction and the enhancement of climate change resilience within the broader context of the Caribbean Safe School initiative.

In recognition of the importance of advancing climate change adaptation (CCA), the General Bureau of Statistics has published the "Suriname Climate Change Statistics and Indicators" report. This is the country's first climate impact publication and provides Suriname with a framework to integrate forward initiatives based on the Intergovernmental Panel on Climate Change (IPCC) in five policy areas (Drivers, Impacts, Vulnerability, Mitigation, and Adaptation) and their subsequent 158 indicators and statistics.





**THE RVA**

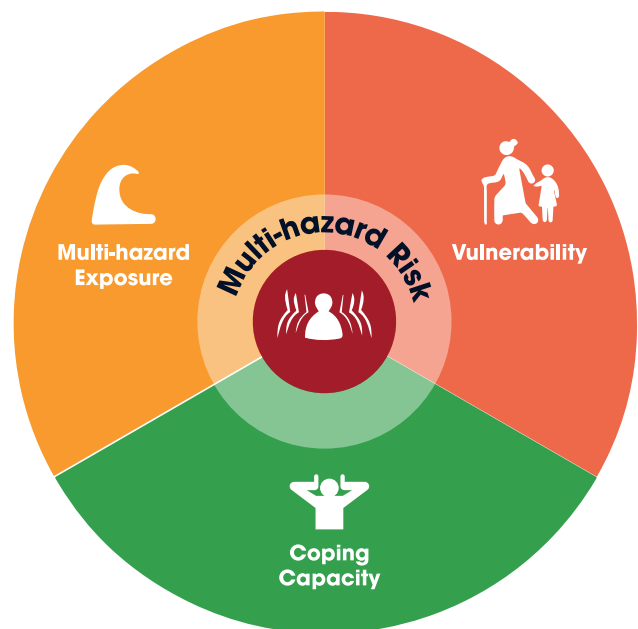
# **RISK AND VULNERABILITY ASSESSMENT RESULTS**

# RISK AND VULNERABILITY

## ASSESSMENT RESULTS

Provided in this section are the Risk and Vulnerability Assessment (RVA) results conducted by the Pacific Disaster Center as part of the Suriname National Disaster Preparedness Baseline Assessment. For more information about PDC's NDPBA Methodology, please visit: <https://www.pdc.org/wp-content/uploads/NDPBA-Data-Sharing-Guide-English-Screen.pdf>

### SURINAME



### COMPONENTS OF RISK



**Multi-hazard Exposure**



**Vulnerability**



**Coping Capacity**





**THE RVA**

# **MULTI-HAZARD EXPOSURE**

# MULTI-HAZARD EXPOSURE

The following hazards were assessed by PDC as part of the National Disaster Preparedness Baseline Assessment:

## Global Multi-hazard Exposure Rank (PDC Global RVA)

**126** OUT OF 216 COUNTRIES / TERRITORIES ASSESSED

## Multi-Hazard Exposure within Latin America and the Caribbean

**36** OUT OF 42 COUNTRIES / TERRITORIES ASSESSED

### SURINAME HAZARD ZONES

#### SEA LEVEL RISE



**5%** Population Exposed  
**28,130** Raw Population Exposure

**6%** Percent Built Environment Exposed

**5%** Percent Critical Infrastructure Exposed

#### COASTAL FLOODING



**59%** Population Exposed  
**347,206** Raw Population Exposure

**56%** Percent Built Environment Exposed

**55%** Percent Critical Infrastructure Exposed

#### WILDFIRE



**9%** Population Exposed  
**54,358** Raw Population Exposure

**11%** Percent Built Environment Exposed

**22%** Percent Critical Infrastructure Exposed

#### LANDSLIDE



**1.4%** Population Exposed  
**8,052** Raw Population Exposure

**2%** Percent Built Environment Exposed

**4%** Percent Critical Infrastructure Exposed

#### RIVERINE FLOODING



**78%** Population Exposed  
**457,089** Raw Population Exposure

**71%** Percent Built Environment Exposed

**45%** Percent Critical Infrastructure Exposed

#### EARTHQUAKE



**75%** Population Exposed  
**439,465** Raw Population Exposure

**70%** Percent Built Environment Exposed

**54%** Percent Critical Infrastructure Exposed

#### TSUNAMI



**5%** Population Exposed  
**28,931** Raw Population Exposure

**6%** Percent Built Environment Exposed

**10%** Percent Critical Infrastructure Exposed

#### MOSQUITO-BORNE DISEASE



**98%** Population Exposed  
**573,683** Raw Population Exposure

**96%** Percent Built Environment Exposed

**94%** Percent Critical Infrastructure Exposed

#### DROUGHT



**9%** Population Exposed  
**52,437** Raw Population Exposure

**6%** Percent Built Environment Exposed

**2%** Percent Critical Infrastructure Exposed

#### EXTREME HEAT

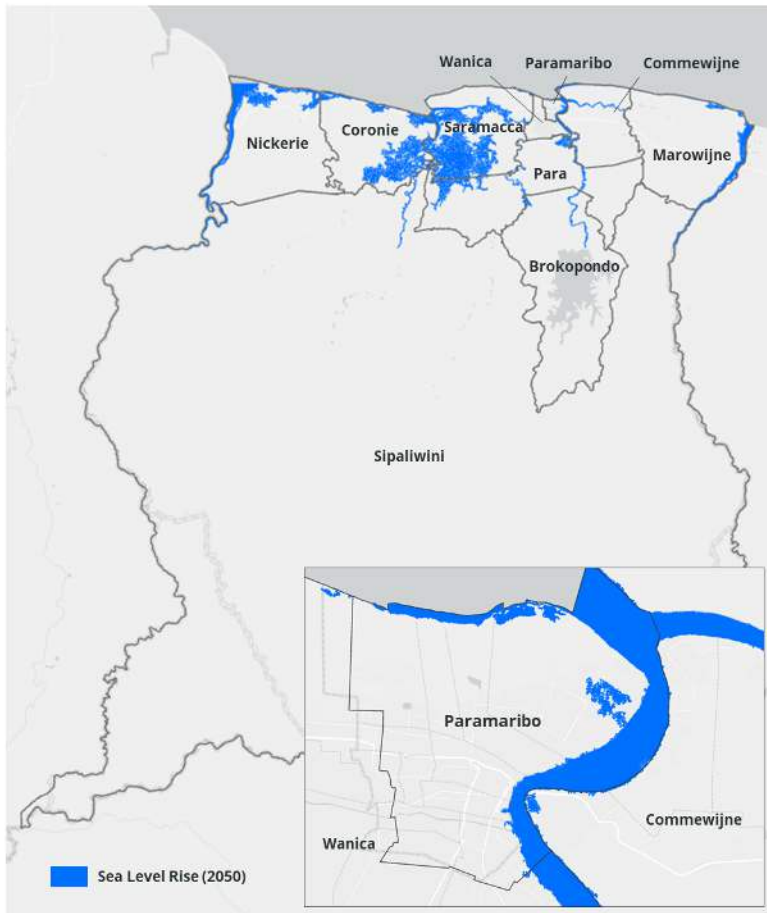


**96%** Population Exposed  
**564,092** Raw Population Exposure

**94%** Percent Built Environment Exposed

**93%** Percent Critical Infrastructure Exposed

# Suriname: Sea Level Rise Hazard Exposure (Year 2050)



## POTENTIAL POPULATION EXPOSURE



**28,130 (5%)**

People exposed to sea level rise by 2050

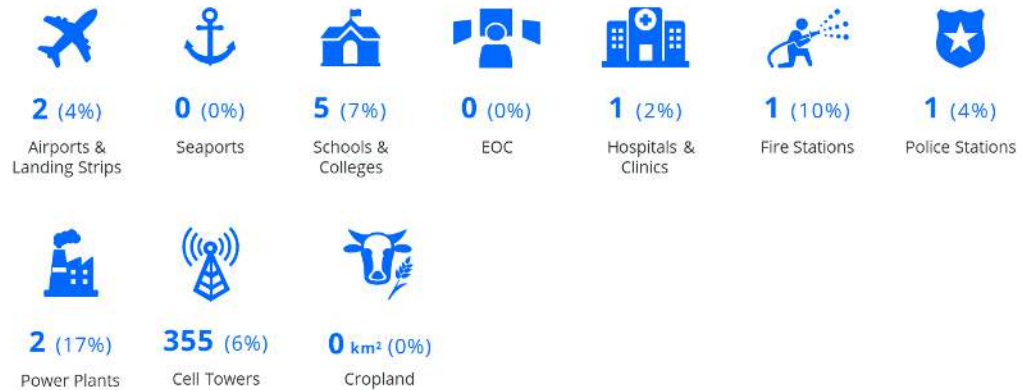
## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**17,362 (6%)**

Buildings exposed to sea level rise by 2050

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED



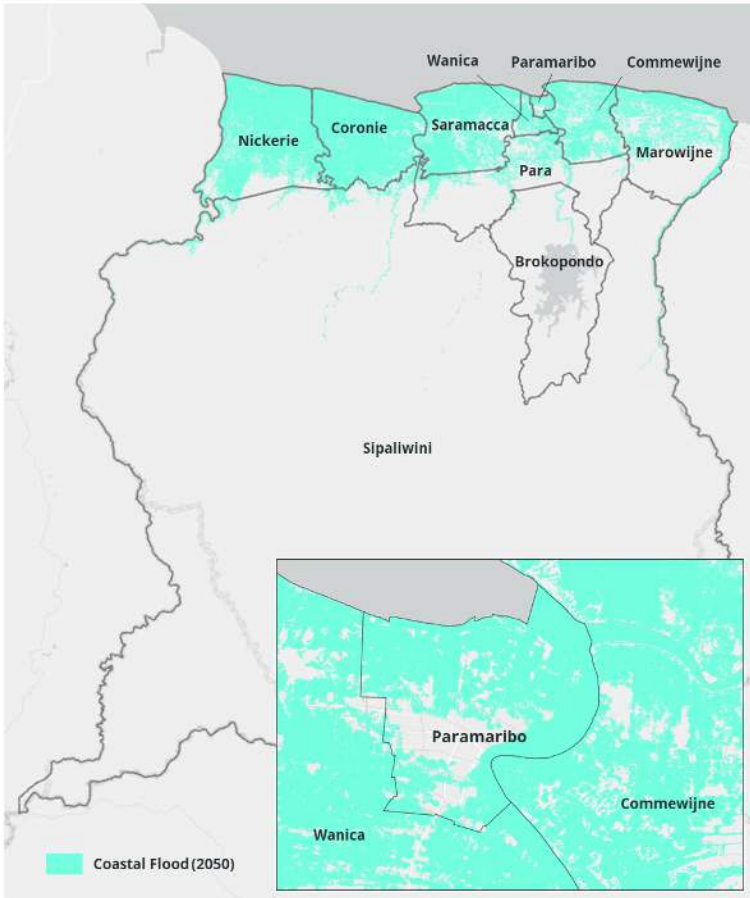
© 2015-2024 Pacific Disaster Center (PDC) - All rights reserved. Commercial use is permitted only with explicit approval of PDC | 7/11/2024 | <https://disasteraware.pdc.org> | Population exposure calculated using PDC's All Hazards Impact Model (AIM). Data: PDC, Climate Central, World Port Index, GONINI, Government of Suriname, UN FAO, HOTOSM, HDX, World Bank (SIDS), Suriname MetOffice, Sentinel-2 Satellite, RAISIG.



# Suriname: Coastal Flooding Hazard Exposure (Year 2050)



[VIEW IN DISASTERAWARE](#)



## POTENTIAL POPULATION EXPOSURE



**327,206 (59%)**  
People exposed to coastal flooding by 2050

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**156,770 (56%)**  
Buildings exposed to coastal flooding by 2050

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED



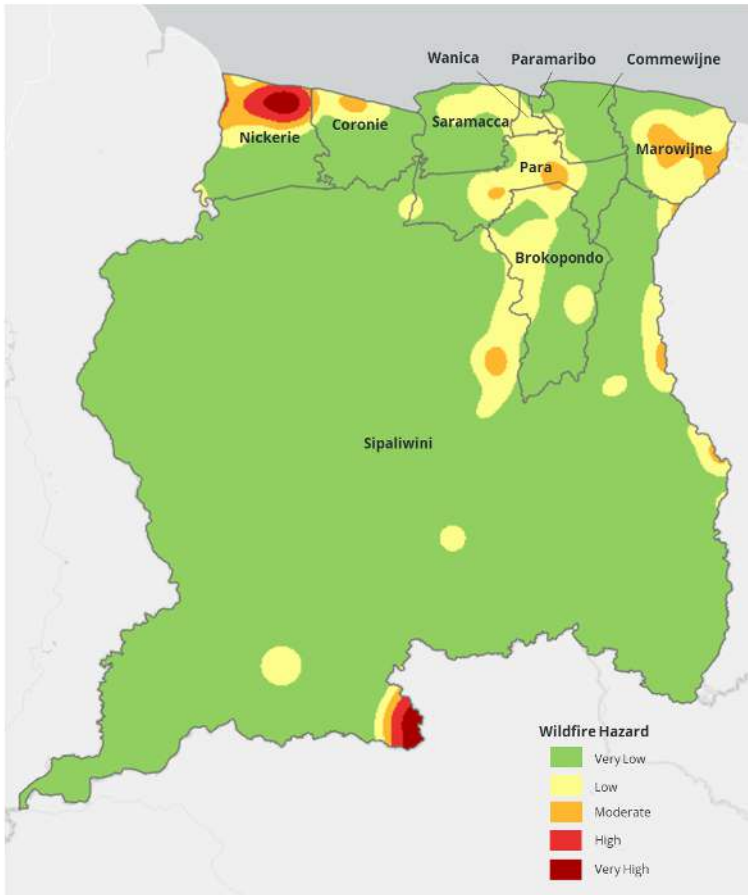
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Data: PDC, Climate Central, World Port Index, GONINI, Government of Suriname, UN FAO, HOTOSM, HDX, World Bank (SIDS), Suriname MetOffice, Sentinel-2 Satellite, RAISIG.



# Suriname: Wildfire Hazard Exposure



VIEW IN DISASTERAWARE



## POTENTIAL POPULATION EXPOSURE



**54,358 (9%)**  
People exposed to wildfire (moderate to very high)

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**29,754 (11%)**  
Buildings exposed to wildfire (moderate to very high)

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

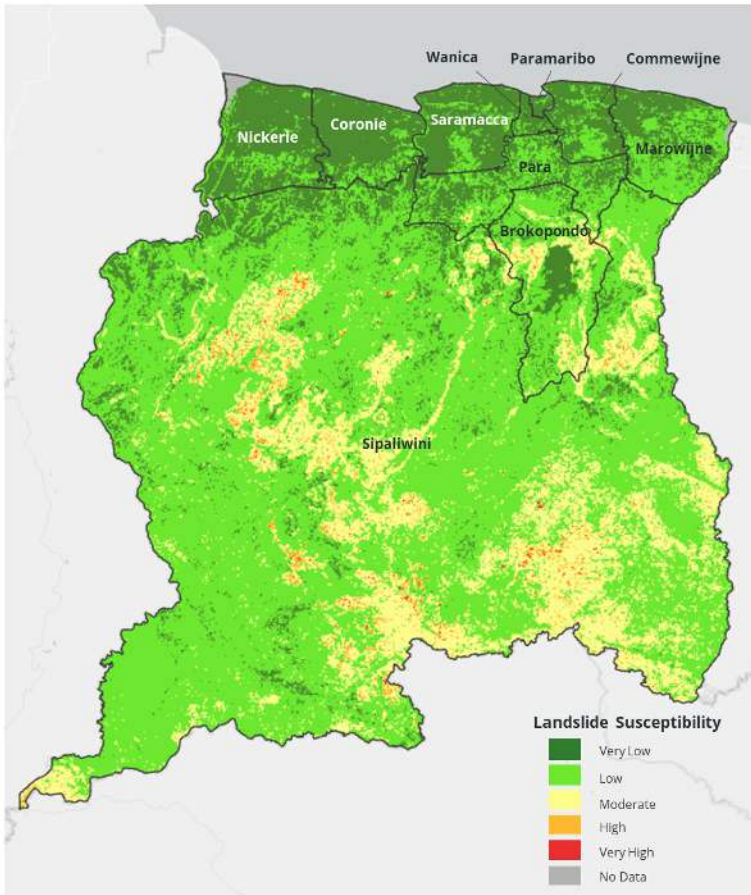


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# Suriname: Landslide Hazard Exposure



VIEW IN DISASTERWARE



## POTENTIAL POPULATION EXPOSURE



**8,052 (1.4%)**

People exposed to landslides (moderate to very high)

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**5,211 (2%)**

Buildings exposed to landslides (moderate to very high)

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED



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# Suriname: Riverine Flooding Hazard Exposure



VIEW IN DISASTERAWARE



## POTENTIAL POPULATION EXPOSURE



**457,089 (78%)**

People exposed to 100-year flood zone

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**199,696 (71%)**

Buildings exposed to 100-year flood zone

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED



**22 (42%)**  
Airports & Landing Strips



**5 (83%)**  
Seaports



**46 (62%)**  
Schools & Colleges



**0 (0%)**  
EOC



**33 (55%)**  
Hospitals & Clinics



**7 (70%)**  
Fire Stations



**17 (68%)**  
Police Stations



**8 (67%)**  
Power Plants



**3,501 (63%)**  
Cell Towers



**2 km² (1%)**  
Cropland



**18 km² (3%)**  
Mining Locations



**15 (63%)**  
Water Control Structures



**631 km (5%)**  
Canals

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# Suriname: Earthquake Hazard Exposure



[VIEW IN DISASTERAWARE](#)



## POTENTIAL POPULATION EXPOSURE



**439,465 (75%)**

People exposed to earthquake (estimated MMI V)

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**194,900 (70%)**

Buildings exposed to earthquake (estimated MMI V)

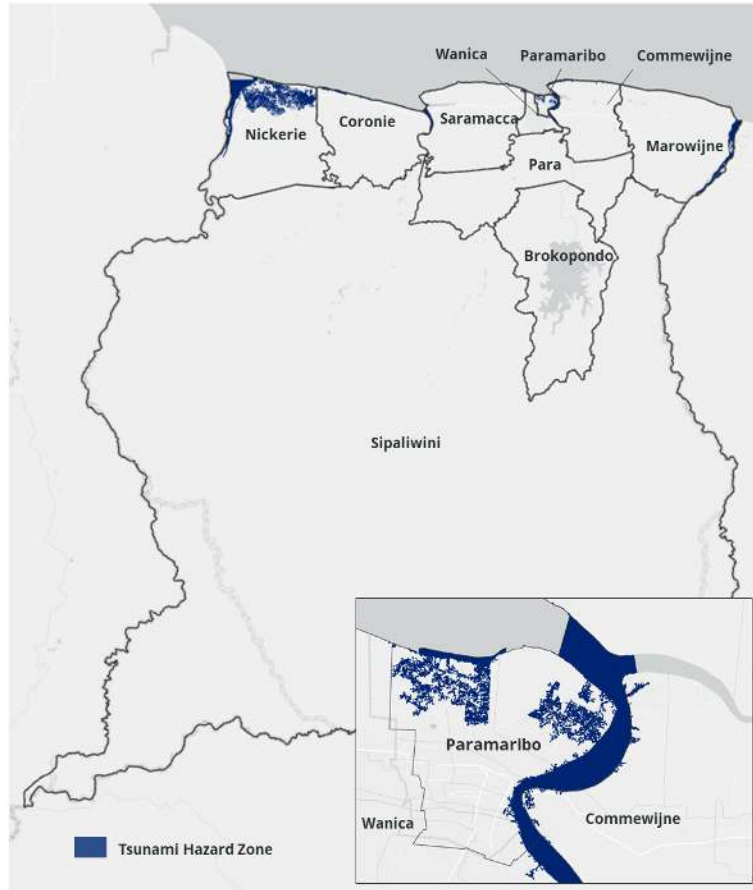
## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED



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# Suriname: Tsunami Hazard Exposure



