

# Cabo Verde Emergency Preparedness and Response Diagnostic: Building a Culture of Preparedness



financed by



THE GOVERNMENT  
OF THE GRAND DUCHY OF LUXEMBOURG

through



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

© 2020 International Bank for Reconstruction and Development / The World Bank

1818 H Street NW

Washington DC 20433

Telephone: 202-473-1000

Internet: [www.worldbank.org](http://www.worldbank.org)

This report is a product of the staff of The World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR). The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors or the governments they represent. The World Bank and GFDRR does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

### **Rights and Permissions**

The material in this work is subject to copyright. Because the World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

# List of Abbreviations

AAC	Civil Aviation Agency
AHBV	Humanitarian Associations of Volunteer Firefighters
ASA	Air Safety Agency
CAT DDO	Catastrophe Deferred Drawdown Option
CNOEPC	National Operations Centre of Emergency and Civil Protection
CNPC	National Council for Civil Protection
CV	Cabo Verde
DMIS	Disaster Management Information System
DPOT	Direction of Planning, Operations, and Telecommunications
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECOWAS	Economic Commission for West African States
EERT	ECOWAS Emergency Response Team
EOC	Emergency Operations Center
EP&R	Emergency Preparedness and Response
EU	European Union
FNE	National Emergency Fund
IASC	Inter-Agency Standing Committee
INGT	National Land Management Institute
INMG	National Institute of Meteorology and Geophysics
INSP	National Institute for Public Health
IOM	International Organization for Migration
MIOTH	Ministry of Infrastructure
NGO	Non-Governmental Organization
OMCV	Women Organization from Cabo Verde
OSOCC	On-site Operations and Coordination Center
PPI	Prepared International
R2R	Ready2Respond
RCCV	Red Cross Cabo Verde
SIDS	Small Island Developing States
SINAGRED	National System for Disaster Risk Management
SNPCB	National Service for Civil Protection and Fire Brigades
SVEI	National Surveillance of Epidemics and Investigation
TTX	Table-top exercises
UN	United Nations
UNDAC	United Nations Disaster Assessment and Coordination team
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

# Index

<b>List of Abbreviations</b>	<b>3</b>
<b>Acknowledgments</b>	<b>7</b>
<b>Introduction</b>	<b>8</b>
General Information on Cabo Verde	8
Introduction of the Assignment	11
Execution of the Assessment	12
Data Collection in Cabo Verde	15
Activities of the International Community in Support of the EP&R System	17
<b>Assessment Findings</b>	<b>18</b>
Overall EP&R System	18
<b>COMPONENT 1: Legal &amp; Institutional Accountabilities</b>	<b>22</b>
Criterion 1.1: Legislated Accountability	23
Indicator 1.1.1: Emergency Management Legislation	23
Indicator 1.1.2: Delegation of Authority	24
Indicator 1.1.3: Agency-Specific Response Plans	25
Indicator 1.1.4: Critical Infrastructure Assurance Program	27
Criterion 1.2: Financial Preparedness	28
Indicator 1.2.1: Financial Instruments for Emergency Response and Early Recovery	28
Indicator 1.2.2: Emergency Procurement Systems and Frameworks	29
Indicator 1.2.3: Public Financial Management Policies and Procedures	30
Indicator 1.2.4: Personal Financial Risk Transfer Programs	30
<b>COMPONENT 2: Information</b>	<b>31</b>
Criterion 2.1: Community Engagement	32
Indicator 2.1.1: Local-Level Volunteer Emergency Responders	32
Indicator 2.1.2: Community Education on Local Emergency Preparedness and Response	37
Indicator 2.1.3: Support to Small-Scale, Community-Led Mitigation Works	38
Indicator 2.1.4: Provision of Education and Tools for Local Leaders to Advocate for Resources, Policies, and Programs	38
Criterion 2.2: Early Warning Systems	40
Indicator 2.2.1: Functioning Monitoring / Surveillance Programs	40
Indicator 2.2.2: Evidence-based and technologically sound program to analyze data gathered by the monitoring system	41
Indicator 2.2.3: Capacity to develop simple, accurate, and real-time warning messages to people at risk (with constructive and reasonable response actions)	42