## POTENTIAL POPULATION EXPOSURE



**28,931 (5%)**

People exposed to tsunami

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**17,082 (6%)**

Buildings exposed to tsunami

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

**2 (4%)**  
Airports & Landing Strips

**1 (17%)**  
Seaports

**6 (8%)**  
Schools & Colleges

**0 (0%)**  
EOC

**3 (5%)**  
Hospitals & Clinics

**1 (10%)**  
Fire Stations

**2 (8%)**  
Police Stations

**2 (17%)**  
Power Plants

**379 (7%)**  
Cell Towers

**0 km² (0%)**  
Cropland

**12 (50%)**  
Water Control Structures

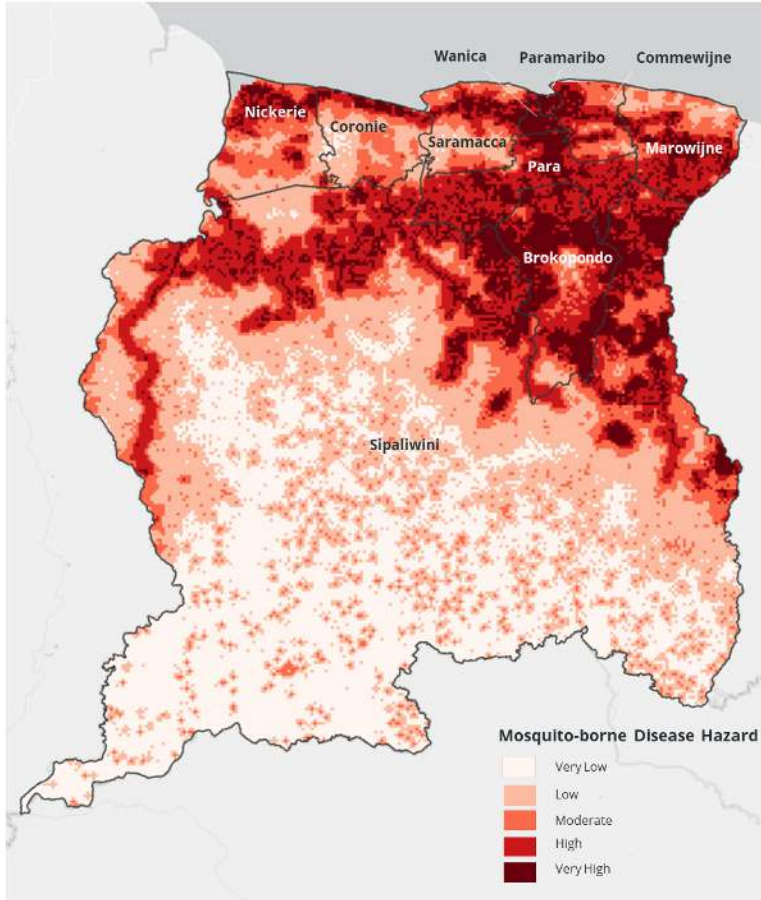
**0 km (0%)**  
Canals

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# Suriname: Mosquito-borne Disease Hazard Exposure



[VIEW IN DISASTERAWARE](#)



## POTENTIAL POPULATION EXPOSURE



**573,683 (98%)**

People exposed to mosquito-born disease (high, very high)

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**270,286 (97%)**

Buildings exposed to mosquito-born disease (high, very high)

## HEALTH CARE CAPACITY



**2.2**

Physicians per 10,000 Persons (2020)



**32.9**

Hospital Beds per 10,000 Persons (2020)



**1.3**

Clinics per 10,000 Persons (2020)

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED



**35 (70%)**

Airports & Landing Strips



**6 (100%)**

Seaports



**56 (93%)**

Hospitals & Clinics



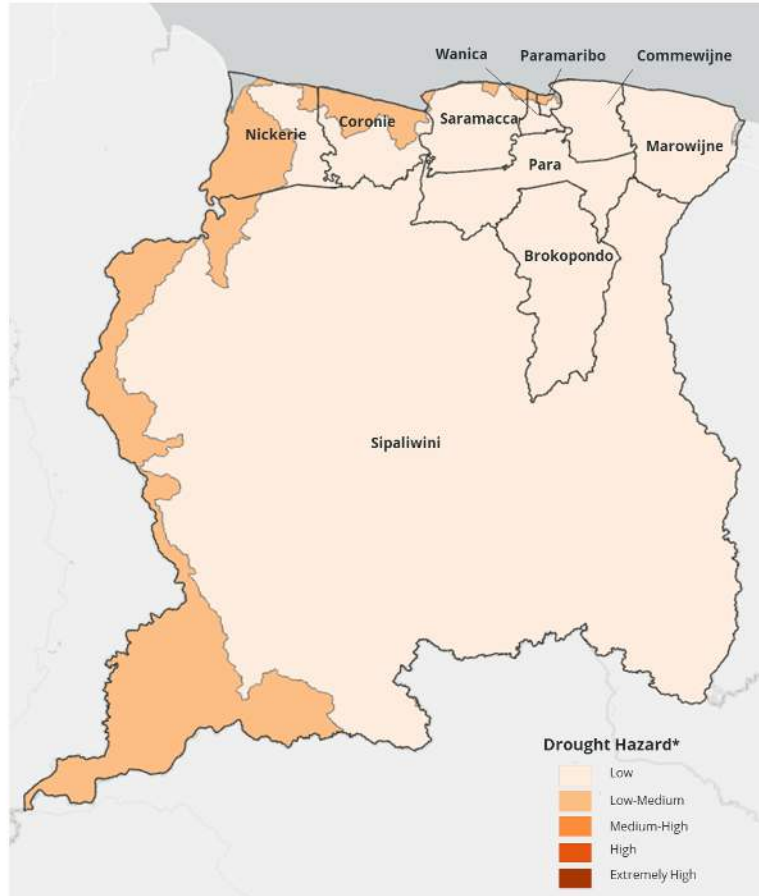
**70 (95%)**

Schools & Colleges

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# Suriname: Drought Hazard Exposure



## POTENTIAL POPULATION EXPOSURE



**52,437 (9%)**  
People exposed to drought (low-medium)

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**17,394 (6%)**  
Buildings exposed to drought (low-medium)

## FOOD INSECURITY & FOOD INFLATION



**41.1%**  
Prevalence of Moderate to Severe Food Insecurity, 2022 (FAO)



**+9%**  
Food Inflation, May 2024



**0.190**  
Food Export to Import Ratio, 2022

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED



**1 (2%)**  
Hospitals & Clinics



**2 (3%)**  
Schools & Colleges



**<1 km² (<1%)**  
Cropland

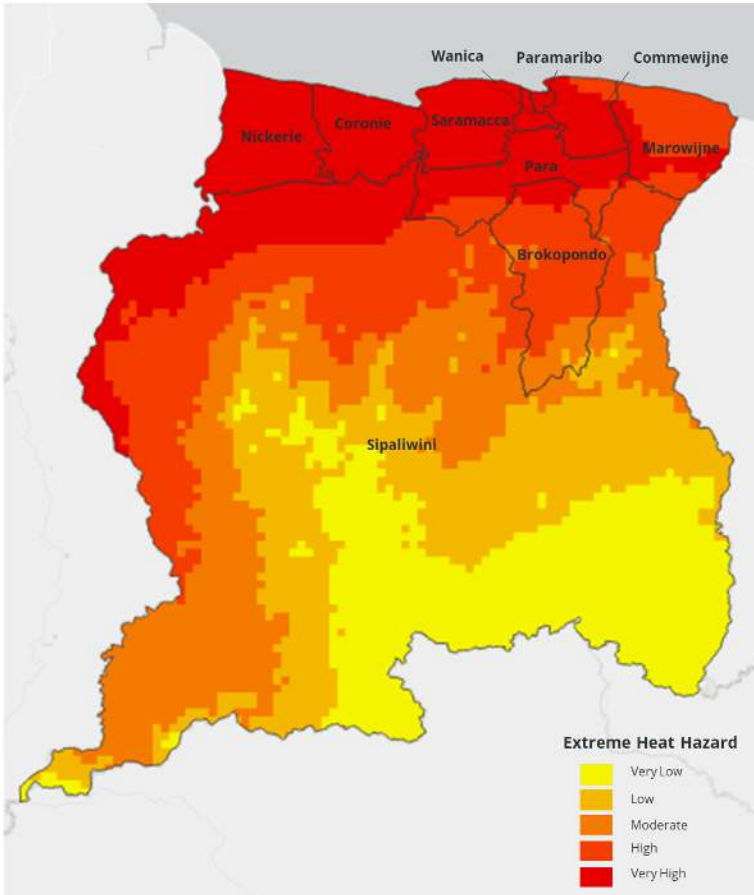
\* Hazard zone is based on World Resource Institute's global drought risk analysis and may not capture localized drought events. Per in-country stakeholder feedback, we include this map in the assessment as the best available data at the time of analysis, with a national recommendation to develop country-specific drought hazard maps.

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# Suriname: Extreme Heat Hazard Exposure



[VIEW IN DISASTER-AWARE](#)



## POTENTIAL POPULATION EXPOSURE



**564,092 (96%)**

People exposed to extreme heat (high and very high)

## POTENTIAL BUILT ENVIRONMENT EXPOSURE



**264,230 (94%)**

Buildings exposed to extreme heat (high and very high)

## CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED



**51 (85%)**

Hospitals & Clinics



**70 (95%)**

Schools & Colleges



**28 (53%)**

Airports & Landing Strips



**6 (100%)**

Seaports



**10 (100%)**

Fire Stations



**25 (100%)**

Police Stations



**12 (100%)**

Power Plants



**621 km² (99%)**

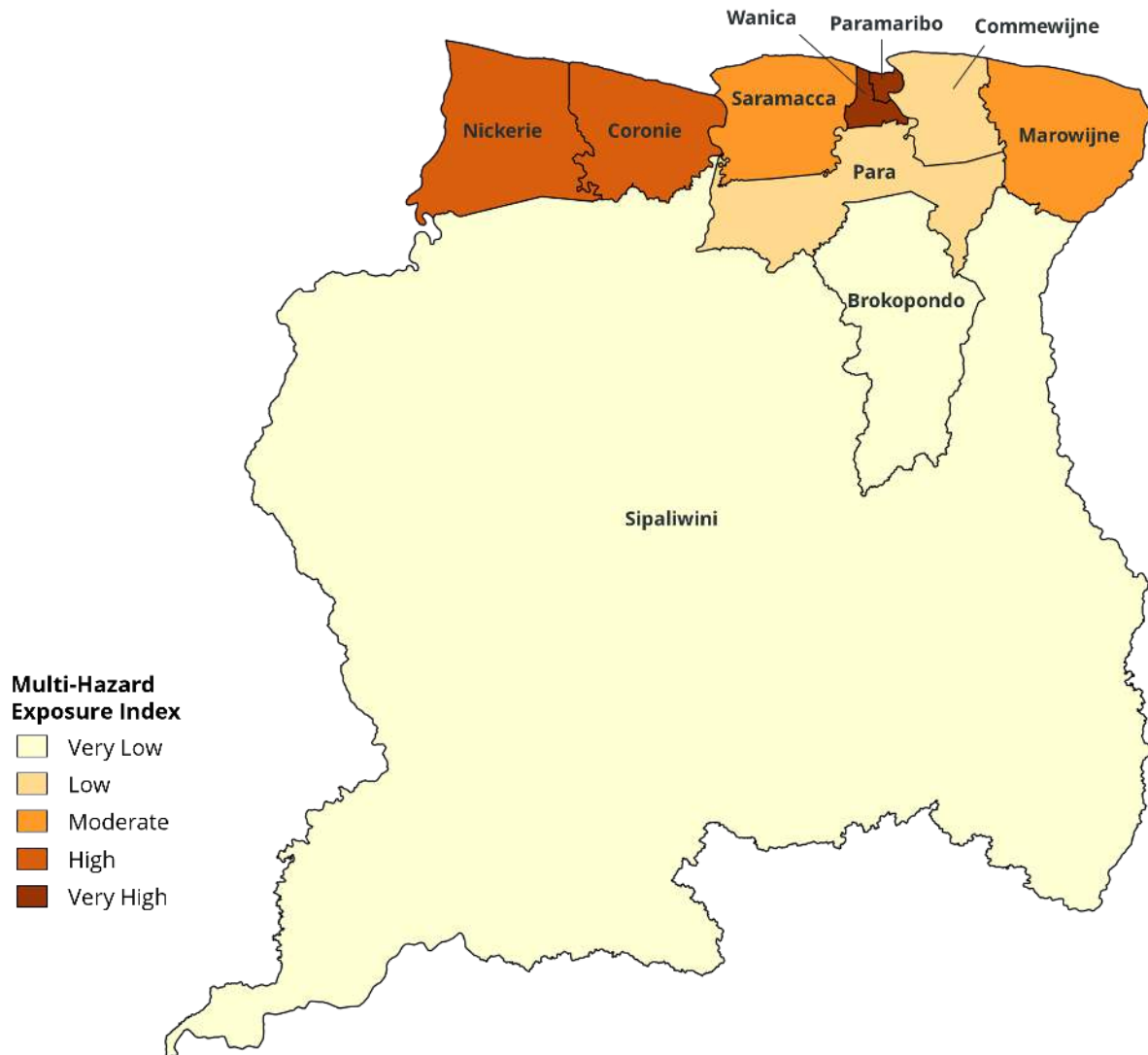
Cropland

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## MULTI-HAZARD EXPOSURE BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Paramaribo	0.730
	2	Wanica	0.634
HIGH	3	Nickerie	0.609
	4	Coronie	0.345
MODERATE	5	Saramacca	0.309
	6	Marowijne	0.281
LOW	7	Commewijne	0.276
	8	Para	0.136
VERY LOW	9	Brokopondo	0.069
	10	Sipaliwini	0.039







**THE RVA**

# **VULNERABILITY**

# VULNERABILITY

Vulnerability measures the physical, environmental, social, and economic conditions and processes that increase susceptibility of communities and systems to the damaging effects of hazards. Vulnerability data is designed to capture the multi-dimensional nature of poverty, the inequality in access to resources due to gender, and the ability of a given area to adequately support the population. In coordination with stakeholders, the following indicators were selected to measure vulnerability subcomponents in the country. Breaking down each vulnerability subcomponent to the indicator level allows users to identify the key drivers of vulnerability to support risk reduction efforts and policy decisions.

## Global Vulnerability Rank (PDC Global RVA)

**100** OUT OF 204 COUNTRIES / TERRITORIES ASSESSED

## Vulnerability within Latin America and the Caribbean

**18** OUT OF 38 COUNTRIES / TERRITORIES ASSESSED

### VULNERABILITY SUBCOMPONENTS AND INDICATORS



#### Children's Vulnerability

- Child Labor Participation
- Childhood Disability
- Children Living with Parents
- Early Childhood Development
- Household Support for Childhood Learning



#### Economic Constraints

- Multidimensional Poverty Index
- Poorest Wealth Quintile
- Wealth Quintile Skew



#### Education Vulnerability

- Childhood Literacy
- Lower Secondary School Completion Rate
- Out of School Rate



#### Gender Vulnerability

- Adolescent Birth Rate
- Child Marriage (Female)
- Mass Media Exposure Gender Parity



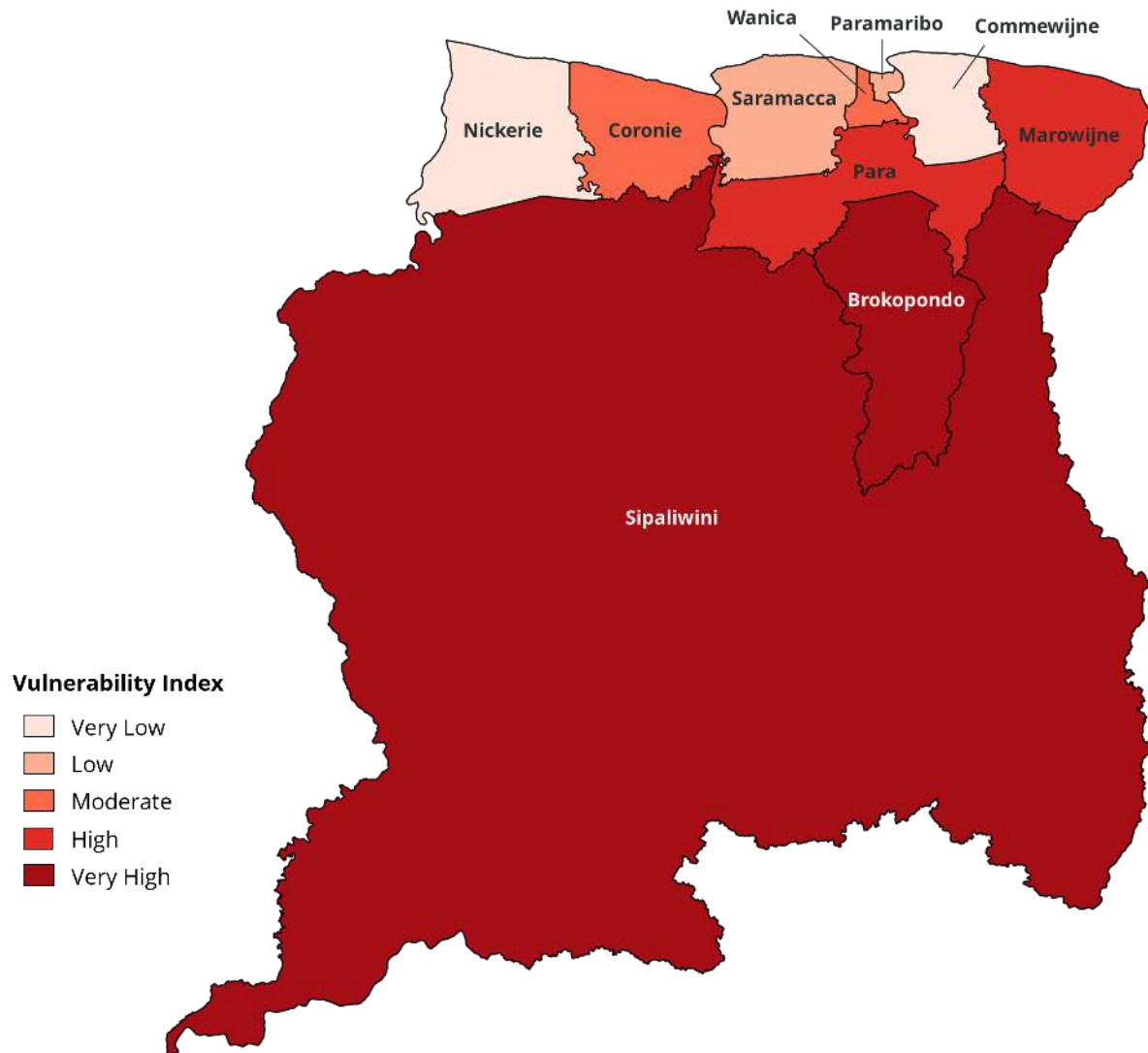
#### Population Pressures

- Elderly Population (age 60 and older)
- Children Under Age 5
- Net Migration
- Population Flux

## VULNERABILITY BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Sipaliwini	0.880
	2	Brokopondo	0.603
HIGH	3	Marowijne	0.549
	4	Para	0.455
MODERATE	5	Coronie	0.325
	6	Wanica	0.235
LOW	7	Paramaribo	0.233
	8	Saramacca	0.231
VERY LOW	9	Nickerie	0.132
	10	Commewijne	0.119







**THE RVA**

# **COPING CAPACITY**

# COPING CAPACITY

Coping Capacity measures the systems, means, and abilities of people and societies to absorb and respond to disruptions in normal function.

## Global Coping Capacity Rank (PDC Global RVA)

**101** OUT OF 198 COUNTRIES /  
TERRITORIES ASSESSED

## Coping Capacity within Latin America and the Caribbean

**22** OUT OF 33 COUNTRIES /  
TERRITORIES ASSESSED

### COPING CAPACITY SUBCOMPONENTS AND INDICATORS



#### Public Health Capacity

- Drinking Water E. Coli Contamination
- Measles Vaccination Rate
- Unsafe Sanitation Practices
- Physicians per 10,000 Persons
- Clinics per 10,000 Persons
- Hospital Bed Density



#### Standard of Living

- Clean Fuels for Cooking and Lighting
- Households with Finished Exterior Walls
- Rural Access Index
- Population that Does Not Share Toilet Facilities



#### Energy and Technology Capacity

- Computer Access
- Electricity Access



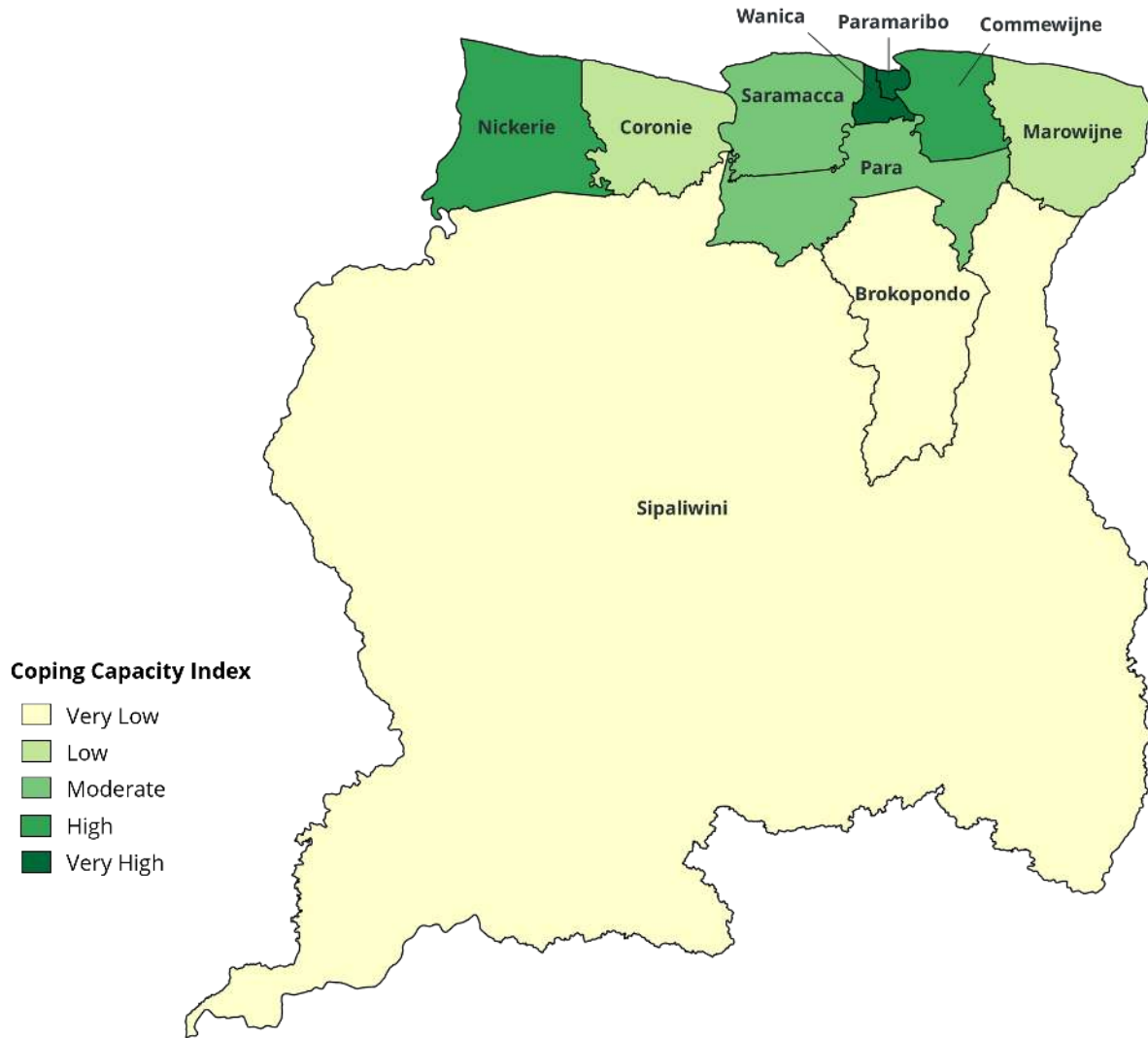
#### Infrastructure Capacity

- Average Distance to Airport
- Average Distance to EOCs
- Average Distance to Fire Stations
- Average Distance to Hospitals
- Average Distance to Police Station
- Average Distance to Port
- Average Distance to School
- Average Distance to Telecommunications



## COPING CAPACITY BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Paramaribo	0.878
	2	Wanica	0.797
HIGH	3	Nickerie	0.761
	4	Commewijne	0.725
MODERATE	5	Saramacca	0.689
	6	Para	0.618
LOW	7	Coronie	0.590
	8	Marowijne	0.555
VERY LOW	9	Brokopondo	0.324
	10	Sipaliwini	0.016





**THE RVA**

# **RESILIENCE**



# RESILIENCE

Resilience in Suriname was calculated by averaging Vulnerability and Coping Capacity. Results are displayed in forthcoming pages, while the main drivers of resilience with detailed recommendations are provided in the detailed subnational profiles.

## Global Resilience Rank (PDC Global RVA)

**97** OUT OF 194 COUNTRIES /  
TERRITORIES ASSESSED

## Resilience Rank within Latin America and the Caribbean

**22** OUT OF 33 COUNTRIES /  
TERRITORIES ASSESSED

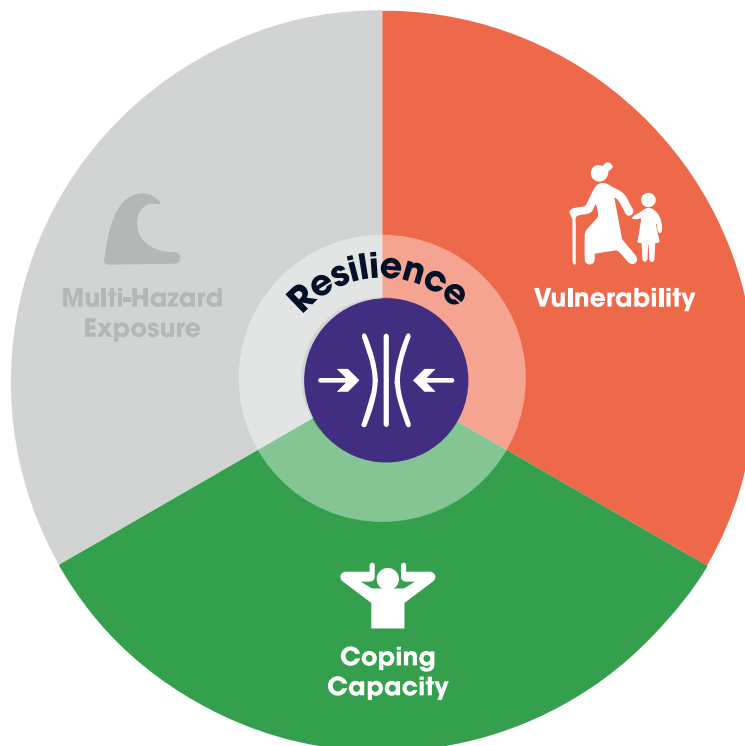
### RESILIENCE COMPONENTS



Vulnerability

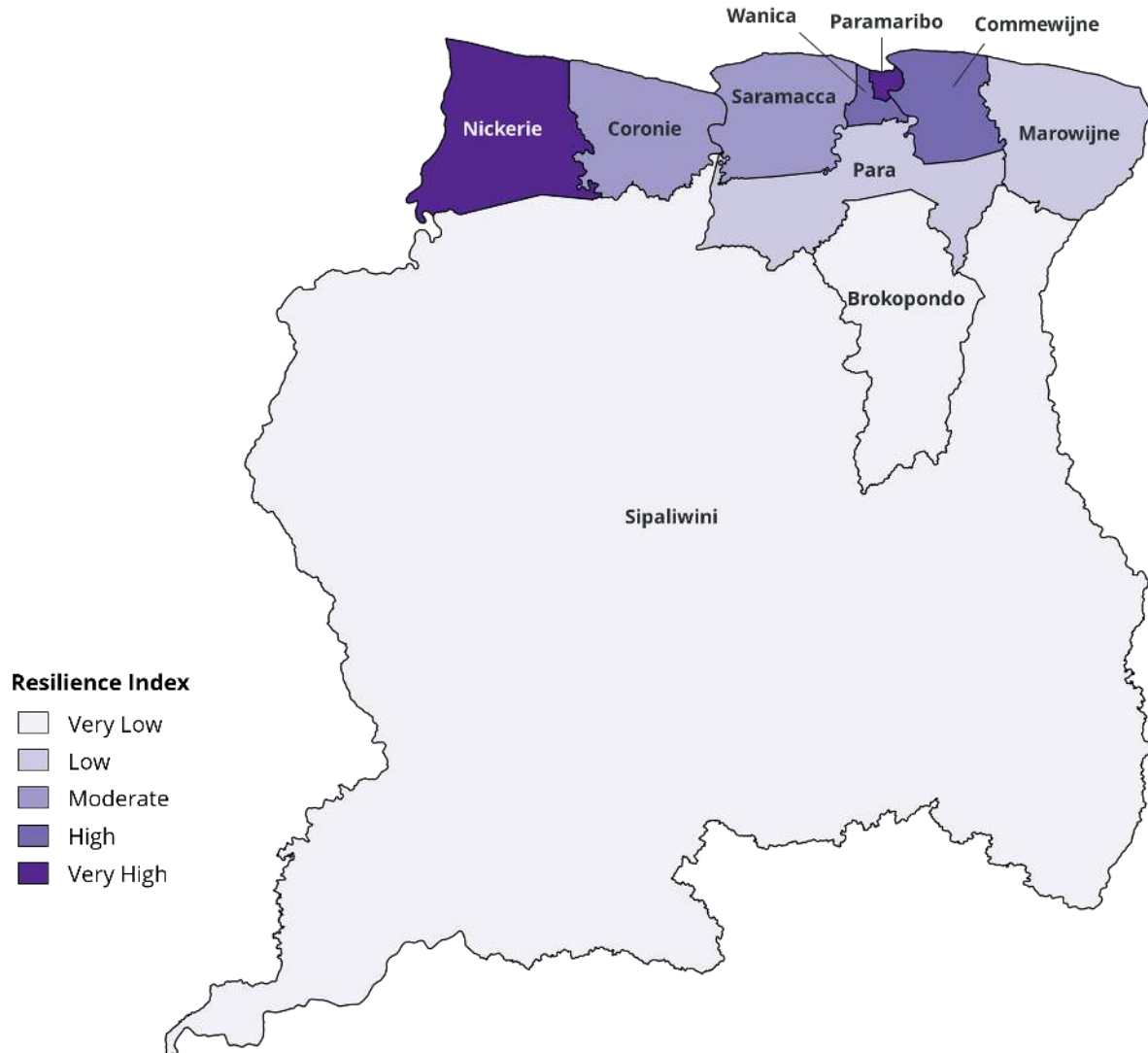


Coping Capacity



## RESILIENCE BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Paramaribo	0.822
	2	Nickerie	0.815
HIGH	3	Commewijne	0.803
	4	Wanica	0.781
MODERATE	5	Saramacca	0.729
	6	Coronie	0.633
LOW	7	Para	0.582
	8	Marowijne	0.503
VERY LOW	9	Brokopondo	0.360
	10	Sipaliwini	0.068







**THE RVA**

# **MULTI-HAZARD RISK**

# MULTI-HAZARD RISK

Multi-hazard risk combines hazard exposure, susceptibility to impact, and the relative ability to absorb negative disaster impacts to provide a collective measure of how each district may be affected by hazards and disasters as a whole over time. Analyzing risk information throughout all phases of disaster management – mitigation, preparedness, response, recovery – improves operations and promotes efficient resource allocation.

Multi-hazard risk was calculated by averaging multi-hazard exposure, vulnerability, and coping capacity. Results are displayed below, while additional detailed analysis of risk is provided in the subnational profiles report.

## Global Multi-Hazard Risk Rank (PDC Global RVA)

**106** OUT OF 194 COUNTRIES /  
TERRITORIES ASSESSED

## Multi-Hazard Risk Rank within Latin America and the Caribbean

**26** OUT OF 33 COUNTRIES /  
TERRITORIES ASSESSED

### MULTI-HAZARD RISK COMPONENTS



**Multi-Hazard Exposure**



**Vulnerability**

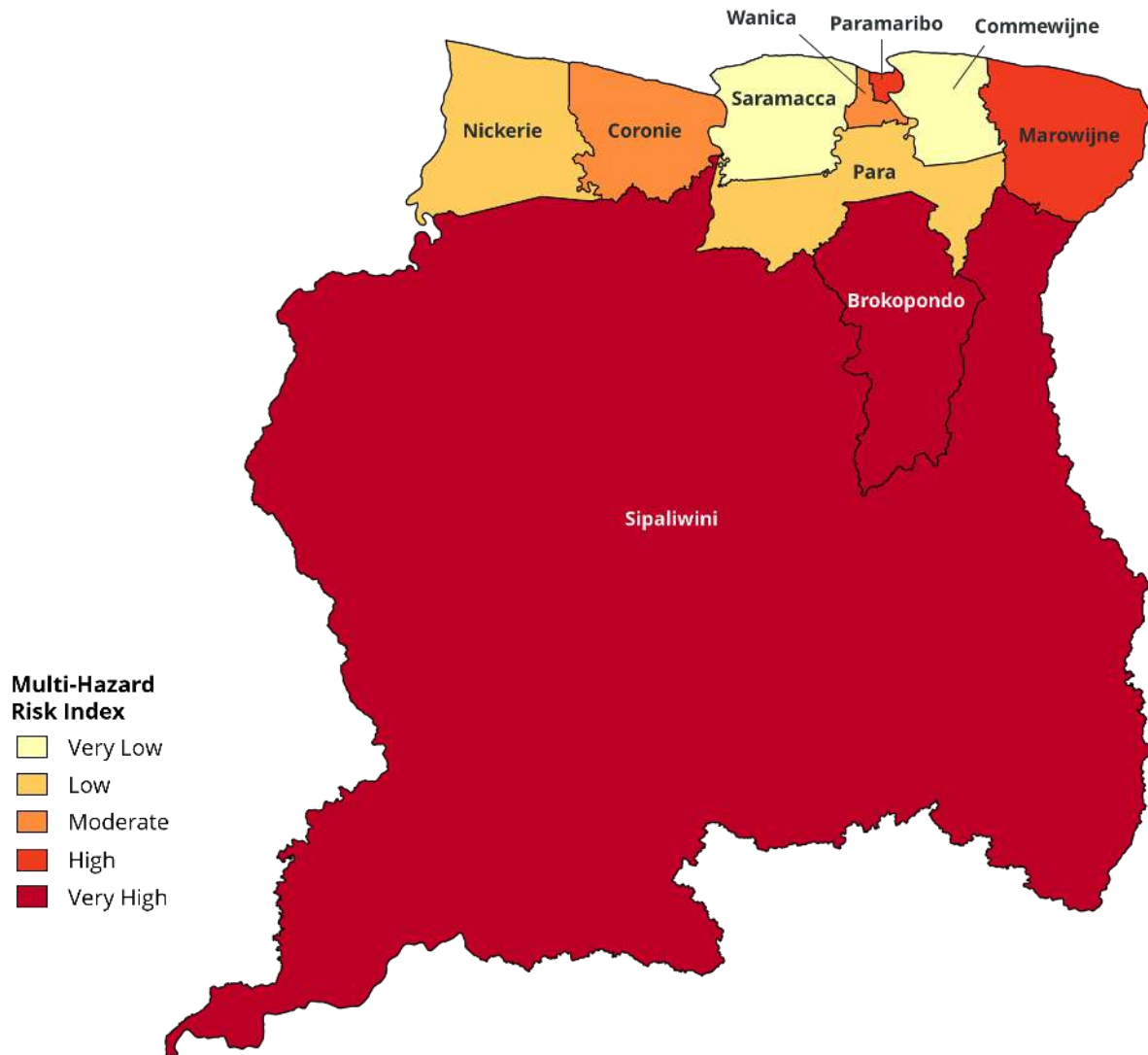


**Coping Capacity**

## MULTI-HAZARD RISK BY DISTRICT

	RANK	DISTRICT	INDEX SCORE
VERY HIGH	1	Sipaliwini	0.634
	2	Brokopondo	0.449
HIGH	3	Marowijne	0.425
	4	Paramaribo	0.362
MODERATE	5	Coronie	0.360
	6	Wanica	0.357
LOW	7	Nickerie	0.327
	8	Para	0.324
VERY LOW	9	Saramacca	0.284
	10	Commewijne	0.223





WWW.KBS.SR

BRANDWEER

MAN

07 11

THE DMA

# DISASTER MANAGEMENT ANALYSIS

SUMMARY OF FINDINGS

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# DISASTER MANAGEMENT ANALYSIS

Provided in this section are the results of the Disaster Management Analysis (DMA) conducted as part of the Suriname National Disaster Baseline Assessment. The recommendations presented as part of this analysis support opportunities to enable more effective prioritization of risk-reduction and resilience-building initiatives and investments.

Considering a spectrum of operational achievements and challenges, the DMA examined six core disaster management themes: Enabling Environment; Institutional Arrangements; Disaster Governance Mechanisms; Capabilities and Resources; Capacity Development; and Communication and Information Management.





# DISASTER MANAGEMENT ANALYSIS RESULTS

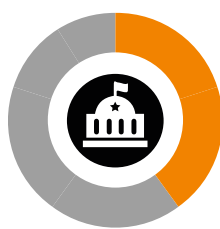
## STATUS

Limited or No Capacity



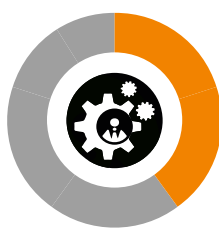
Advanced Capacity

## DISASTER MANAGEMENT ANALYSIS THEME AND SUBTHEMES



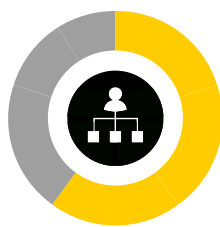
### A. Enabling Environment

- Legal Instruments
- Financial Resources
- Strategies
- Public Confidence and Political Support
- Attitudes and Experience



### D. Capabilities and Resources

- Dedicated Facilities and Equipment
- Human Resources
- Inventory of Commodities and Supplies
- Targeted Functional Capabilities



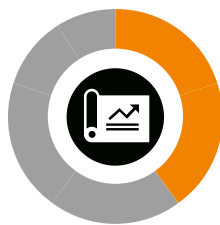
### B. Institutional Arrangements

- Organizational Structures
- Leadership Arrangements
- Mechanisms for Stakeholder Engagement



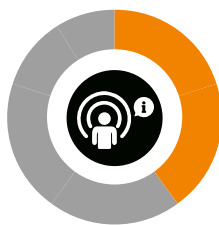
### E. Capacity Development

- Capacity Development Plans and Strategies
- Training and Education Programs and Facilities
- Monitoring and Evaluation Processes and Systems



### C. Disaster Governance Mechanisms

- Plans and Processes
- Command, Control, and Coordination Systems
- Emergency Operations Centers



### F. Communication and Information Management

- Hazard and Risk Analysis Systems
- Monitoring and Notifications
- Disaster Assessment
- Information Collection, Management, and Distribution
- Media and Public Affairs

Limited or No Capacity

Early Capacity Development

Achievement with Significant Limitation

Substantial Progress with Some Limitation

Advanced Capacity

---

# DISASTER MANAGEMENT ANALYSIS RESULTS

Suriname has progressively advanced its disaster management capabilities on several fronts and with significant improvement in disaster risk reduction in line with its international commitments and priorities. This is evident in the Multi-Annual Development plan 2022-2026 which calls for reducing the number of those affected by disasters, especially within vulnerable populations, and limiting disaster-related economic losses.

To that end, the Government of Suriname has forged partnerships with international and regional organizations to strengthen Suriname's resilience through disaster risk reduction and management projects. Projects such as the World Bank partnership for rehabilitation of the Saramacca Canal, and participation in the Inter-American Development Bank's Emerging and Sustainable Cities Program have bolstered Suriname's infrastructure. In addition, through partnership with the European Union, the country has dedicated funding to pursue protection for the Agriculture, Land, and Forestry sectors and has made progress to develop a comprehensive National Strategy for Disaster Risk Reduction (Country Work Programme).

Additionally, Suriname recognizes the growing need to address significant natural hazards and the impacts of climate change. The Environmental Framework Act 2020 (the Act) implemented protective legislation, monitoring measures, and an overall commitment by the Government of Suriname to addressing climate change adaptation. The framework established the National Environmental Authority and the National Institute for Environment and Development as the authoritative bodies to ensure successful implementation and execution of mandates codified in the Act. The National Environmental Authority was officially launched in summer 2024. The Act will result in building disaster-resilient infrastructure, decreasing land-based pollution, rehabilitating ecosystems, and securing economic and financial investments within Suriname.