Indicator 2.2.4: Functional and Multimodal Early Warning Distribution System	42
Criterion 2.3: Information Management Systems	43
Indicator 2.3.1: Disaster Management Information System (DMIS) in Support of Emergency Management	43
Indicator 2.3.2: Program Budget Allocations	44
Indicator 2.3.3: DMIS Capable of Integrating GIS-generated Data	44
Indicator 2.3.4: DMIS Capable of Integrated Early Warning System Data	44
Criterion 2.4: Geomatics	45
Indicator 2.4.1: GIS Capacity Available	45
Indicator 2.4.2: Comprehensive Set of Geo-referenced Data Layers	45
Indicator 2.4.3: Standards for the Compilation and Interpretation of Geo-referenced Data	45
Indicator 2.4.4: Standardized and Periodic Processes for the Update of Data Layers	45
<b>COMPONENT 3: Facilities</b>	<b>47</b>
Criterion 3.1: Emergency Operations Centers	47
Criterion 3.2: Training Centers	51
Criterion 3.3: Logistics Warehouses and Response Stations	53
Criterion 3.4: Shelters and Open Spaces	56
<b>COMPONENT 4: Equipment</b>	<b>58</b>
Criterion 4.1: Emergency Social Services	59
Indicator 4.1.1: Medical Responders, Pre-hospital Healthcare and Medical Transportation Resources for Casualty Care	59
Indicator 4.1.2: Disease Prevention and Core Services	60
Indicator 4.1.3: Social Services Programs	60
Indicator 4.1.4: Mortality Management During Emergencies	60
Criterion 4.2: Information and Communications Technology	61
Indicator 4.2.1 and 4.2.2: Availability and Interoperability of Radio Communications in Support of Emergency Operations	61
Indicator 4.2.3: Broadband Network Connectivity for EOC Use	61
Indicator 4.2.4: Protection and Rapid Recovery of Public and Private Sector Communication	61
Criterion 4.3: Hazard-Specific Response Capacity	62
Criterion 4.4: Urban Firefighting and Technical Rescue	66
<b>COMPONENT 5: Personnel</b>	<b>69</b>
Criterion 5.1: Incident Organization Structures	70
Criterion 5.2: Training and Knowledge Building	71
Criterion 5.3: Exercises and Drill	73
Criterion 5.4: International Support Coordination	76

<b>Summary of Diagnostic Conclusions</b>	<b>77</b>
Critical and Conditional Factors for Development	78
Tipping-Point Investment Opportunities	79
Recommendations per Component	80
<b>Appendix A: Best Practice in Volunteering: The Red Cross</b>	<b>86</b>
<b>Maps</b>	
Map 1: Map of the Republic of Cabo Verde.	8
<b>Figures</b>	
Figure 1: Statistics on the Republic of Cabo Verde.	9
Figure 2: Methodological Characteristics of the World Bank Group Ready 2 Respond Rapid Diagnostic.	11
Figure 3: An overview of the stakeholders participating in the Diagnostic.	13
Figure 4: Overview of field assessments on different Islands.	16
Figure 5: Diagnostic Results for the EP&R system in Cabo Verde.	18
Figure 6: R2R results for both criteria of the component.	22
Figure 7: Organigram of Cabo Verdean EP&R Stakeholders on various levels.	26
Figure 8: 2019 budget of the SNPCB	28
Figure 9: R2R results for all four criteria of the component.	31
Figure 10: Non-governmental actors with strong community outreach in Cabo Verde.	35
Figure 11: R2R results are shown for all four criteria of the component.	47
Figure 12: Possible Humanitarian Supply Chain Set-Up.	54
Figure 13: R2R results for all four criteria of the component.	58
Figure 14: R2R results for all four criteria of the component.	69
Figure 15: Diagnostic Results for the EP&R system in Cabo Verde.	77
Figure 16: Infographic: Maturing the EP&R system in Cabo Verde.	78
<b>Tables</b>	
Table 1: Average scores per diagnostic component.	19
Table 2: Overview of the corps of professional and volunteer firefighters (SNPCB).	33
Table 3: Number of Fires on the islands of Cabo Verde between 2005 and 2010.	63
Table 4: The highest mountains on each of the inhabited islands.	67

# Acknowledgments

The World Bank would like to thank the Government of Cabo Verde for the partnership and strong support throughout this project. We thank the many participating interview partners for their invaluable inputs and guidance. This project is part of the World Bank Technical Assistance under the Disaster Risk Management Development Policy Financing with a Catastrophe Deferred Drawdown Option (Cat DDO).

This work was implemented by Prepared International (PPI) under the oversight and coordination of a World Bank team consisting of Oscar Ishizawa, Robert Reid and Elad Shenfeld, with the technical support from Rossella Della Monica and Joaquin Muñoz Díaz. Edson Medina facilitated local coordination and logistics for the Preparedness International (PPI) team's mission in June 2019 to collect data and information for the assessment. Pietro Spigai designed the report. The team also received inputs and guidance from development partners during the technical missions and final presentation of this work.

This report and associated activities were financed by the Government of the Grand Duchy of Luxembourg through the Global Facility for Disaster Reduction & Recovery (GFDRR).

# Introduction

## General Information on Cabo Verde

Cabo Verde is a small island-nation located off the coast of West Africa. The archipelago has ten islands, nine of which are inhabited, as well as some islets. The country covers an area of 4,033 square kilometers and had a population of 560,349 in 2019. The Windward Islands are Santo Antão, São Vicente, Santa Luzia, São Nicolau, Sal, and Boa Vista. The leeward group comprises Maio, Santiago, Fogo, and Brava. The islands differ in terms of geology and morphology<sup>1</sup>.