The Government of Suriname has also taken steps to strengthen its disaster management system by pursuing operations and logistics planning projects and training opportunities with the assistance of its international partners. Suriname could further bolster their disaster risk reduction measures through continued partnerships and focused training and exercising on existing plans to meet the needs of today's Suriname.

The NCCR, under the Ministry of Defense, is well respected and has strong leadership. The NCCR maintains close relationships with its response partners and is committed to protecting the people of Suriname. However, NCCR faces notable challenges in effectively providing disaster operational and logistical support to the districts due to the lack of an approved Disaster Management Law and

chronic lack of financing. An effective Law that codifies disaster management authorities and roles/responsibilities would elevate NCCR beyond a posture of reactive disaster management and assist it to implement more effective planning, preparedness, and mitigation initiatives. Thus, advancing Suriname's disaster management capacity and capability while collectively reflecting the nation's dedication to fostering resilience.

This study is designed to establish Suriname's baseline disaster management preparedness levels presented in six interconnected themes, and to assist Suriname's ongoing efforts to prioritize its resources and advance its disaster management capabilities. It is a step towards meaningfully tracking progress while setting clear and coherent objectives aligned with Suriname's commitment to Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals (SDGs), the Paris Agreement for Climate Change, and the Caribbean Disaster Emergency Management Agency (CDEMA) Comprehensive Disaster Management (CDM) Strategy and Framework.



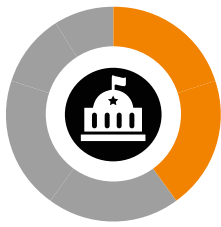






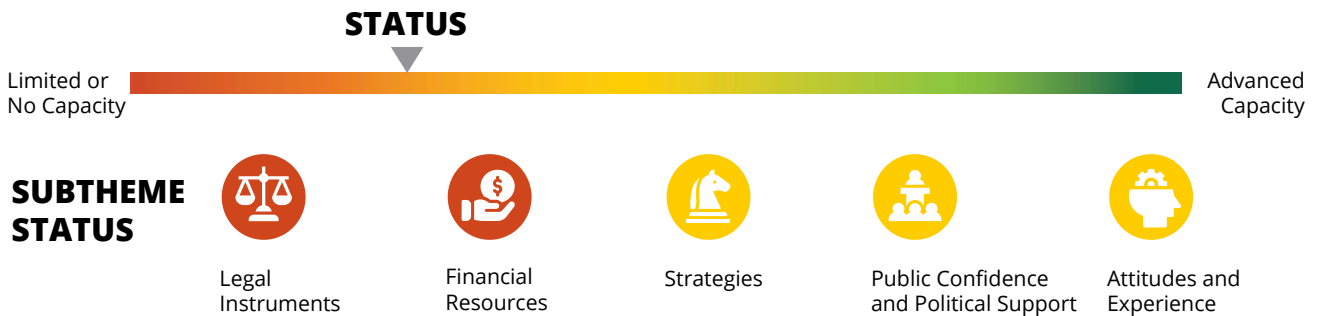
**THE DMA**

# **ENABLING ENVIRONMENT**



# ENABLING ENVIRONMENT

Findings indicate Suriname’s Enabling Environment shows early capacity development.



Suriname shows early capacity development to support increasing the capacity of the disaster management structures, authorities, processes, and capabilities enabled by their legal, institutional, financial, and social instruments. These rules, laws, policies, and other instruments allow capacity to develop and to achieve an effective risk reduction vision. Characterization of an enabling environment covers a range of issues from the existence and applicability of legislation to disaster management stakeholders’ attitudes and experience. The DMA analyzed the following sub-themes that characterize the enabling environment of Suriname: Legal Instruments; Financial Resources; Strategies; Public Confidence and Political Support; and Attitudes and Experiences.



# ENABLING ENVIRONMENT



## LEGAL INSTRUMENTS

### FINDINGS

The National Coordination Center for Disaster Relief (NCCR) has a well-established disaster response mechanism that can quickly call upon government, non-government, and private sector establishments for assistance during a national disaster. The organization commands considerable respect from the public.

However, the NCCR faces significant challenges in fulfilling its mission requirements due to bureaucratic hinderances in governing practices relating to disaster management, due in part to the fact that the Draft Disaster Management Law (Draft DM Law) has yet to be ratified by the National Assembly).

The absence of a legal mandate and subsequent regulations at the national political level inhibits the ability of NCCR to effectively establish national planning and response capabilities amongst ministerial and public service organizations.

A comprehensive Draft DM Law, in alignment with the local Regional Bodies Act, would secure an effective disaster risk management environment provide the necessary authorities and protections to NCCR and all DM stakeholders for improved coordination and collaboration.

### RECOMMENDATIONS

To support NCCR in meeting mission requirements, the following activities are recommended:

- ✔ Conduct a multistakeholder audit of the Draft DM Law to address bureaucratic complexities and better operationalize DM structures with a focus on improved delivery of service.
- ✔ Establish legal mandate to sanction NCCR's implementation of DM objectives and a more effective incident response with national and district partners.
  - o Clearly outline roles, responsibilities, institutional arrangements, and authorities in relation to the NCCR, Ministries, Armed Forces, District Commissioners, and other pertinent DM partners.
- ✔ Ensure NCCR has the necessary jurisdiction to enforce minimum compliance standards thereby promoting DM, response, and recovery principles across the whole of society.
- ✔ Prioritize the movement of the Draft DM Law through the National Assembly and the necessary legislative process.

### SEDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, E, F, G

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l)

#### SDGs

3, 9, 11, 13, 14, 15, 16, 17

#### Paris Agreement

7.1, 8.1

#### CDEMA CDM Priority Areas

1, 2, 3, 4

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# ENABLING ENVIRONMENT



## FINANCIAL RESOURCES

### FINDINGS

The 2023 budget (draft) allocates funds to an Emergency Reserve Contingency Fund dedicated to general contingencies impacting general and government expenses with a special provision for Disaster Management and Mitigation. During disaster response, the National Coordination Center for Disaster Relief (NCCR) relies on funding through donations and unspecified government support.

The absence of dedicated funds/budget is a major limiting factor in NCCR's ability to pursue activities in the Disaster Risk Management cycle (Mitigation, Preparedness, Response, Recovery) and operational response capabilities.

The creation of a consistent national disaster risk management fund would provide the financial resources and a budgetary process that would allow NCCR to engage more effectively in future planning efforts, capacity development, and timely disaster response operations. This fund should also include provisions for national and local level initiatives addressing both disaster risk reduction (DRR) and climate change adaptation (CCA).

### RECOMMENDATIONS

To support Suriname in meeting essential disaster management funding requirements, the following activities are recommended:

- ✓ Advocate for an increase in the base funding for NCCR to adequately support the growing demand for disaster risk management services.
- ✓ Establish a national disaster risk management fund (NDRMF) in the Draft Disaster Management Law. The NDRMF should include provisions that:
  - Incorporate probable maximum losses and average annual loss considerations in the budgeting parameters.
  - Allocate funds towards mitigation, prevention, and preparedness efforts at both national and sub-national levels.
  - Expand resources for programmatic, administrative, and operational needs.
  - Invest in personnel training, education, and research and development.
  - Implement language that ensures the fund is solely used for disaster-related purposes.
  - Consider drawing upon the Eastern Caribbean Island nations as a resource and example for implementation of similar funding strategies.
  - Include considerations for DRR and CCA.

### SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, F

#### Guiding Principles

(a), (b), (c), (e), (f), (g), (h), (i), (j), (k), (m)

#### SDGs

11, 13, 17

#### Paris Agreement Articles

7.1, 8.1

#### CDEMA CDM Priority Areas

1, 2, 3 (3.1, 3.2), 4

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# ENABLING ENVIRONMENT



## FINANCIAL RESOURCES

### FINDINGS

A pressing challenge in disaster management is securing the necessary funding and avenues to implement effective disaster management from the national to the local level ensuring the nation's resilience. It is important that funding is prioritized and allocated to meet the disaster management (DM) needs of the National Coordination Center for Disaster Relief (NCCR) and local District Commissioners within Suriname.

Currently, local level and national government disaster management activities are underfunded. In directing focused and adequate funding to support DM capabilities, the country is investing in overall enhanced capacity building.

In addition, it would be beneficial for funding distribution protocols to be developed that include access to timely communication and funding coordination mechanisms, cross-collaboration among national and district-level partners and promoting community resilience-building activities.

### RECOMMENDATIONS

To support NCCR implementing financial resilience measures and reinforcing disaster risk reduction actions, the following activities are recommended:

- ✔ Coordinate with the Ministry of Finance to protect the nation through implementation of a financial management strategy that focuses on proactive (instead of reactive) funding structures.
- ✔ Establish a framework for a comprehensive financial management strategy that allows for financing in the event of a disaster and outlines mechanisms for:
  - o budget planning.
  - o reserve funding allocation.
  - o risk transfer strategies.
  - o execution protocols in times of disaster.
- ✔ Engage ministerial stakeholders and ensure high level support from the President's Office for endorsement of an effective financial strategy and consistent funding.
- ✔ Prioritize consistent funding allocations to NCCR within the Draft DM Law.

### SEDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, E

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

#### SDGs

11, 13

#### Paris Agreement Articles

7.1, 8.1

#### CDEMA CDM Priority Areas

1, 2 (2.2, 2.3), 3, 4

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity



# ENABLING ENVIRONMENT



## STRATEGIES

### FINDINGS

Memorandums of Understanding (MOUs) are essential to secure limited assets and resources vital for operational capacity and comprehensive disaster preparedness, response, and recovery efforts. In times of emergency or disaster a District Commissioner can request assistance from other district authorities; however, there are no formal mutual aid agreements governing such assistance.

The National Coordination Centre for Disaster Relief (NCCR) would benefit by securing focused MOUs in critical areas.

Securing MOUs would further provide NCCR and District Commissioners with a framework to allocate and optimize resources, strategically directing efforts and deploying assets from key stakeholders to where they are most needed. This would result in enhancing collaboration and coordination across sectors for effective disaster management.

## RECOMMENDATIONS

**To support NCCR and District Commissioners in fulfilling their statutory duties, the following activities are recommended:**

- ✓ Encourage and assist District Commissioners to formalize MOUs with neighboring districts, CSOs, NGOs, Academic, and Private Sectors.
- ✓ Secure MOUs within NCCR for a systematic approach to securing assets and resources and ensure a coordinated response within critical areas:
  - Commodities
  - Medical services and supplies
  - Transportation services (Land, Air, Water)
  - Communication/Information
- ✓ Plans, policies, and protocols need to be updated to reflect the defined roles/responsibilities/resources as outlined within the MOUs

## SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

### Priorities for Action

1, 2, 4

### Global Targets

A, B, C, D

### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j)

### SDGs

11, 16

### CDEMA CDM Priority Areas

1 (1.3, 1.4, 1.5), 3 (3.2), 4 (4.1, 4.2, 4.4)

Limited or No Capacity

Early Capacity Development

Achievement with Significant Limitation

Substantial Progress with Some Limitation

Advanced Capacity

# ENABLING ENVIRONMENT



## STRATEGIES

### FINDINGS

Through direct initiatives and programs, the National Coordination Center for Disaster Relief (NCCR) has made progress in strengthening their capacity to prepare for, respond to, and recover from disasters. To further advance these initiatives, Suriname would benefit from a methodical assessment and review of disaster management (DM) and disaster risk reduction (DRR) legislation, policies, and plans.

The NCCR would benefit from having more resources directed to the oversight and promotion of DR and DRR capabilities to promote the implementation of essential strategies and planning enhancement necessary to augment existing capacity.

This will lead to heightened coordination efficiency, more streamlined initiatives, and optimized asset allocation to address DR and DRR capacity and resource requisites.

### RECOMMENDATIONS

**To support NCCR in meeting mission requirements, the following activities are recommended:**

- ✔ Formulate and disseminate DM and DRR development plans and/or strategies to drive initiatives towards advanced capacity.
  - Ensure linkage to key stakeholders such as the Ministry of Spatial Planning and Environment, National Planning Office, Suriname Red Cross, and volunteers.
- ✔ Promote advanced oversight of coordination and support of capacity development efforts for DM and DRR.
  - Support key sectors and requirement on incorporation of DRR into plan development, implementation, and maintenance.
  - Include mechanisms for public engagement on national and local DRR strategies.
  - Engage vulnerable groups and indigenous populations in DM plans and strategies with focused efforts on response/recovery, evacuation, and shelter considerations.
- ✔ Adopt a standardized process and timeline for the review of DM and DRR legislation at the national level.
  - Ensure that related district level ordinances align with updates and revisions.

### SEDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 4

#### Global Targets

A, B, C, D

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

#### SDGs

6, 7, 11, 13, 14, 15, 16

#### Paris Agreement Articles

7.1, 8.1

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2 (2.2, 2.3, 2.4), 3 (3.1, 3.2), 4 (4.1, 4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# ENABLING ENVIRONMENT

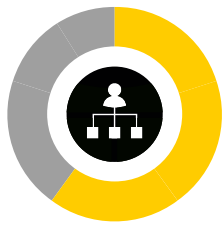






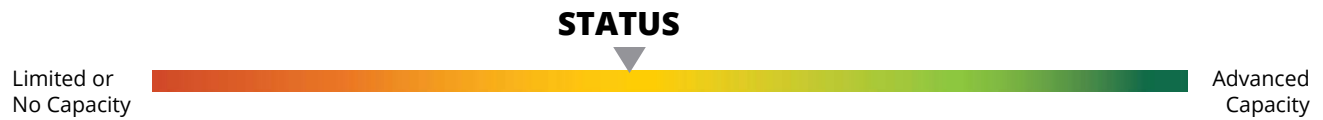
**THE DMA**

# **INSTITUTIONAL ARRANGEMENTS**



# INSTITUTIONAL ARRANGEMENTS

Findings indicate Suriname’s Institutional Arrangements have made achievements with significant limitations.



**SUBTHEME STATUS**



Organizational Structures



Leadership Arrangements



Mechanisms for Stakeholder Engagement

The organizational and institutional structures through which disaster management capacity forms are indicators of Suriname’s Institutional Arrangements. By examining the organization and composition of diverse agencies and individuals that constitute a nation’s disaster management capacity—detailing the relationships and collaboration between them — tangible opportunities for increased effectiveness are often revealed. Suriname has shown progress within the organizational and institutional structures, leadership, and their engagement with disaster management stakeholders.

# INSTITUTIONAL ARRANGEMENTS



## Organizational Structures

### FINDINGS

The National Coordination Center for Disaster Relief (NCCR), is the national coordinating disaster management (DM) agency for Suriname. Participation efforts that effectively harnesses the strengths of preparedness, response, and recovery amongst government and stakeholders are inconsistent and *ad hoc*.

The role of NCCR is to effectively leverage and coordinate DM efforts to support the districts in the event of an incident. It would be beneficial for NCCR, consistent with operational capacity, to continue building upon connections with existing partners and reach out to additional key stakeholders to foster a greater sense of collaboration among the DM community. These relationships would forge a more organized and systematic approach to disaster preparedness, response, and recovery throughout the nation.

### RECOMMENDATIONS

To better support NCCR in meeting mission requirements, the following activities are recommended:

- ✔ Establish a coordination framework, led by NCCR, consistent with existing operational capacity including:
  - Ministries
  - Suriname Red Cross
  - National Army
  - NGOs/Private partners
  - Academia
  - Indigenous and maroon groups (Association of Traditional Authorities of the Saamaka Tribe, Association of Indigenous Village leaders)
  - Internationally sponsored groups such as the Friends of Suriname and Organization of Hindu Media (OHM) Suriname
- ✔ Outline specific activities and identify resource capabilities of key stakeholders and organizations within the coordination framework.
- ✔ Establish partnerships through joint working groups and/or committees to engage in pre-planning efforts, activities and information sharing.
  - Consider drawing upon the National Health Sector Disaster Committee (SDG) as a resource for a successful planning model.

### SEDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 4

#### Global Targets

A, C, D

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (h), (i)

#### SDGs

11, 16

#### CDEMA CDM Priority Areas

1 (1.2, 1.3, 1.4), 3 (3.1, 3.2), 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity



# INSTITUTIONAL ARRANGEMENTS

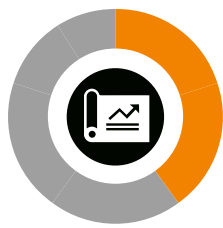




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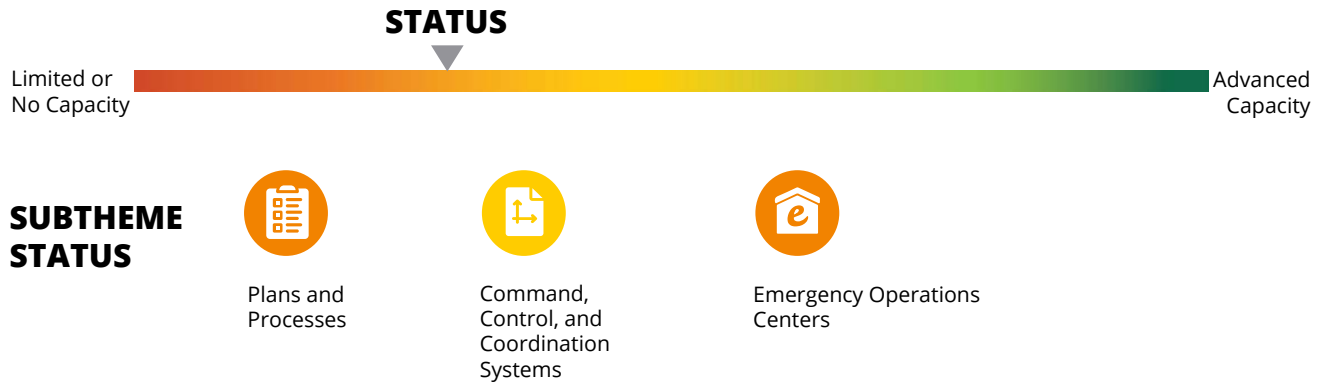
**THE DMA**

# **DISASTER GOVERNANCE MECHANISMS**



# DISASTER GOVERNANCE MECHANISMS

Findings indicate Suriname’s Disaster Governance Mechanisms show early capacity development.



Disaster management efforts are most effective when guided by standardized, formalized systems and procedures that dictate how and by whom activities are conducted. The effectiveness of all disaster management phases, including disaster preparedness, hazard mitigation, response, and recovery, is dependent on the establishment and documentation of such mechanisms. The DMA analyzed the following sub-themes that characterize the Disaster Governance Mechanisms of Suriname: Plans and Processes; Command, Control, and Coordination Systems; and Emergency Operations Centers.



# DISASTER GOVERNANCE MECHANISMS



## Plans and Processes

### FINDINGS

The Government of Suriname, the Ministries, and the National Coordination Center for Disaster Relief (NCCR) would benefit from formally integrating succession planning into COOP/COG plans and policies.

It would benefit all stakeholders in Suriname for NCCR to provide leadership, planning templates and training resources to promote COG/COOP planning among government and private sector enterprises.

Additionally, harmonizing COG/COOP efforts is essential to ensure the provision of critical services, maintain systematic oversight of vital personnel and infrastructure, and uphold the objectives and principles of disaster management during disasters.

### RECOMMENDATIONS

To support NCCR in meeting its mission requirements, the following activities are recommended:

- ✔ Develop and disseminate a standardized template for COG/COOP Plans, facilitating consistency and effective planning across all of government, as well as private sectors.
- ✔ Create mechanisms for sharing critical information, data, and resources to include access to real-time data, such as weather forecasts and disaster impact assessments, which can be crucial for decision-making during a crisis.
- ✔ Establish and integrate formal memoranda of understanding (MOU) into plans and protocols, outlining roles, responsibilities, and expectations of both government and private sector entities, and ensure inclusion of liabilities and resource allocation.
- ✔ Establish joint COG/COOP training and exercises to ensure alignment with response and recovery procedures and enhance readiness and coordination among stakeholders.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

2, 4

#### Global Targets

A, C, D

#### Guiding Principles

(a), (b), (e), (h),

#### SDGs

11, 16

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3), 2 (2.4), 3 (3.1, 3.2), 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# DISASTER GOVERNANCE MECHANISMS



## PLANS AND PROCESSES

### FINDINGS

Planning initiatives with national and international emergency management partners are producing strategies focused on disaster management (DM), driving the country towards a more resilient nation. Within each of the 10 Districts, the District Commissioners have developed District Response Plans in coordination with the United Nations Development Programme (UNDP). The compilation of the district response plans forms the basis for the overarching proposed National Disaster Response Plan.

The National Disaster Response Plan, led by the National Coordination Center for Disaster Relief (NCCR), should address requirements for a fully operational and coordinated approach to DM. It would be beneficial for NCCR to conduct training and exercising of both the local and national plans to identify specific planning gaps within response and recovery operations, as well as focus on enhancing a coordinated national strategy with limited staffing, resources, and technologies. Prioritizing the finalization of a comprehensive National Disaster Response Plan would further enhance Suriname’s disaster management program within NCCR and the nation’s ability to effectively recover from a disaster.

### RECOMMENDATIONS

To better support the NCCR in meeting its mission requirements, the following activities are recommended:

- ✓ Finalize a National Disaster Response Plan with a focus on activation and response for NCCR to support the districts. Key elements should include:
  - Disaster Communications, Logistics and Operations, Public Information, Training and Exercise support.
  - Include the adopted ICS command structure for declared disasters.
  - Ensure alignment of District and National Response Plans.
  - Relevant recovery functions with a priority on infrastructure, economy, and psychosocial recovery
  - Strategic framework for disaster risk reduction (DRR), Sendai sustainable development goals (SDGs), and climate change adaptation (CCA).
- ✓ Conduct T&E on both the national and local response plans to identify strengths and weaknesses in DM response and recovery.
  - Incorporate lessons learned and after-action reviews into updated plans.
  - Update local and national plans to reflect identified strengths and weaknesses in DM and DRR.

### SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 4

#### Global Targets

A, C, D, F

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (k), (l)

#### SDGs

11, 13 16, 17

#### Paris Agreement Articles

7.1, 8.1

#### CDEMA CDM Priority Areas

1 (1.1, 1.4), 2 (2.2, 2.4), 3 (3.1, 3.2), 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# DISASTER GOVERNANCE MECHANISMS



## PLANS AND PROCESSES

### FINDINGS

It would be beneficial for the National Coordination Center for Disaster Relief (NCCR) to gain Parliamentary approval and authority that would enable NCCR to better support and coordinate overarching national risk reduction and resilience building strategies within Suriname. The current disaster management landscape is inhibiting the ability of NCCR to provide effective coordination of: Suriname’s 2014 Disaster Risk Reduction Document along with the Paramaribo Strategic Flood Risk Assessment 2017, Coastal Resilience Assessment 2017, Nationally Determined Contribution to the Paris Agreement 2020, Suriname National Adaptation Plan 2019-2029, Suriname Multi-Annual Development Plan 2022-2026, and Suriname’s Third National Communication to the United Nations Framework Convention on Climate Change 2023 recommend risk reduction actions within different sectors.

Improved collaboration and coordination would avoid duplication efforts and capitalize on funding and resource opportunities for a more streamlined approach to disaster management (DM).

## RECOMMENDATIONS

To better support the NCCR in meeting its mission requirements, the following activities are recommended:

- ✓ Advocate for Parliamentary approval and authority to the NCCR for DM hazard mitigation and risk reduction initiatives across sectors to avoid duplication of efforts and resources.
- ✓ Create joint working groups for effective national collaboration. Ensure at a minimum inclusion of:
  - Ministries of Finance & Planning; Agriculture, Livestock & Fisheries; Regional Development & Sport; Spatial Planning & the Environment; Land Policy & Forest Management; Natural Resources; Health; Transport, Communication & Tourism.
  - District Commissioners
  - Key public and private DM stakeholders
  - NGOs
  - International partners, as appropriate.
- ✓ Conduct a review of risk reduction plans, projects, and strategies to align priorities with finite resources, and to avoid duplication of efforts.
- ✓ Pursue funding, planning support, and public-private partnerships (as appropriate) for strategically prioritized projects through national and international avenues.

## SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

### Priorities for Action

1, 2, 3, 4

### Global Targets

A, B, C, D, E, F

### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (l), (m)

### SDGs

6, 7, 9, 11, 13, 14, 15, 16, 17

### Paris Agreement Articles

7.1, 8.1

### CDEMA CDM Priority Areas

1 (1.2, 1.3, 1.4), 3 (3.1, 3.2, 3.3), 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity



# DISASTER GOVERNANCE MECHANISMS



## PLANS AND PROCESSES

### FINDINGS

At the District level, EOCs are established at the District Commissioners Office or another location if available at the time of an emergency or disaster.

The National Emergency Operating Center (NEOC) is in a temporary location with limited space and available technology for accommodating necessary disaster response operations.

However, at the National level there is an approved project supported by USSOUTHCOM that will provide a dedicated space for an Emergency Operations Center and warehouse.

Completing the construction of a new NEOC as soon as practical, would provide enhanced national coordination capability and ensure decentralized emergency management capacity for faster disaster response and recovery operations.

### RECOMMENDATIONS

To better support the NCCR and District Commissioners in meeting their mission requirements, the following activities are recommended:

- ✔ Work with USSOUTHCOM to implement the project to build a stand-alone, state-of-art NEOC/warehouse with the capability to communicate with District Commissioners and other response elements, monitor conditions and activities nationwide, and store supplies for 24/7 operations over an extended period.
- ✔ Consider (as appropriate) utilizing the old NEOC as a back-up/alternative facility.
- ✔ Document the NEOC Standard Operating Procedures and create Incident Response Checklists aligned with national response and contingency plans.
- ✔ Consider assisting the districts to obtain dedicated space for EOCs and obtain the necessary equipment and supplies to effectively partner with the NCCR and the Meteorological Service Suriname Alert and Warning services.
  - Include in this assistance the establishment of a NCCR liaison for each district and plans for establishing joint field operations centers, if needed.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

2, 3, 4

#### Global Targets

A, C, D, F

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (h), (i), (j), (k), (l), (m)

#### SDGs

11, 16, 17

#### CDEMA CDM Priority Areas

1 (1.1, 1.3, 1.4), 4 (4.1, 4.2)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

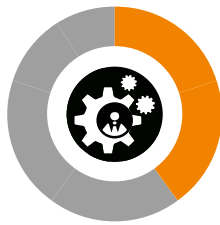
■ Substantial Progress with Some Limitation

■ Advanced Capacity



**THE DMA**

# **CAPABILITIES AND RESOURCES**



# CAPABILITIES AND RESOURCES

Findings indicate Suriname’s Capabilities and Resources show early capacity development.



The nature and extent of skills, knowledge, supplies, resources, equipment, facilities, and other capacity components dedicated to meeting disaster management needs is an indication of Suriname’s overall capabilities and resources. The DMA examines these components, the source and size of surge capacities available in times of disaster, and a broad array of disaster-focused functional capabilities like search and rescue, sanitation, and security. For this analysis, the following core thematic areas were reviewed: Dedicated Facilities and Equipment; Human Resources; Inventory of Commodities and Supplies; Targeted Functional Capabilities.



# CAPABILITIES AND RESOURCES



## Facilities and Equipment

### FINDINGS

Emergency medical services are provided by a combination of hospital owned resources and private sector ambulance services. In May of 2022, the government increased the country's ambulance fleet by 12 vehicles.

Both the police and the fire department take advantage of international assistance and training opportunities to increase capacity, ability, and professionalism. The fire department is exploring models for including medical assistance as one of its services, as well as increased capacity to respond to fires on oil platforms.

However, lack of equipment and personnel is a deficit that can delay response to an emergency or disaster, especially within the fire department. Prioritizing capacity building in first response elements would increase national response capabilities at the local level.

### RECOMMENDATIONS

To support District Commissioners, the following activities are recommended:

- ✓ Amplify engagement with international organizations providing first responder training in urban search and rescue (SAR), First Aid, HAZMAT, and oil fire response.
  - Include Police, Fire, and EMS in train-the-trainer courses.
- ✓ Consider creating a national urban SAR element with the ability to draw on and coordinate Army, Coast Guard, Fire Department, and Police resources in the event of a national disaster.
- ✓ Focus efforts and resources on innovative strategies with limited budgets to equip existing fire stations with contingents and resources (vehicles, equipment, and supplies) to enhance baseline capacity for effective emergency response.
  - Plan strategically for the expansion of fire department services to underserved areas.
  - Pursue funding for prioritized projects through national and international avenues.
- ✓ Consider building a volunteer fire corps capable of rapid response in underserved areas until established fire stations can augment response capacity for significant incidents.

### SEDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, C, D, F

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (h), (j), (l), (m)

#### SDGs

3, 11, 17

#### CDEMA CDM Priority Areas

1 (1.3, 1.4, 1.5), 2 (2.4), 3 (3.1), 4 (4.1, 4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# CAPABILITIES AND RESOURCES



## Facilities and Equipment

### FINDINGS

Climate change impacts will drive the need to focus and prioritize evacuation and shelter planning within the Districts. Current plans and protocols identify emergency sheltering facilities as schools, community centers, and church buildings. A complete inventory of such facilities that are suitable for use as emergency shelters has not been completed.

Furthermore, guidance for planning and maintaining preparedness for shelter operations has not been developed at either the national or district levels. The national and district level have not developed guidance for planning and maintaining preparedness for shelter operations.

Suriname District Commissioners and the National Coordination Center for Disaster Relief (NCCR) would benefit by identifying districts with higher susceptibility to disaster impacts such as flooding, windstorms, or wildfire to identify a prioritized approach to implementing a sustainable sheltering plan and system nationwide.

### RECOMMENDATIONS

To support District Commissioners, the following activities are recommended:

- ✓ Utilize the NDPBA Risk and Vulnerability Assessment (RVA) to assist the district level with planning.
- ✓ Consider national/international partners for access to resources and support, such as the Suriname Red Cross for sheltering logistics and the OCHA/CDEMA Regional Response Mechanism, to augment limited resources.
- ✓ Create and maintain an inventory of existing facilities that are suitable for use as emergency shelters.
  - Consider the use of the NDPBA to identify possible shelter locations that would best support a diverse evacuee population and take into consideration vulnerable groups.
  - Consider utilizing DisasterAware for logistic inventories.
- ✓ Consider identifying additional facilities that are suitable for sheltering and supporting a diverse population including children, the elderly, and those with disabilities.
  - Include stockpiling of supplies and durable medical equipment.
  - Address safety and security, water, sanitation, hygiene, and the psychological needs of the affected population.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 4

#### Global Targets

D, F

#### Guiding Principles

(a), (b), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

#### SDGs

3, 4, 7, 9, 10, 11, 12, 13, 15, 16, 17

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2, 3, 4 (4.2, 4.3, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# CAPABILITIES AND RESOURCES



## Facilities and Equipment

### FINDINGS

The health care industry in Suriname faces several challenges. Among these are physical vulnerability to extreme weather events, lack of and overworked staff, health professionals leaving for positions overseas, limited supplies, stockpiles, and equipment, and, at times, labor unrest.

To address some of these challenges, the Ministry of Health established General Practitioner Emergency Stations (HuSp) in RGD Limesgracht and RGD Meerzorg in 2022. In addition, a General Practitioner Training Program is to be established by the Faculty of Medical Sciences (FMeW) at Anton de Kom University.

Moreover, the Individual Healthcare Professions Act (BIG) is being prepared with the intent of providing regulation and standards for the profession.

Accelerating present strategies for improved national health care infrastructure and regulation with a disaster risk reduction element would benefit national resilience building.

### RECOMMENDATIONS

To support the national health system, the following activities are recommended:

- ✔ Expand the General Practitioner Emergency Stations concept.
  - Leverage the General Practitioner Training to include preparedness and response planning and expand disaster operational capacity.
  - Expand medical services, and consider retrofitting existing healthcare infrastructure to accommodate hazards, such as flooding.
- ✔ Create a Strategic National Stockpile for use in response to a national emergency.
- ✔ Include in the Individual Healthcare Professions Act fair and equitable labor standards, work conditions, a wage series, drivers for professional development, and incentives for retention of staff in both public and private sector health care, as well as the ambulance services.
- ✔ Engage the Ministry of Health to draft a National Response Plan for Health Emergencies distribute to medical and disaster management stakeholders.
- ✔ Include the public health and medical community in disaster training and exercises to improve efficiency of first responders and personnel.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

2, 3, 4

#### Global Targets

A, C, D

#### Guiding Principles

(a), (b), (c), (d), (e), (h), (j), (k)

#### SDGs

3, 11, 16

#### CDEMA CDM Priority Areas

1 (1.3), 2 (2.3, 2.4), 3 (3.1, 3.2), 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity



# CAPABILITIES AND RESOURCES



## HUMAN RESOURCES

### FINDINGS

The National Coordination Center for Disaster Relief (NCCR) is currently facing a critical shortage in staffing for disaster management, highlighting the urgent need for strategic interventions to address comprehensive and technical staffing and resourcing. The lack of a fully equipped workforce underscores the importance of bolstering staffing levels through targeted initiatives.

Staffing shortages often pose significant challenges in effectively fulfilling crucial disaster management roles. Additional technical staffing would enhance existing capacities, enabling the continued leveraging of policies, programs, and planning efforts related to DRR, sustainable development goals (SDGs), and climate change adaptation (CCA) efforts. Securing funding to support the recruitment of technical disaster management (DM) personnel is also paramount in addressing these challenges.

### RECOMMENDATIONS

To support NCCR in meeting its mission requirements effectively, the following activities are recommended:

- ✔ Advocate for funding to support technical education related to DRR and management at the associate, bachelor, and master degree levels in, but not limited to, geology, geography, engineering, GIS technologies, and DM.
- ✔ Build partnerships with higher education institutions through MOUs, sponsored research and applied projects, and placement of graduates in disaster management positions.
- ✔ Continue to build on internationally supported projects and programs to expand the quality of workforce readiness programs in DM.
  - Leverage partnerships with CDEMA, IOM, the United Nations and bilateral initiatives.
- ✔ Promote the Suriname National Training Authority and the Foundation for Labor Mobilization and Development to support quality training in DRR and management at the vocational level.
- ✔ Establish partnerships and implement training programs for existing staff to address immediate staffing gaps and enhance their current capabilities.

### SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, F

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

#### SDGs

4, 11, 13, 16, 17

#### Paris Agreement

7.1, 8.1

#### CDEMA CDM Priority Areas

1 (1.1, 1.5), 2 (2.3, 2.4), 3 (3.1, 3.3), 4 (4.2)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# CAPABILITIES AND RESOURCES



## TARGETED FUNCTIONAL CAPABILITIES

### FINDINGS

The National Coordination Center for Disaster Relief (NCCR) has limited capability to inventory and effectively track emergency relief supplies and equipment. While regional disaster management response mechanisms and logistics exist for an international response, national and localized operations need more support and organization. It would be beneficial for the NCCR to establish a collaborative inventory and tracking framework to strengthen its coordination role during a disaster response involving government, NGO, and private sector response partners.

Additionally, NCCR maintains several containers in the Metropolitan Paramaribo area and coastal districts stockpiling emergency equipment and supplies. There are plans to build a combined National Emergency Operating Center (NEOC) and warehouse in Paramaribo that will provide a space for a central national warehouse

Strengthening NCCR's logistical planning and resource tracking capabilities would position it to become a pro-active national coordinating element in support of emergency response operations at both the national and district levels.

## RECOMMENDATIONS

To support NCCR's national response requirements, the following activities are recommended:

- ✓ Consider the use of the Disaster Aware Platform to upload assets and resources and maintain a logistics inventory.
  - Create a database that tracks equipment, essential resources, and supply inventories across government ministries.
  - Invite Districts, NGOs active in disasters, and select private sector partners to contribute to this database, as appropriate
- ✓ Create formal Memorandums of Understanding (MOUs) with public and private resource and services providers to secure limited resources.
  - Consider focusing efforts on districts with access limitations or higher vulnerability to disaster impacts.
- ✓ Advocate for the initiation of the new NEOC and Warehouse Project to improve logistics and functional capabilities of disaster management and response.
  - Consider placing container stockpiles in Para, Brokopondo, and western, central, and eastern Sipaliwini.

## SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

### Priorities for Action

2, 3, 4

### Global Targets

A, C, D, F

### Guiding Principles

(a), (b), (c), (d), (e), (f), (h), (i), (k), (l), (m)

### SDGs

3, 11, 16, 17

### CDEMA CDM Priority Areas

1, 3 (3.1, 3.2), 4 (4.1, 4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# CAPABILITIES AND RESOURCES







**THE DMA**

# **CAPACITY DEVELOPMENT**



# CAPACITY DEVELOPMENT

Findings indicate Suriname’s Capacity Development is at limited or no capacity.



Suriname’s ability to advance disaster management strategies that achieve risk reduction and resilience goals is ultimately dependent on its ability to support capacity development. From training and education that supports the advancement of knowledge and skills to the institutionalization of appropriate attitudes and cultures, capacity development requires the continuous advancement of assessments, strategic plans, programs, facilities, and many other components of the sub-themes examined in this report. The DMA analyzes resources and opportunities for all stakeholders and all sectors, from individuals and vulnerable populations to government responders. This DMA’s sub-themes include Capacity Development Plans and Strategies; Training and Education Programs and Facilities; Monitoring and Evaluation Processes and Systems.

# CAPACITY DEVELOPMENT



## CD PLANS AND STRATEGIES

### FINDINGS

The National Coordination Center for Disaster Relief (NCCR) operates within a constrained budget. Emphasizing the link between financial commitment to disaster risk reduction (DRR), sustainable development goals (SDGs), climate change adaptation (CCA), and the provision of funding to NCCR will enhance the well-being of Suriname. Additionally, effectively these initiatives would prevent duplication of efforts and further improve coordination and collaboration among stakeholders.

It would be beneficial for the NCCR, Ministries, and disaster management organizations to align efforts on capacity building, policy development, advocacy, and initiatives crucial to guiding the country towards improved preparedness and enhanced resilience in the face of climate change. This will, in turn, lead to efficient use of limited resources and strengthen planning endeavors throughout the districts cultivating a more unified and synergistic approach to disaster management (DM).

### RECOMMENDATIONS

To support Suriname in disaster risk reduction, the following activities are recommended:

- ✔ Develop clear project proposals where NCCR can demonstrate the impact and alignment of projects, funding, and planning for DRR, SDGs, and CCA.
  - Work with the Ministry of Finance to allocate resources within governance budgets.
- ✔ Support NCCR, Department of Agriculture, Livestock and Fisheries, Ministry of Spatial Planning and Environment, the National Planning Office, Civil Society Organizations, and National Research Institutes to develop and promote DRR/CCA strategies.
  - Ensure funding is prioritized and allocated to meet NCCR needs, including equipment, infrastructure, training, and capacity building.
  - Collaborate with key stakeholders via joint working groups to improve collaboration and avoid duplication of efforts.
- ✔ Secure funding for the implementation of mitigation measures to address climate change and related hazards.
  - Diversify funding sources to reduce reliance on one donor and explore long-term opportunities such as grants, stakeholder partnerships, and climate finance mechanisms.

### SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, e

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (m)

#### SDGs

11, 13, 14, 15, 17

#### Paris Agreement

7.1, 8.1

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.3), 3 (3.1, 3.2), 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity



# CAPACITY DEVELOPMENT



## CD PLANS AND STRATEGIES

### FINDINGS

The National Climate Change Policy, Strategy, and Action Plan (2014-2021) identifies a clear path to address climate change and adaptation measures within Suriname. However, there is a lack of a clear financial structure to protect the agricultural sector and provide guidance recovery and rehabilitation following a disaster. Additionally, central to this approach is the development of a comprehensive disaster management plan dedicated to the agricultural sector, emphasizing sustainable practices that can withstand and recover from major adverse events.

It would be beneficial for Suriname to implement policy level guidelines and formal plans that fortify protection measures and sustainable agricultural development against climate-related challenges such as rising sea level, saltwater intrusion, and drought. These adaptive strategies will ensure continuity and productivity in the face of adverse events.