Over the past 25 years, Cabo Verde has undergone significant economic and social progress, which resulted, in 2015, in its reaching middle-income country status. The country's main economic sectors are tourism and agriculture, whereby one third of its population depends on agriculture for livelihoods. Tourism has become the main driver of economic growth with a 4% GDP increase in 1999, to an estimation of 21% in 2014. Poverty rates have significantly dropped between 2001 and 2015.

Much like other Small Island Developing States (SIDS), Cabo Verde faces several risks due to its location and geography. These risks are exacerbated by rapid rural-urban migration, continuous land degradation, and climate change. In particular, its two main economic sectors are highly vulnerable to adverse impacts of climate change and natural hazards.

**First**, the agricultural sector is highly dependent on water availability and management, and would be directly affected by the predicted climate change scenarios, namely 1) increased drought frequency and severity; 2) increased rainfall variability, including more frequent events of short and intense rains, causing flash-floods in several catchment areas; and 3) progressive sea level rise and salt water intrusion into freshwater reservoirs closer to coastal areas.<sup>2</sup>

**Second**, the tourism industry would be affected by coastal erosion, which is exacerbated by sand mining for construction<sup>3</sup> and other extreme weather events, and a reduction would negatively affect the national economy and poverty rates. The National Adaptation Program of Action on Climate Change, drafted by the Ministry of Environment and Agriculture together with UNDP, perceives Cabo Verde as “an environment system with a high degree of fragility and vulnerability facing the occurrence of extreme natural phenomena.”<sup>4</sup> It is expected that the poorest part of the population, who do not have the necessary coping capacities, will be most affected.



**Map 1:** Map of the Republic of Cabo Verde.  
Source: <https://earthexplorer.usgs.gov/>

<sup>1</sup> Government of Cabo Verde, Post-Disaster Needs Assessment (PDNA) Report, Fogo Volcanic Eruption, 2014-2015.

<sup>2</sup> UNDP GEF PIMS no. 4091, Government of Cabo Verde, National Institute for the Management of Water Resources – INGRH, Building adaptive capacity and resilience to climate change in the water sector in Cabo Verde, July 5, 2015, p. 1.

<sup>3</sup> Government of Cabo Verde, Post-Disaster Needs Assessment (PDNA) Report, Fogo Volcanic Eruption, 2014-2015.

<sup>4</sup> National Adaptation Programme of Action on Climate Change 2008-2012, Ministry of Environment and Agriculture/UNDP, p. 3.

REPÚBLICA DE CABO VERDE			
Area	4,003 sq km	Capital	Praia
Flag		Population	531,239
Discovery Date	1460	Life Expectancy	Men 71.8 (years) Women 80 (years)
Independence from Portugal	5 July 1975	Official language	Portuguese
		National Language	Crioulo (Cape Verdean)
		Currency	Cape Verdean Escudos (ECV)
		GDP (total)	\$4.323 billion
		GDP (per capita)	\$7,728
ISLAND	MUNICIPALITY		
Santo Antão	Ribeira Grande – Paul – Porto Novo		
São Vicente	São Vicente		
São Nicolau	Ribeira Brava – Terrafal de São Nicolau		
Sal	Sal		
Boa Vista	Boa Vista		
Maio	Maio		
Santiago	Terrafal – Santa Catarina – Santa Cruz – Praia – São Domingos – São Miguel – São Salvador do Mundo – São Lourenço dos Órgãos – Ribeira Grande de Santiago		
Fogo	Mosteiros – São Filipe – Santa Catarina do Fogo		



Figure 1: Statistics on the Republic of Cabo Verde.<sup>5</sup>

**Third**, Cabo Verde is exposed to a variety of natural hazards, ranking it 32<sup>nd</sup> out of 177 countries in the World Risk Report 2017 due to its susceptibility, vulnerability, and level of adaptive capacities. Cabo Verde is exposed to the following natural hazards:

1. Extreme weather and climate-related events (such as droughts and tropical cyclones);
2. Flash floods and landslides;
3. Earthquakes;
4. Volcanic eruptions; and
5. Epidemics.