### RECOMMENDATIONS

To support the agricultural sector, the following activities are recommended:

- ✓ Develop and institutionalize policies for integrated land use with a focus on most vulnerable to land degradation and climate change impacts.
  - Consider partnering with Trinidad and Tobago Ministry of Agriculture, Land & Fisheries to utilize as a model.
- ✓ Implement targeted initiatives to boost agricultural resilience by:
  - Offering training programs and knowledge transfer activities for farmers and stakeholders to support sustainable practices and crop continuity.
  - Helping farm and agriculture facility owner's climate proof their assets.
- ✓ Expedite the development of a DM plan for the agricultural sector and ensure alignment with legislation policies.
  - Clarify roles and responsibilities of specific sectors to avoid duplication and maximize limited resources.
  - Focus on adaptive strategies and climate resilience.
  - Collaborate via joint working groups to include the Department of Agriculture, Livestock and Fisheries, the Food and Agriculture Organization (FAO), National Coordination Center for Disaster Relief, and other key stakeholders.

### SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, E, F

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l)

#### SDGs

2, 9, 11, 13, 15, 17

#### Paris Agreement

7.1, 8.1

#### CDEMA CDM Priority Areas

1 (1.2, 1.3, 1.4), 2 (2.2, 2.3), 3, 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# CAPACITY DEVELOPMENT



## TRAINING AND EDUCATION

### FINDINGS

Suriname would benefit from an official centralized disaster training and exercise (T&E) initiative led and coordinated by the National Coordination Center for Disaster Relief (NCCR).

A centralized training and information initiative would further foster interagency collaboration and communication among the disaster management community withing Suriname leading to a more effective and coordinated response to disasters.

### RECOMMENDATIONS

To support NCCR in meeting its mission requirements, the following activities are recommended:

- ✓ Identify staff within NCCR to manage the T&E program with primary responsibilities of exercise, logistics, coordination, and alignment with multi-agency calendars.
  - Increase simulation and scenario-based exercises particularly among response agencies, to enhance collaboration and capacity building across communities.
- ✓ Create a master training schedule and oversee communication channels and social media platforms to increase visibility, facilitate information sharing, and optimize collaboration.
- ✓ Implement a digital record management system accessible to all participating agencies to track T&E schedules, participants, evaluations, and lessons learned for both review and real-time updates.
- ✓ Ensure a standardized T&E reporting framework for consistent data collection, encompassing key metrics, observations, and feedback mechanisms for formal performance evaluations and after-action reporting.

### SEDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, F

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

#### SDGs

4, 11, 16, 17

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.4), 3, 4 (4.1, 4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# CAPACITY DEVELOPMENT



## TRAINING AND EDUCATION

### FINDINGS

Capacity development in disaster risk reduction and management, led by the National Coordination Center for Disaster Relief (NCCR), would benefit from a strategic and planned approach to capacity building, training, and exercising that aims to strengthen response partner relationships. Examples of successful initiatives include the Community Resilience Building (CRB) Caribbean Region Program, the Organization of American States Suriname (OAS) sponsored Improved Disaster Risk Management for Ports in the Caribbean Project, the Inter-American Development Bank (IDB) Sustainable Agricultural Productivity Program, technical assistance from Global Facility for Disaster Risk Reduction (GFDRR), and the utilization of the USAID-NASA supported SERVIR program that maps areas of risk through satellite imagery. In addition, workshops and online training courses provided by organizations such as the Caribbean Disaster Emergency Management Agency (CDEMA), the International Organization for Migration (IOM), and the United Nations Framework Convention on Climate Change (UNFCCC) are utilized to build the knowledge and skills of disaster management staff and national experts.

### RECOMMENDATIONS

To support national capacity and resilience, the following activities are recommended:

- ✔ Continue to engage in regional and international disaster management training and exercise opportunities when available. Expand participation to include District, NGO, and private sector disaster management partners, especially in opportunities where individuals can build skills together as a team.
- ✔ Continue and strengthen partnerships with the international DM community such as with CDEMA, the IOM, and UNFCCC to assist in implementation of national and district training and exercises given their expertise and availability to assist with exercises and resources.
- ✔ Explore augmenting NCCR staff and key emergency management positions through provision of training/ apprenticeship programs.
  - Designed to send an individual to a partner state's Emergency Operating Center or other institution (Fire, Police, EMS, etc.) for six months to one year to train/work in the individual's specialty.
  - Gain experience in specialized training and execution of duties across other specialties (Operations, Planning, Logistics, Finance and Administration).

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, E, F

#### Guiding Principles

(a), (b), (c), (d), (f), (h), (j), (k), (l), (m)

#### SDGs

4, 9, 11, 16, 17

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.4), 3 (3.1, 3.2, 3.3), 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity



# CAPACITY DEVELOPMENT



## Capacity Development Monitoring and Evaluation

### FINDINGS

After-Action Reports (AAR) occur within individual disaster management and response organizations such as the National Coordination Center for Disaster Relief (NCCR) and the Suriname Red Cross.

However, they are informal and are not extended to integrate all disaster response partners and stakeholders.

Formalizing an AAR requirement following all exercises and incidents for response partners and stakeholders would promote inter-agency and organization cooperation and continuous improvement.

### RECOMMENDATIONS

To support lessons learned during exercises and incident responses, the following activities are recommended:

- ✔ Develop a standardized AAR template, maintained by NCCR, for local and national partners to utilize for consistency throughout disaster management.
- ✔ Include the requirement to conduct AARs for exercises and incidents within the local and national Disaster Response Plans.
- ✔ Expand and formalize the AAR process to integrate all disaster response partners and stakeholders, including those from civil society organizations and the private sector.
- ✔ Ensure that AAR recommendations and improvement steps are vetted, prioritized, and implemented through a corrective action plan coordinated and monitored by District Commissioners and the NCCR.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 4

#### Global Targets

A, C, D

#### Guiding Principles

(a), (b), (c), (e), (f), (g), (h), (i)

#### SDGs

4, 11

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2, 3 (3.1, 3.2), 4 (4.1, 4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

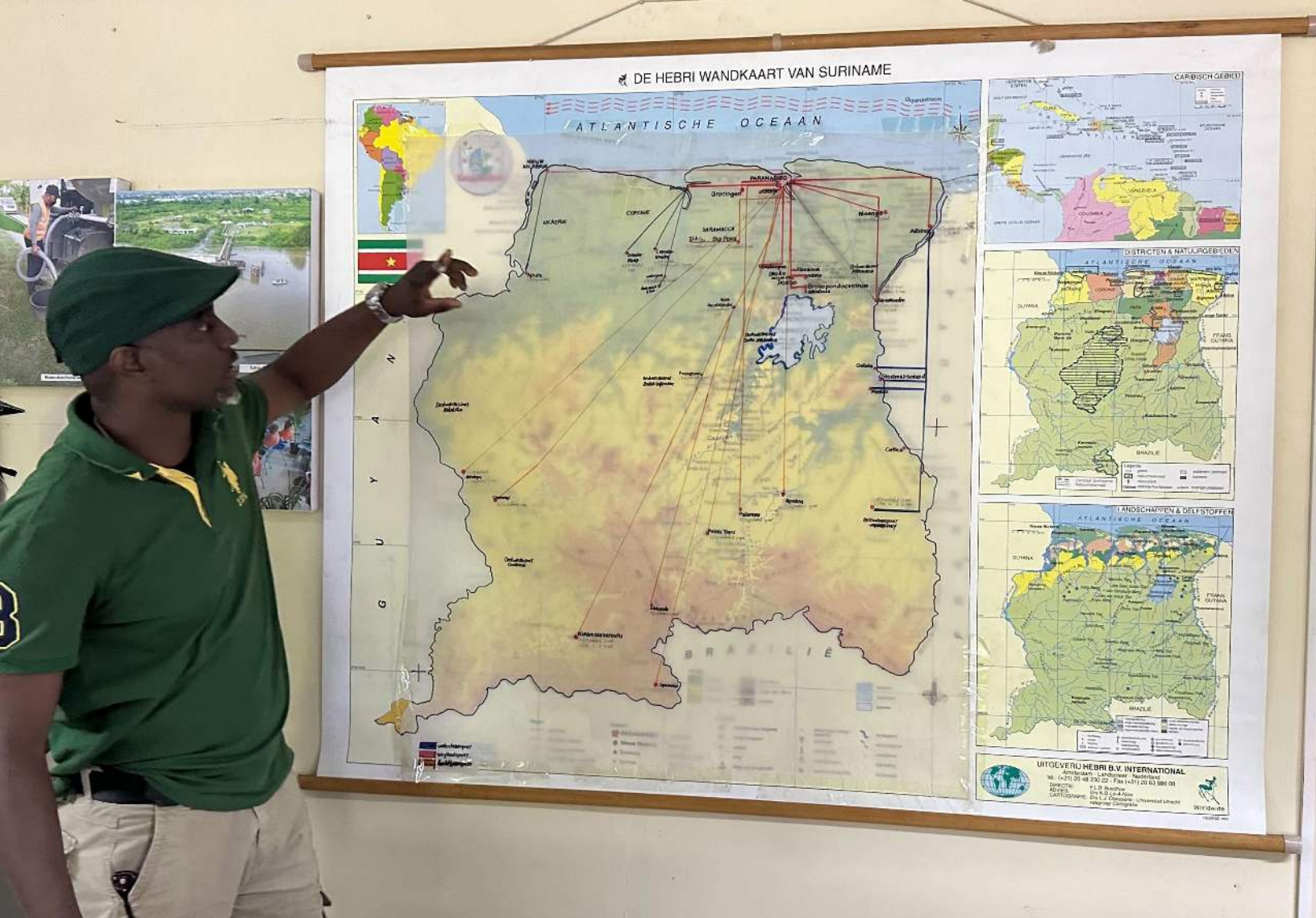
■ Substantial Progress with Some Limitation

■ Advanced Capacity

# CAPACITY DEVELOPMENT



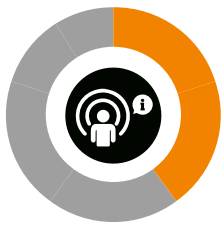




**THE DMA**

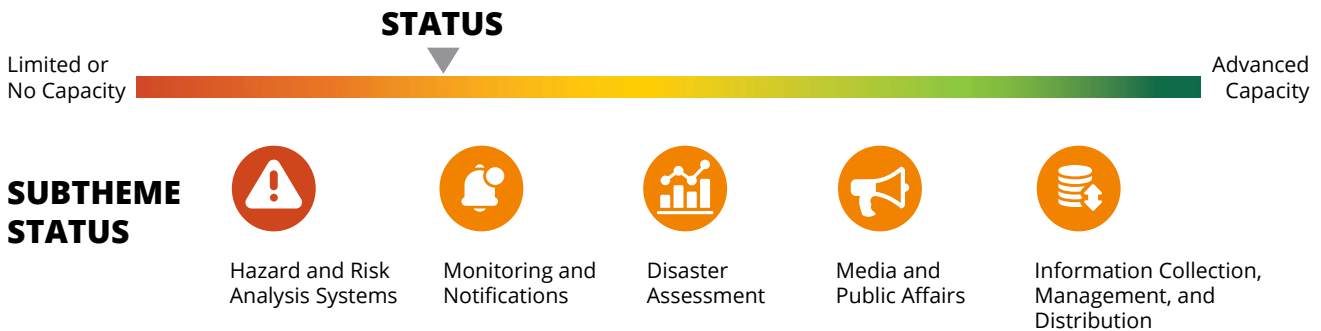
# **COMMUNICATION AND INFORMATION MANAGEMENT**





# COMMUNICATION AND INFORMATION MANAGEMENT

Findings indicate Suriname’s Communication and Information Management system shows early capacity development.



Disaster management is a risk-based endeavor, and as such the capacity of stakeholders to generate, manage, and share risk and incident related information is critical. This area of analysis looks at the systems, processes, and procedures that have been established in Suriname to inform pre- and post-disaster activities. From hazard mapping and event monitoring, to warning and notification, communication and information management sub-themes address a broad range of topics that highlight effective practices.

# COMMUNICATION AND INFORMATION MANAGEMENT



## Monitoring and Notification

### FINDINGS

Hazard monitoring is coordinated by the Meteorological Service Suriname (MDS) which is tasked with collecting weather and climate information. Suriname has Automatic Weather Stations (3) and Automatic Rain Stations (15) in at-risk communities. Although there are early flood warning systems in some locations, public alert and warning is achieved through local radio stations and mofo-quranti (word-of-mouth) within and between communities. Within Disaster Management (DM), it is achieved through email, phone, and text. Suriname is pursuing funding for a multi-hazard early warning system (MHEWS) at both the national and local levels and intends to conduct an inventory of its present technological capabilities. Investing in MHEWS infrastructure, coupled with expanded pre-disaster training programs, would contribute to a more resilient, informed, and DM framework within Suriname.

### RECOMMENDATIONS

To support MDS and mission requirements, the following actions are recommended:

- ✔ Continue partnership with UNDP to install Automatic Weather Stations and Automatic Rain Stations strategically throughout the country. Expand the project to include increased Doppler radar coverage and flood gauges in communities that are at-risk of severe flooding and increased.
- ✔ Develop the capability to monitor risks and assist with emergency notification at the district level which includes reporting standards and reach-back ability to MDS and National Coordination Center for Disaster Relief (NCCR) for effective information sharing.
- ✔ Strengthen coordination between MDS, the Hydraulic Research Division, NCCR, and District Governments through MOAs regarding roles and responsibilities, information sharing, and collaboration opportunities.
- ✔ Consider partnering with telecommunication companies to invest in a national wireless emergency alert system for public alert and warning.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, G

#### Guiding Principles

(a), (b), (c), (f), (g), (h), (i), (j)

#### SDGs

11

#### CDEMA CDM Priority Areas

1, 2 (2.1, 2.2, 2.3), 3 (3.1, 3.2), 4

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# COMMUNICATION AND INFORMATION MANAGEMENT



## INFORMATION COLLECTION AND MANAGEMENT

### FINDINGS

Suriname has access to data holdings; however, they are not easily accessible to support the disaster management (DM) mission of the National Coordination Center for Disaster Relief (NCCR). The ongoing SERVIR program supported by USAID-NASA is capable of mapping areas of risk and can provide information to support disaster assessment and response. Central to these efforts is the Ministry of Spatial Planning and the Environment (2020) which works to incorporate disaster risk analysis and reduction with projects aligned to the SDGs and Climate Change Adaptation. The completed NDPBA and Risk Vulnerability Assessment (RVA) can support additional planning for critical infrastructure identification and exposure analysis and can provide NCCR and stakeholders with necessary scientific information to plan, justify, and budget for local DM and mitigation projects.

### RECOMMENDATIONS

To support information managements, the following activities are recommended:

- ✔ Consider utilizing the NDPBA data and the GIS-based DisasterAWARE Platform, alongside SERVIR, for more comprehensive information and access.
  - Collate geospatial data to inform community-based DM and planning efforts.
- ✔ Leverage resources within the RVA, including hazard mapping for population exposures, critical infrastructure locations, and evacuations/shelter identification to drive sector-based community planning and provide for vulnerable groups and hard to reach communities.
- ✔ Utilize GIS-based mapping systems to assist risk and vulnerability assessments in DM and disaster risk reduction planning.
  - Continue to include climate change in hazard and risk assessments.
  - Capitalize on local and indigenous knowledge in hazard and risk assessments.
- ✔ Generate local hazard and risk maps to facilitate and advance data-driven and scenario-based training, exercises planning, and preparedness activities.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, E, F, G

#### Guiding Principles

(a), (b), (c),(d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

#### SDGs

4, 9, 11, 13, 14, 15, 17

#### Paris Agreement

7.1, 8.1

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2, 3, 4 (4.2, 4.4)

Limited or No Capacity

Early Capacity Development

Achievement with Significant Limitation

Substantial Progress with Some Limitation

Advanced Capacity



# COMMUNICATION AND INFORMATION MANAGEMENT



## INFORMATION COLLECTION AND MANAGEMENT

### FINDINGS

Disaster Assessment begins at the local level through the National Coordination Center for Disaster Relief (NCCR) administered KOBO KOLLECT application. These reports are collated and included in situation reports for senior leadership by NCCR. However, national plans and procedures for a preliminary disaster assessment and needs analysis do not exist and international assistance is often required to obtain a comprehensive damage and needs assessment in the aftermath of a disaster.

Including a Disaster Assessment and Needs Analysis process in the National Disaster Response Plan would provide direction to the District Commissioners. This standardized process would greatly strengthen the overall national disaster response capabilities of Suriname, enabling the country to better recovery from disasters.

### RECOMMENDATIONS

To support NCCR and Districts, the following are recommended:

- ✓ Strengthen the requirement for disaster assessments as part of the draft Disaster Management Law to ensure outcomes drive and inform incident response operations.
- ✓ Build on KOBO KOLLECT to develop a national disaster assessment template and needs analysis methodology that includes:
  - Formatting for disaster response partners from local governments, civil society, and the private sector.
  - Accessible template and training on procedures to all DM partners.
- ✓ Strengthen coordination with regional and international partners to build capacity for disaster assessments at the national and local levels.
- ✓ Ensure that personnel are adequately trained, equipped, and prepared to conduct assessments in the immediate aftermath of significant events.
- ✓ Develop and connect KOBO Collect to a disaster management information management software platform and linkage to the General Bureau of Statistics Suriname.

### SEDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

2, 4

#### Global Targets

A, C, D, F

#### Guiding Principles

(a), (b), (d), (f), (g), (h), (m)

#### SDGs

11, 17

#### CDEMA CDM Priority Areas

1, 2 (2.3, 2.4), 3 (3.1, 3.2), 4 (4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# COMMUNICATION AND INFORMATION MANAGEMENT



## INFORMATION COLLECTION AND MANAGEMENT

### FINDINGS

The National Coordination Center for Disaster Relief (NCCR) uses KOBO KOLLECT to gather disaster assessment reports. In addition, it gathers and shares other disaster related information through informal means (meetings, phone, email). There are no shared standards or technology in place for the storage or display of this information.

The NCCR would derive advantages from implementing a centralized disaster management information system. This system could be utilized to provide a common operating picture at the national level that can be shared with relevant disaster response partners and would provide data and information to support critical decision-making during response operations. Such a system would also facilitate the accessibility of data to enhance collaboration and capacity development initiatives.

### RECOMMENDATIONS

To support NCCR, the following activities are recommended:

- ✔ Invest in a NCCR administered disaster management system (such as WebEOC or VEOCI) to centralize and standardize disaster response information and expedite decision-making.
- ✔ Utilize the DisasterAware platform to maintain a centralized GIS-based data management system and leverage risk assessments, monitor disaster impacts/loss data, and tracking of inventory for resources/assets.
- ✔ Train and exercise all relevant disaster management and response partners in the ministries, districts, civil society, and the private sector in use of the system.
- ✔ Include a Disaster Communications section within the National Disaster Response Plan.
  - Include a description for information collection and reporting to NCCR if connectivity is lost during a disaster response.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, C, F

#### Guiding Principles

(a), (b), (d), (e), (f), (g), (h), (j), (k), (m)

#### SDGs

11, 17

#### CDEMA CDM Priority Areas

1 2, (2.2, 2.3, 2.4) 3 (3.1, 3.2), 4 (4.1, 4.2, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity

# COMMUNICATION AND INFORMATION MANAGEMENT



## MEDIA AND PUBLIC AFFAIRS

### FINDINGS

The National Coordination Center for Disaster Relief (NCCR) would benefit from a focused and expanded public information campaign to enhance the effectiveness of its outreach efforts.

NCCR also has an online presence, however, there is a need for social media to be maintained and regularly updated. Expanding efforts to maintain these social media channels would better serve the public and improve communications during disaster events.

Additionally, establishing a Public Information Lead at NCCR would make disaster risk management more visible to the public and provide a guide for effective communication throughout the emergency management cycle.

### RECOMMENDATIONS

To support NCCR, the following activities are recommended:

- ✔ Implement a dedicated Public Information Lead within NCCR.
- ✔ Develop and implement a comprehensive public outreach campaign to ensure consistent disaster management and risk reduction public messaging across government organizations.
- ✔ Consider an outreach approach that can be scaled, including:
  - Maintaining traditional messaging through radio, television, face-to-face meetings, and community leaders.
  - Leveraging a social media campaign with consistent messaging across various platforms to maintain a strong presence and connection with the public.
  - Communication tailored to vulnerable, indigenous, and hard to reach populations and communities.
- ✔ Leverage the Communicatie Dienst Suriname’s capabilities to assist NCCR with incorporating Public and Risk Communication into the National Response Plan that includes:
  - Protocols for obtaining and disseminating public information.
  - Pre-scripted information for major hazards.
  - Provisions to address vulnerable and indigenous populations.

### SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

#### Priorities for Action

1, 2, 3, 4

#### Global Targets

A, B, C, D, E

#### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

#### SDGs

4, 5, 10, 11, 13, 16

#### Paris Agreement

7.1, 8.1

#### CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2, 3, 4 (4.2, 4.3, 4.4)

■ Limited or No Capacity

■ Early Capacity Development

■ Achievement with Significant Limitation

■ Substantial Progress with Some Limitation

■ Advanced Capacity



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# ENVIRONMENTAL FRAMEWORK ACT

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DISCLAIMER: This translation is for purposes of better understanding the Official Dutch text of the Environmental Framework Act. This text in no way supersedes or substitutes the official Dutch text as was published in the Official Gazette of the Republic of Suriname, under S.B. 2020 no. 97. No

## THE NDPBA

# COMMENDATIONS FOR BEST PRACTICES

# COMMENDATIONS FOR BEST PRACTICES



## BEST PRACTICES COMMENDATION

### ENABLING ENVIRONMENT

#### Recognition of the Environmental Framework Act 2020

Suriname has implemented protective legislation through the Environmental Framework Act 2020. The Act addresses integration and involvement of indigenous and tribal peoples, ensuring information and education on activities within communities is widespread and accessible for effective decision-making and informed consent. Additionally, the framework outlines concrete compliance policies, monitoring measures, and an overall commitment to maintaining ecological balance as part of their climate change adaptation (CCA) strategy. To best support the National Environment Framework 2020, Suriname has established a formal structure that includes the National Environmental Authority and the National Institute for Environment and Development. These entities have been tasked with the authority for ensuring the successful implementation, management, and execution of the mandates within the National Environment Framework 2020.

Notable elements within the framework include the proposed Environmental Policy. The goal of this initiative is to harmonize national and local plans and stakeholders for an improved and collaborative approach to decision-making and enactment of more effective environmental regulations and subsequent funding within Suriname. Another highlight is the Environmental Impact Assessments (EIAs) that have been incorporated into the framework for infrastructure and development projects that include but are not limited to expansion of electrical and transmission production, new port construction, as well as mining and forestry projects.

This legislation is a successful initiative that will result in the building of disaster-resilient infrastructure, decreasing land-based pollution, and rehabilitating ecosystems to ensure the sustainability of not only the environment, but also the economy and financial investments within Suriname.

#### SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

##### Priorities for Action

1, 2, 3, 4

##### Global Targets

A, B, C, D, E

##### Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h),  
(i), (j), (k)

##### SDGs

1, 2, 3, 6, 7, 8, 9, 10, 11, 12,  
13, 14, 15, 16, 17

##### Paris Agreement

7.1, 8.1

##### CDEMA CDM Priority Areas

1 (1.2, 1.3, 1.4), 2, 3, 4 (4.2,  
4.4)



# COMMENDATIONS FOR BEST PRACTICES



## BEST PRACTICES COMMENDATION

### DISASTER GOVERNANCE MECHANISMS

#### Highlighting Suriname’s Declaration of School Safety

In 2019, Suriname became party to the Antigua and Barbuda Declaration on School Safety, the Caribbean Safe School Initiative (CSSI), and secured the endorsement of the twelve CARICOM Ministries of Education. Serving as an instrumental document for the country, this declaration forms the cornerstone for the systematic implementation of strategies focused on disaster risk reduction and the enhancement of climate change resilience within the broader context of the Caribbean Safe School initiative.

A particular focus of this declaration lies in enhanced coordination and cooperation mechanisms among stakeholders, extending from the community, regional, national, and international levels. Emphasis is also placed on cultivating collaboration among Caribbean Ministries of Education, relevant private sector, non-governmental organizations, and various regional and international entities.

The Declaration of School Safety outlines a comprehensive framework designed to monitor and assess progress in the implementation of initiatives outlined in the Road Map on School Safety. This framework is authorized under the Minister of Education, symbolizing a concerted commitment to fortify school safety protocols and regional resilience against potential adversities. Such proactive measures highlight the dedication to creating a safe and secure educational environment throughout the region.

**SENDAI FRAMEWORK, SDGS,  
PARIS AGREEMENT, AND  
CDEMA CDM PRIORITY AREAS  
ADVANCED**

**Priorities for Action**

1, 2, 4

**Global Targets**

B, D, E

**Guiding Principles**

(a), (b), (d), (e), (f), (g), (h), (i),  
(j), (k), (l), (m)

**SDGs**

4, 11, 12, 13, 15

**Paris Agreement**

7.1, 8.1

**CDEMA CDM Priority Areas**

1 (1.3, 1.4), 2, 3 (3.1, 3.2), 4  
(4.2, 4.4)

# COMMENDATIONS FOR BEST PRACTICES



## BEST PRACTICES COMMENDATION

### COMMUNICATION AND INFORMATION MANAGEMENT

#### Highlighting Suriname’s Commitment to Climate Change

Suriname faces continued environmental challenges due to droughts, floods, tropical storms, and climate change impacts. In recognition of the importance of advancing climate change adaptation (CCA), the General Bureau of Statistics has published the “Suriname Climate Change Statistics and Indicators” report. This is the country’s first climate impact publication and provides Suriname with a framework to integrate forward initiatives based on the Intergovernmental Panel on Climate Change (IPCC) in five policy areas (Drivers, Impacts, Vulnerability, Mitigation, and Adaptation) and their subsequent 158 indicators and statistics.

These adaptive measures incorporate strategies to strengthen Suriname’s economic resilience, sustainably develop infrastructure, and improve risk management while adapting to climate impacts. Suriname’s National Adaptation Plan (NAP) directly supports the implementation of the IPCC policy measures through a systematic approach to priorities aligned with strategic national objectives and focused on sectors that are the most vulnerable. The NAP, along with the “Suriname Climate Change Statistics and Indicators”, outlines actionable plans, policies, and protocols and an overall commitment to protect Suriname’s economy, increase productivity, and continue to enhance the nation’s resilience.

**SENDAI FRAMEWORK, SDGS,  
PARIS AGREEMENT, AND  
CDEMA CDM PRIORITY AREAS  
ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**Global Targets**

A, B, C, D, F

**Guiding Principles**

(a), (b), (c), (d), (e), (f), (g), (h),  
(i), (j), (k), (l), (m)

**SDGs**

4, 6, 7, 8, 9, 11, 12, 13, 14, 15,  
17

**Paris Agreement**

7.1, 8.1

**CDEMA CDM Priority Areas**

1 (1.3, 1.4), 2 (2.2, 2.3, 2.4), 3,  
4 (4.2, 4.4)



**THE NDPBA**

# **NATIONAL RECOMMENDATIONS**



# THE NDPBA NATIONAL RECOMMENDATIONS



## EXPAND COMPREHENSIVE HAZARD MODELING CAPABILITIES TO UPDATE AND IDENTIFY ADDITIONAL EXPOSURE ZONES THAT CONSIDER THE UNIQUE CHARACTERISTICS AND ENVIRONMENTAL CONDITIONS OF SURINAME.

- With initial prioritization on drought, coordinate with the Meteorological Service, Ministry of Agriculture, Ministry of Spatial Planning and the Environment, and the Center for Agricultural Research (CELOS) at Anton de Kom University to incorporate GIS-based data, research, and mapping into preparedness, climate adaptation, and disaster risk reduction plans.
- Consider potential impacts on critical infrastructure and agricultural production, including indigenous subsistence farming.
  - Enhance coordination with the Ministry of Agriculture to support community engagement, preparedness, and mitigation measures against the impacts of climate sensitive hazards, including the protection of assets and livelihoods.
- Develop hazard zones for manmade hazards including oil spills (both offshore and on land) and mining-related accidents and water contamination to anticipate potential impacts to population and environmental health and support evidence-based mitigation efforts.
- Refine and customize hazard modeling to anticipate and address needs of local communities and vulnerable populations, ensuring that local disaster management plans include hazard exposure.

### **ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3

**SDGs**

2, 3, 6, 11, 13, 14, 15

**Global Target (s)**

A, B, C, D, E

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j)

**CDEMA CDM Priority Areas**

1, 2, 3, 4

# 2

## REVIEW AND UPDATE THE DRAFT DISASTER MANAGEMENT LAW TO STRENGTHEN THE LEGAL INSTRUMENTS NECESSARY FOR EFFECTIVE DISASTER MANAGEMENT.

- The law should at a minimum:
  - Establish legal basis and authority for NCCR to improve the effectiveness for disaster risk management in Suriname and ensure NCCR has direct access to the highest levels of government.
  - Define the structure, role, and responsibilities of the NCCR in relation to district-level disaster management, as well as NCCR’s institutional arrangements and authorities with respect to the ministries, armed forces, and other disaster risk management partners.
  - Allocate funding for the financial stability and support of the NCCR over the long-term to allow for the necessary investment to protect the nation.
  - Incorporate the Law of 7 August 2020 to frame the national protocol for disaster declaration process and authorities.
- Prioritize the movement of the draft law through the necessary legislative process.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

3, 9, 11, 13, 14, 15, 16, 17

**Global Target (s)**

A, B, C, D, E, F, G

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l)

**CDEMA CDM Priority Areas**

1, 2, 3, 4

NATIONAL RECOMMENDATIONS

3

**STRENGTHEN THE ANNUAL BUDGET TO DIRECTLY SUPPORT THE NCCR WITH A FOCUS ON PROACTIVE FUNDING STRUCTURES AND PROGRAM REQUIREMENTS TO MEET THE PREDICTED ESCALATION IN CLIMATE-RELATED HAZARDS AFFECTING SURINAME.**

- Include annual operating costs and necessary funds that allow NCCR to meet program requirements.
  - Advocate for an increase in the base funding for NCCR.
  - Implement provisions to ensure the fund is solely used for disaster-related purposes and not diverted elsewhere.
- Ensure comprehensive and adequate funding resources that allow for necessary staffing and technical assistance, equipment and facility maintenance, equipment purchases, vital program/ project implementation, response operations support, and capacity building.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

11, 13, 17

**Global Target (s)**

A, B, C, D, F

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (e), (f), (g), (h), (i), (j), (k), (m)

**CDEMA CDM Priority Areas**

1, 2, 3 (3.1, 3.2), 4



# 4

## **ESTABLISH A NATIONAL CLIMATE AND DISASTER RISK FINANCING STRATEGY TO SUPPORT LONG-TERM NATIONAL ECONOMIC AND FINANCIAL STABILITY WHILE ADAPTING TO CLIMATE CHANGE.**

- Collaborate with the Surinamese Association of Insurance Companies to explore and expand avenues and opportunities for businesses, private property owners, and municipalities to gain insurance against damage caused by natural disaster. Include comprehensive insurance programs that cover primary hazards.
- Explore alternative risk transfer schemes such as Disaster Pooling Funds and a blended finance National Insurance Program aimed at climate related disasters for small businesses and individuals.
- Apply to the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC) to expand insurance holdings with inclusion of excessive rainfall coverage and electric and water utility protection policies.
- Introduce streamlined and documented steps to expedite the management of public funds in post-disaster situations.

### **ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

11, 13

**Global Target (s)**

A, B, C, D, E

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (e), (f), (g), (h), (i), (j), (k)

**CDEMA CDM Priority Areas**

1, 2 (2.2, 2.3), 3, 4

NATIONAL RECOMMENDATIONS

# 5

## **COLLABORATE WITH THE NATIONAL PLANNING OFFICE TO COORDINATE AND ALIGN MULTI-AGENCY AND CROSS-SECTOR INITIATIVES RELATED TO HAZARD MITIGATION, DISASTER RISK REDUCTION, CLIMATE CHANGE ADAPTATION, AND SUSTAINABLE DEVELOPMENT TO PREVENT DUPLICATION OF EFFORT AND RESOURCES.**

- Ensure strong lines of communication with the Office of the President and other high-level decision-making bodies for funding support, swift coordination, resource allocation, and synergistic planning.
  - Establish partnerships through joint working groups and/or committees to engage in pre-planning efforts, activities, and information sharing.
- Track all DRR, SDGs, and CCA initiatives to align priorities, finite national resources, and link project executions.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

6, 7, 9, 11, 13, 14, 15, 16, 17

**Global Target (s)**

A, B, C, D, E, F

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (e), (f), (g), (h), (i), (j), (k), (l), (m)

**CDEMA CDM Priority Areas**

1 (1.2, 1.3, 1.4), 3 (3.1, 3.2, 3.3), 4 (4.2, 4.4)

# 6

## **CONDUCT A COMPREHENSIVE PLANNING AUDIT TO IDENTIFY NECESSARY PLANS THAT DO NOT EXIST AND UPDATE EXISTING PLANS THAT HAVE BECOME OUTDATED.**

- Harmonize Continuity of Government (COG) and Business Continuity Planning (BCP) efforts to ensure the provision of critical services, while upholding the objectives of disaster management and sustainable governance to enhance the nation's resilience.
  - Include provisions for maintaining mechanisms for sharing critical information, data, and resources across ministries, districts, agencies, public/private sectors and prioritize essential functions.
- Finalize a National Disaster Response Plan with a focus on activation and response to support the districts.

### **ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

#### **Priorities for Action**

1, 2, 3, 4

#### **SDGs**

3, 4, 6, 7, 9, 10, 11, 13, 14, 15, 16, 17

#### **Global Target (s)**

A, B, C, D, E, F, G

#### **Paris Agreement Articles**

7.1, 8.1

#### **Guiding Principle(s)**

(a), (b), (c), (e), (f), (g), (h), (i), (j), (k), (l)

#### **CDEMA CDM Priority Areas**

1 (1.1, 1.2, 1.3, 1.4), 2 (2.2, 2.3), 3 (3.1, 3.2), 4

NATIONAL RECOMMENDATIONS

# 7

## STRENGTHEN THE INSTITUTIONAL CAPACITY OF THE NCCR AND DISTRICT DM CAPACITY.

- Document NCCR’s organizational structure in an institutional operations plan that describes sections/divisions and position roles and responsibilities.
- Formalize academic requirements and training to improve disaster management competency at the national and local levels.
- Prioritize the construction of the National Emergency Operations Center (NEOC), warehouse, and training facility.
- Secure Memorandums of Understanding (MOUs) with public and private resource providers to facilitate the timely delivery of commodities, medical provisions and assistance, transportation needs, and information and communication services when needed to support response operations.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

2, 4

**SDGs**

8, 9, 11, 17

**Global Target (s)**

A, C, D, F, G

**CDEMA CDM Priority Areas**

1, 2 (2.2, 2.4), 3 (3.1, 3.2), 4 (4.2, 4.4)

**Guiding Principle(s)**

(a), (c), (e), (f), (h), (i), (j), (k), (l), (m)



# 8

## **FORTIFY SURINAME’S AGRICULTURAL SECTOR AGAINST CLIMATE-RELATED CHALLENGES, FOSTERING SUSTAINABLE PRACTICES, RESILIENT INFRASTRUCTURE, AND ADAPTIVE STRATEGIES TO ENSURE CONTINUITY AND PRODUCTIVITY IN THE FACE OF ADVERSE EVENTS.**

- Expedite the development of a comprehensive disaster management plan specifically tailored to the agriculture sector.
- Build target-capacity initiatives aimed at enhancing the resilience of agriculture.
  - Consider partnerships with certified labs for research and monitoring of pesticides in products to pollutants in the aftermath of a disaster and the impacts on agriculture.
- Develop and institutionalize polices for integrated land use, especially in the most vulnerable to land degradation and climate change impacts.

### **ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

<b>Priorities for Action</b> 1, 2, 3, 4	<b>SDGs</b> 2, 9, 11, 13, 15, 17
<b>Global Target (s)</b> A, B, C, D, E, F	<b>Paris Agreement Articles</b> 7.1, 8.1
<b>Guiding Principle(s)</b> (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l)	<b>CDEMA CDM Priority Areas</b> 1 (1.2, 1.3, 1.4), 2 (2.2, 2.3), 3, 4 (4.2, 4.4)

NATIONAL RECOMMENDATIONS

# 9

## CONDUCT A FORMAL REVIEW OF CURRENT BUILDING CODES AND PROPOSE ADDITIONAL CODES TO CONSIDER CLIMATE CHANGE AND THE INCREASE IN THE NUMBER AND INTENSITY OF HAZARDS EXPECTED TO IMPACT SURINAME.

- Review the Act of Construction for urban Paramaribo to ensure incorporation of updated requirements.
- Institutionalize the recognition of the changing risk profile due to climate change; building codes should be treated as living documents to ensure they can meet changing demands.
- Establish a multi-stakeholder pathway for a systemic inspection of existing infrastructures, starting with the most critical, to make recommendations for retrofitting opportunities.
- Provide incentives to homeowners and businesses to retrofit poorly built or aging infrastructure, install safety measures and equipment, and increase overall resilience of existing buildings.
- Utilize and build upon similar initiatives and programs underway within the Eastern Caribbean nations regarding infrastructure requirements and retrofitting facilities.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

9, 11, 12, 13, 14, 15

**Global Target (s)**

A, B, C, D, E

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (e), (f), (g), (h), (i), (j), (k)

**CDEMA CDM Priority Areas**

1 (1.2, 1.3, 1.4), 2 (2.3), 3, 4 (4.2, 4.4)

# 10

## CONTINUE TO DEVELOP CAPACITY DEVELOPMENT IN DRR AND DM PLANS AND STRATEGIES TO DRIVE INITIATIVES TOWARDS ADVANCED CAPACITY.

- Build on internationally supported projects and programs to expand the quality of workforce readiness programs in DRR and DM.
  - Ensure linkage to key stakeholders such as the Suriname Red Cross and volunteers.
- Amplify engagement with international organizations providing first responder training in urban search and rescue (SAR), First Aid, HAZMAT and oil fire response.
- Support key sectors and communities to incorporate DRR into plan development, implementation, and maintenance.
- Engage vulnerable groups, indigenous populations, and underserved communities in DM plans and strategies with a focused effort on response/recovery, evacuation, and shelter considerations.
  - Ensure involvement of Chiefs of Indigenous and Tribal Peoples to ensure a balanced approach to cultural norms and integration of village plans into DRR strategies.
- Promote participation in annual regional or national disaster exercises for response partners in a national multi-year training and exercise plan.
  - Expand participation to include District, NGO, health and medical, and other public/private sector disaster risk management partners.

### ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

**Priorities for Action**

1, 2, 3, 4

**SDGs**

4, 11, 16, 17

**Global Target (s)**

A, C, D, F,

**CDEMA CDM Priority Areas**

1 (1.1, 1.2, 1.3, 1.4), 2 (2.4), 3, 4 (4.2, 4.4)

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (h), (i), (j), (k), (l), (m)

NATIONAL RECOMMENDATIONS

# 11

## STRENGTHEN COORDINATION AND COLLABORATION OF DM AND EMERGENCY SERVICE PROVISIONS ACROSS THE NATION.

- Pursue donor funding and/or public-private partnerships to support fortifying and expanding fire, police, health, and emergency medical services.
- Consider building a volunteer fire corps capable of rapid response in underserved areas until established fire stations can augment response capacity for significant incidents.
- Consider creating a federal urban Search & Rescue element with the ability to draw on and coordinate Army, Coast Guard, Fire Department, and Police resources in the event of a national disaster.
- Support and expand the Suriname Red Cross’ DRR and response awareness workshops to all districts.
- Engage with higher education institutions to develop and provide curriculums for advanced and vocational training in disaster risk management.
- Plan strategically for the expansion of fire and police department services to underserved and high risk/vulnerable areas.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

3, 4, 11, 17

**Global Target (s)**

A, C, D, F,

**CDEMA CDM Priority Areas**

1 (1.3, 1.4, 1.5), 2 (2.4), 3 (3.1), 4 (4.1, 4.2, 4.4)

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (h), (i), (j), (k), (l), (m)



# 12

## STRENGTHEN PRIMARY HEALTH CARE SERVICES' CAPACITY TO CONTINUE OPERATIONS UNDER EMERGENCY CONDITIONS AND DURING DISASTER RESPONSE OPERATIONS.

- Include in the Individual Healthcare Professions Act fair and equitable labor standards, work conditions, a wage series, drivers for individual and institutional professional development, and incentives for retention of staff in both public and private sector health care, as well as the ambulance services.
- Expand the General Practitioner Emergency Stations concept to other districts in accordance with best practices for hazard mitigation (location and construction).
- Leverage the General Practitioner Training Program to increase disaster response capacity by including comprehensive disaster preparedness and response planning in daily operations and training curriculum.
- Create and maintain a Strategic National Stockpile of medical supplies, vaccines, and durable medical equipment for use during a national emergency.
- Acknowledge health sector capacities and challenges in disaster management plans to anticipate health care needs of exposed populations during disasters.
- Collaborate with the Ministry of Health to provide emergency and disaster preparedness training and planning tools for health facility staff.

### ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

**Priorities for Action**

2, 3, 4

**SDGs**

3, 11, 16

**Global Target (s)**

A, C, D

**CDEMA CDM Priority Areas**

1 (1.3), 2 (2.3, 2.4), 3 (3.1, 3.2), 4 (4.2, 4.4)

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (h), (j), (k)

NATIONAL RECOMMENDATIONS

# 13

## STRENGTHEN ALL-HAZARDS MONITORING AND COMMUNICATIONS SYSTEMS AND DATA TRANSLATION INTO COMPREHENSIVE EARLY WARNING SYSTEMS (EWS) AND CAPABILITIES.

- Invest in advanced communication technology to address challenges in underserved areas, and to expand accessibility outside of metropolitan communities.
  - Support national telecommunication companies' efforts to expand mobile data connectivity and internet accessibility outside metropolitan areas. Partner with them to invest in a National Wireless Emergency Alert System for public alert and warning that can be used at either the national or district level as dictated by the emergency.
- Customize EWS to meet specific demographic needs of communities and ensure EWS efficacy in reaching exposed and vulnerable communities promptly.
- Enhance coordination between the Meteorological Service Suriname (MDS), the Hydraulic Research Division, the National Coordination Center for Disaster Relief, and District Governments regarding roles and responsibilities, information sharing, and collaboration opportunities.
- Continue partnership with the United Nations Development Programme to install Automatic Weather Stations and Automatic Rain Stations strategically throughout the country.
  - Expand the project to include increased Doppler radar coverage and flood gauges near communities that are at-risk of severe flooding.
- Conduct regular system evaluations of the notification and EWS to identify areas for improvement and ongoing effectiveness.
- Consider investing in an internal notification system to enable NCCR to activate and communicate with federal and district government disaster response partners.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

11

**Global Target (s)**

A, B, C, G

**CDEMA CDM Priority Areas**

1, 2 (2.1, 2.2, 2.3), 3 (3.1, 3.2), 4

**Guiding Principle(s)**

(a), (b), (c), (f), (g), (h), (i), (j)

NATIONAL RECOMMENDATIONS

# 14

## **ESTABLISH A CONSOLIDATED MULTI-AGENCY DISASTER RISK INFORMATION SYSTEM TO SUPPORT DATA SHARING AND EVIDENCE-BASED DECISION MAKING.**

- Leverage a GIS-based data management system to support identification of high-risk areas, priority needs, resource tracking, and damage/loss data to promote response and recovery capacity development.
- Invest in a NCCR-administered Disaster Management Information Management Software such as WebEOC or VEOCI to host disaster assessment information, department/agency/organization action and outcome reports, a request for assistance and information process, and a common operating picture (COP) display during disaster response.
- Establish a centralized digital data repository and promote sharing among government agencies, NGOs, academia, private sector, and civil society organizations to ensure that the latest and most authoritative data is available to all stakeholders and decision-makers.
- Enhance evidence-based decision-making by leveraging maps, models, and assessments to guide evidence-based decision making through all phases of disaster management and support scenario-based training, exercise planning, and preparedness activities.
- Utilize the NDPBA results to guide further advancement and enhancements to multi-hazard mapping and comprehensive risk and vulnerability assessment to contextualize and prioritize disaster risk reduction at the national and subnational levels.
- Train and exercise all relevant disaster management and response partners in the ministries, districts, civil society, and the private sector in use of the system, data, and analysis capabilities including mapping and modeling.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

11, 17

**Global Target (s)**

A, C, F

**CDEMA CDM Priority Areas**

1, 2 (2.2, 2.3, 2.4), 3 (3.1, 3.2), 4 (4.1, 4.2, 4.4)

**Guiding Principle(s)**

(a), (b), (d), (e), (f), (g), (h), (j), (k), (m)

NATIONAL RECOMMENDATIONS

# 15

**ESTABLISH WITHIN THE NCCR A CENTRALIZED DIGITAL REPOSITORY FOR DM SUPPLIES AND RESOURCES TO SUPPORT STRATEGIC DESIGNATION AND MAINTENANCE INVENTORIES FOR RESOURCE ALLOCATION AND TRACKING.**

- Adopt a logistics database that tracks equipment, facilities, and supply inventories throughout national ministries and local districts.
  - Standardize the reporting of DM supply inventories, encompassing all facilities and administrative levels.
  - Complete the inventory of existing facilities that are suitable for use as emergency shelters.
  - Invite districts, NGOs active in disasters, and select private sector partners to contribute to this database as appropriate.
  - Integrate the logistics database with the request for assistance process to enable resource allocation and tracking across sectors during a national disaster response.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

2, 3, 4

**SDGs**

3, 11, 16, 17

**Global Target (s)**

A, C, D, F

**CDEMA CDM Priority Areas**

1, 3 (3.1, 3.2), 4 (4.1, 4.2, 4.4)

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (h), (i), (k), (l), (m)



# 16

## **FORMALIZE AND EXPAND A NATIONAL, MULTIAGENCY DISASTER TRAINING AND EXERCISE (T&E) PROGRAM CENTRALIZED AND COORDINATED BY NCCR.**

- Create a master training schedule for training and exercise activities and oversee communication channels and social media platforms to augment visibility, facilitate information sharing, and optimize collaboration.
- Implement a digital record management system accessible to all participating agencies to formalize T&E schedules, participants, evaluations, and lessons-learned for both review and real-time updates.
- Ensure a standardized T&E reporting framework for consistent data collection to encompass key metrics, observation, and feedback mechanisms for formal performance evaluations and after-action reporting.
- Increase simulation and scenario-based exercises, particularly among response agencies, to enhance collaboration and capacity building across communities.
- Conduct joint training and exercises at both the national and local levels to identify strengths and weaknesses in disaster management response and recovery plans.

### **ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

4, 11, 16, 17

**Global Target (s)**

A, B, C, D, F

**CDEMA CDM Priority Areas**

1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.4), 3, 4 (4.1, 4.2, 4.4)

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (g), (h), (i), (k), (l), (m)

NATIONAL RECOMMENDATIONS

# 17

## EXPAND PUBLIC OUTREACH AND PREPAREDNESS CAMPAIGNS FOR NATURAL AND MANMADE HAZARDS AFFECTING SURINAME.

- Identify a NCCR public information liaison to build support for government action and coordinate with government agencies, NGOs, and the public.
- Conduct outreach campaigns promoting knowledge increasing government and public support and understanding on hazards and use of alert and warning system tools, evacuation and sheltering, and mitigation for disasters and emergencies.
- Support and expand the Suriname Red Cross’ disaster risk reduction and response awareness workshops in all districts. Align this training with NCCR’s efforts to build National Disaster Response Teams at the district level.
- Provide media training to all key officials and government leadership for effective action and risk communication.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

4, 5, 11, 11, 13, 16

**Global Target (s)**

A, B, C, D, E

**CDEMA CDM Priority Areas**

1 (1.1, 1.2, 1.3, 1.4), 2, 3, 4 (4.2, 4.3, 4.4)

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (g), (h), (i), (k)

# 18

## **BOOST COMMUNITY ENGAGEMENT IN DISASTER RISK REDUCTION BY INCLUDING COMMUNITY LEADERS AND VULNERABLE GROUPS IN THE RISK ASSESSMENT, PLANNING, AND MITIGATION PROCESSES.**

- Socialize risk and vulnerability assessment results and solicit feedback from community leaders to support validation and ensure that analyses reflect local experiences, challenges, and capacities.
- Include representatives from vulnerable groups including the disabled, elderly, indigenous, isolated, and economically constrained communities to strengthen support for specialized mitigation, preparedness, response, and recovery needs.
- Include considerations for gender-based vulnerabilities to reduce the disproportionate impacts of disasters on women and girls.
- Ensure that national and subnational plans identify vulnerable populations and anticipate barriers to access in health care, transportation, clean water, and energy before, during, and after disasters.
- Include risk assessment in annual subnational development planning to promote mitigation and build resilience.

### **ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

5, 6, 7, 10, 11, 12, 13, 14, 15, 16

**Global Target (s)**

A, B, C, D, E

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (e), (f), (g), (h), (i), (j), (k)

**CDEMA CDM Priority Areas**

1 (1.2, 1.3, 1.4), 2 (2.3), 3 (3.2), 4 (4.2, 4.4)

NATIONAL RECOMMENDATIONS

# 19

## ADOPT A COMPREHENSIVE STRATEGY TO BUILD PUBLIC HEALTH CAPACITY.

- Increase investment in improved water and sanitation infrastructure including wastewater containment and treatment to increase access to clean water, reduce exposure to disease, and increase resilience.
- Given the prevalence of flooding and illicit mining, institute measures to protect water supplies and reduce potential public health risks from exposure to untreated wastewater.
- Strengthen the capacity of National Environmental Authority and the National Institute for Environment and Development to monitor and regulate extractive industries to mitigate land degradation and contamination of groundwater, streams, and rivers.
- Promote enforcement of the National Environmental Framework Act 2020 to administer environmental protections such as water-quality testing and post-extraction restoration to protect the health and well-being of surrounding communities and the environment.
- Increase investments in community health education and outreach, including best practices for sanitary health, prevention of communicable and noncommunicable diseases, and reproductive and family health.
- Leverage the Infectious Disease Act of 2023 (when passed) to strengthen disease surveillance systems in collaboration with public and private healthcare providers, the World Health Organization, and other academic and private sector partners.
- Include a robust infectious disease surveillance capability as part of the 2025 vision for the Program Oprichten Public Health Authority Suriname (PHAS).

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2, 3, 4

**SDGs**

3, 6, 8, 11, 13, 14, 15, 16

**Global Target (s)**

A, B, C, D, E

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

**CDEMA CDM Priority Areas**

1 (1.2, 1.3, 1.4), 2 (2.3), 3 (3.1, 3.2), 4 (4.2, 4.4)



# 20

## PROMOTE COMPREHENSIVE STRATEGIES TO ADDRESS AND MITIGATE THE IMPACTS OF COASTAL AND INLAND FLOODING.

- Invest in high-resolution imagery for the development of a digital elevation model (DEM) for the entire country to support more accurate flood mapping and monitor shoreline changes.
- Strengthen protections for low-lying coastal environments through the implementation of strategies to reduce erosion, coastal inundation, saltwater intrusion, and coastline retreat.
- Strengthen, repair, and/or replace aging or damaged water control structures and systems. Ensure that mitigation measures consider future climate change impacts into new construction and retrofits.
- Increase efforts to regularly maintain waterways, drainage canals and spill ways to remove and prevent blockages.
- Leverage local indigenous knowledge and experience in flood control and management strategies.
- Provide incentives for homeowners, residents, businesses and industry for implementation of flood mitigation measures including non-structural enhancements that improve drainage, reduce soil erosion, protect vegetated slopes, and reduce water contamination.

### ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

**Priorities for Action**

1, 2, 3, 4

**SDGs**

6, 11, 13, 14, 15

**Global Target (s)**

A, B, C, D, E

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

**CDEMA CDM Priority Areas**

1 (1.2, 1.3, 1.4), 2 (2.3), 3, 4 (4.2, 4.4)

NATIONAL RECOMMENDATIONS

# 21

## MONITOR CHANGES IN POPULATION TO SUPPORT DISASTER MANAGEMENT PLANNING AND PROMOTE SUSTAINABLE DEVELOPMENT.

- Work closely with the General Bureau of Statistics to identify funding streams to support regular intercensal surveys to consistently assess changes in population to estimate exposure and anticipate response and relief requirements.
- Regularly review social, cultural, demographic and economic data to assess and anticipate local changes in vulnerability and resource constraints that could lead to conflict or increased risk.
- Ensure that health care, shelter, and emergency service resources are regularly reviewed and realigned based on the NDPBA to best support areas of high vulnerability and low coping capacity.

### ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

**Priorities for Action**

1, 3, 4

**SDGs**

11, 13, 14, 15

**Global Target (s)**

A, B, C, D, E

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (c), (d), (f), (g), (h), (i), (j), (k)

**CDEMA CDM Priority Areas**

1 (1.2, 1.3, 1.5), 2 (2.3), 3 (3.2), 4 (4.2, 4.4)

# 22

## PROMOTE YOUTH EDUCATION AND ENGAGEMENT IN DISASTER MANAGEMENT.

- Leverage the Suriname National Training Authority (SNTA) and the Foundation for labor Mobilization and Development (SAO) to promote and support quality training in disaster risk reduction and management at the vocational level.
- Support integration of disaster risk reduction education into public school curriculums, including the identification of hazards and vulnerabilities experienced in local communities, and preparedness and mitigation strategies.
- Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs, internships, and leadership academies.
- Prioritize youth education and training in disaster management and associated fields including environmental science, geography, health, and public policy to support a highly skilled workforce.

### ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

**Priorities for Action**

1, 2, 3, 4

**SDGs**

4, 11, 16, 17

**Global Target (s)**

A, B, C, D

**CDEMA CDM Priority Areas**

1 (1.1, 1.2, 1.3, 1.4), 2 (2.4), 3, 4 (4.2, 4.4)

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (g), (h), (i), (k)

NATIONAL RECOMMENDATIONS

# 23

## CONTINUE EFFORTS TO EXPAND ENERGY, TRANSPORTATION AND ICT SERVICES IN UNDERSERVED AREAS.

- Increase energy capacity through infrastructure expansion in areas with limited access to electricity or other energy sources. Increased access to electricity will facilitate access to information and offer expanded opportunities for those whose livelihoods rely on artisanal fishing, hunting, and bringing agricultural products to market.
- Support quality improvements and expansion of the transportation network to promote sustainable economic growth through greater accessibility of goods and services. Increases in transportation capacity facilitate expansion of other infrastructure (water, energy, ICT), and support emergency management activities before, during, and after a disaster.
- Continue efforts to expand access to telecommunications services in areas with poor penetration of information and communications technology (ICT) to facilitate timely receipt and dissemination of information before, during, and after a disaster.
  - In areas without ICT access, work with NGOs, indigenous leaders, schools, and other organizations to increase public awareness regarding hazards, natural warning signs, immediate response actions to protect life and safety, and preparedness measures.

### ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

**Priorities for Action**

1, 3, 4

**SDGs**

1, 2, 3, 6, 7, 9, 10, 11, 16

**Global Target (s)**

A, B, C, D

**CDEMA CDM Priority Areas**

1 (1.3), 3, 4 (4.2, 4.4)

**Guiding Principle(s)**

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)



# 24

## REASSESS PROGRESS MADE TOWARD DRR AND RESILIENCE GOALS.

- Update the NDPBA, including both the RVA and DMA analyses, to track progress toward reducing vulnerabilities, increasing coping capacities, and building disaster management capabilities in support of Suriname’s Disaster Risk Reduction and Sustainable Development Goals for a more resilient nation.

**ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED**

**Priorities for Action**

1, 2

**SDGs**

11

**Global Target (s)**

E, F

**Paris Agreement Articles**

7.1, 8.1

**Guiding Principle(s)**

(a), (b), (c), (d), (f), (g), (h), (i), (j), (k), (l)

**CDEMA CDM Priority Areas**

1, 2, 3 (3.2), 4 (4.4)

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# 5-YEAR PLAN



## SURINAME NATIONAL RECOMMENDATIONS

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
<b>RECOMMENDATION 1</b>				
Expand comprehensive hazard modeling capabilities to update and identify additional exposure zones that consider the unique characteristics and environmental conditions of Suriname.				
<b>RECOMMENDATION 2</b>				
Review and update the Draft Disaster Management Law to strengthen the legal instruments necessary for effective disaster management.				
<b>RECOMMENDATION 3</b>				
Strengthen the annual budget to directly support the NCCR with a focus on proactive funding structures and program requirements to meet the predicted escalation in climate-related hazards affecting Suriname.				
<b>RECOMMENDATION 4</b>				
Establish a national climate and disaster risk financing strategy to support long-term national economic and financial stability while adapting to climate change.				
<b>RECOMMENDATION 5</b>				
Collaborate with the National Planning Office to coordinate and align multi-agency and cross-sector initiatives related to hazard mitigation, disaster risk reduction, climate change adaptation, and sustainable development to prevent duplication of effort and resources.				
<b>RECOMMENDATION 6</b>				
Conduct a comprehensive planning audit to identify necessary plans that do not exist and update existing plans that have become outdated.				
<b>RECOMMENDATION 7</b>				
Strengthen the institutional capacity of the NCCR and District DM capacity.				
<b>RECOMMENDATION 8</b>				
Fortify Suriname's agricultural sector against climate-related challenges, fostering sustainable practices, resilient infrastructure, and adaptive strategies to ensure continuity and productivity in the face of adverse events.				

# 5-YEAR PLAN

## SURINAME NATIONAL RECOMMENDATIONS



YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
	<b>RECOMMENDATION 9</b>			
	Conduct a formal review of current building codes and propose additional codes to consider climate change and the increase in the number and intensity of hazards expected to impact Suriname.			
		<b>RECOMMENDATION 10</b>		
		Continue to develop capacity development in DRR and DM plans and strategies to drive initiatives towards advanced capacity.		
		<b>RECOMMENDATION 11</b>		
		Strengthen coordination and collaboration of DM and emergency service provisions across the nation		
		<b>RECOMMENDATION 12</b>		
		Strengthen primary health care services' capacity to continue operations under emergency conditions and during disaster response operations.		
		<b>RECOMMENDATION 13</b>		
		Strengthen all-hazards monitoring and communications systems and data translation into comprehensive early warning systems (EWS) and capabilities.		
			<b>RECOMMENDATION 14</b>	
			Establish a consolidated multi-agency disaster risk information system to support data sharing and evidence-based decision making.	
			<b>RECOMMENDATION 15</b>	
			Establish within the NCCR a centralized digital repository for DM supplies and resources to support strategic designation and maintenance inventories for resource allocation and tracking.	
			<b>RECOMMENDATION 16</b>	
			Formalize and expand a national, multi-agency disaster training and exercise (T&E) program centralized and coordinated by NCCR.	



# 5-YEAR PLAN



## SURINAME NATIONAL RECOMMENDATIONS

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
		<b>RECOMMENDATION 17</b>		
		Expand public outreach and preparedness campaigns for natural and manmade hazards affecting Suriname.		
		<b>RECOMMENDATION 18</b>		
		Boost community engagement in Disaster Risk Reduction by including community leaders and vulnerable groups in the risk assessment, planning, and mitigation processes.		
		<b>RECOMMENDATION 19</b>		
		Adopt a comprehensive strategy to build public health capacity.		
			<b>RECOMMENDATION 20</b>	
			Promote comprehensive strategies to address and mitigate the impacts of coastal and inland flooding.	
			<b>RECOMMENDATION 21</b>	
			Monitor changes in population to support disaster management planning and promote sustainable development.	
			<b>RECOMMENDATION 22</b>	
			Promote youth education and engagement in disaster management.	
			<b>RECOMMENDATION 23</b>	
			Continue efforts to expand energy, transportation and ICT services in underserved areas.	
				<b>RECOMMENDATION 24</b>
				Reassess progress made toward DRR and resilience goals.

# 5-YEAR PLAN

## SURINAME NATIONAL RECOMMENDATIONS







**NDPBA**

# **SURINAME DISTRICT RISK PROFILES**

**SUBNATIONAL ASSESSMENT RESULTS**



# DISTRICT RISK PROFILES

The subnational report developed for each district offers a more detailed understanding of risk in Suriname. These are provided separately from this report (linked below), and include drivers of vulnerability, coping capacity, and resilience; a comparison of each district within overall country; and strategic, data-driven, actionable recommendations.

**Download Here:**

<https://www.pdc.org/wp-content/uploads/NDPBA-Suriname-Subnational-Profiles-merge.pdf>





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