In the past ten years, the country has suffered from the following adverse natural event:

- Hurricane Fred in 2015, causing flooding and heavy rainfall on many islands (estimated damage: US\$2.5 million);
- Volcanic Eruption on Fogo Island, lasting for 88 days in 2014-2015 (estimated damages: US\$28 million);
- Sustained low levels of precipitation in 2017 leading to severe drought. As a result, dams were depleted and harvest failed, affecting the agriculture sector and resulting in a further increase in rural-urban migration;
- Regular floods on several islands: São Nicolau (2009), Boavista (2012), São Miguel (2013 – estimated damage: US\$2.6 million), and Santo Antão (2016 – estimated damage: US\$7million); and
- Epidemics: in 2009-2010, the first Dengue epidemic; in October 2015 a Zika virus outbreak; and in mid-2017, a Malaria outbreak with 447 cases.<sup>6</sup>

<sup>5</sup> Instituto Nacional de Estatística, Anuário Estatístico Cabo Verde. 2016 p. 29

<sup>6</sup> World Bank, Cabo Verde – Disaster Risk Management Development Policy Financing with a Catastrophe Deferred Drawdown Option (Cat DDO) (P160628), Technical Mission, March 19-23, 2018, Aide Memoire, p.3

**Fourth**, adding to the country's exposure to natural hazards and climate change-related events, Cabo Verde has a lack of coping capacity in terms of emergency preparedness and response (EP&R).



**Picture 1:** Agriculture in the crater of a volcano on Santo Antão. According to the INMG, There is a real risk of a massive volcanic eruption on the island. Not all local authorities recognized this risk during the interviews.

The 2019 INFORM index ranks Cabo Verde 136<sup>th</sup> out of 191 countries. The index, a collaborative project of the Inter-Agency Standing Committee and the European Commission, combines three dimensions — hazards and exposure, vulnerability, and lack of coping capacity. Whereas the score for hazard and exposure is heavily influenced by the probability of agricultural drought, Cabo Verde's score is mainly due to higher scores in terms of vulnerability (aid dependency and inequality), and in a lack of coping capacity (access to health care, governance, and DRR).<sup>7</sup>

### Emergency Preparedness and Response in Cabo Verde

The Government of Cabo Verde has increasingly realized its vulnerabilities and the need to strengthen its Emergency Preparedness and Response (EP&R) system in order to protect public safety and investment across development sectors. The damages sustained by recent emergencies, including the volcanic eruption in 2014-2015 and heavy rainfall in 2015, were significant and put a growing burden on the State budget. The total value of the eruption effect in terms of physical damage and production loss was estimated at (CVEsc) 2,832.30 million, the equivalent to US\$28 million.<sup>8</sup>

In response, the government adopted in 2018 an overarching policy framework, namely a National Strategy for Disaster Risk Reduction and Disaster Recovery Framework.<sup>9</sup> One of the seven priority areas in this Strategy is Disaster Preparedness and Response, which consists of four main measures:

1. Reinforcing capacities for the design and implementation of contingency plans;
2. Developing a multi-hazard early warning system;
3. Reinforcing technical and operational capacities for response; and
4. Raising public awareness of risks.

However, the implementation of the national strategy is curbed by a number of challenges in the field of EP&R. **As such, the National Service for Civil Protection and Fire Brigades (SNPCB) has requested technical assistance for the implementation of the strategy.**

In Cabo Verde, ten percent of the State budget is allocated to the municipalities, with regulations in place which define budget allotment through various indicators (for example, size of population, size of municipality, poverty rates). By law, municipalities are not compelled to allocate part of the budget to EP&R or crisis management manners.

<sup>7</sup> INFORM INDEX 2019, <https://drmkc.jrc.ec.europa.eu/inform-index/Results-and-data/INFORM-2019-Results-and-data#maps> (last consulted on May 16, 2020).

<sup>8</sup> Government of Cabo Verde (2015): Post-Disaster Needs Assessment – Fogo Volcanic Eruption 2014-2015.

<sup>9</sup> Official Document of Cabo Verde, National Strategy for Disaster Risk Reduction and the National Post-Disaster Recovery Framework, Boletim Oficial, I Serie, Numero 66, Saturday, October 20, 2018.

## Introduction of the Assignment

The World Bank supports the Government of Cabo Verde in a wide range of activities, recognizing that any impact caused by an adverse natural event would bring about loss and damage to recent development gains and undermine future developments. As such, the World Bank seeks to support the country in strengthening its EP&R system. In June 2019, the World Bank Board of Directors approved a Disaster Risk Management Development Policy Financing with a Catastrophe Deferred Drawdown Option (Cat DDO), in the form of a contingent line of credit that can be accessed after a declaration of State of Calamity. In the framework of the development of this instrument, the World Bank has supported different line ministries and further actors in the field of preparedness. Such achievements, once updated, have enhanced the flexibility and capacity of the Cabo Verdean Government to better act and rebuild in the event of a disaster.

The present diagnostic is to be considered as a continuation of past efforts aimed at strengthening EP&R capacities in Cabo Verde. An in-depth investigation of the domestic disaster risk management system's current status quo was expected to identify caveats and potential future pathways for EP&R in Cabo Verde.

### THE READY 2 RESPOND (R2R) RAPID DIAGNOSTIC METHODOLOGY

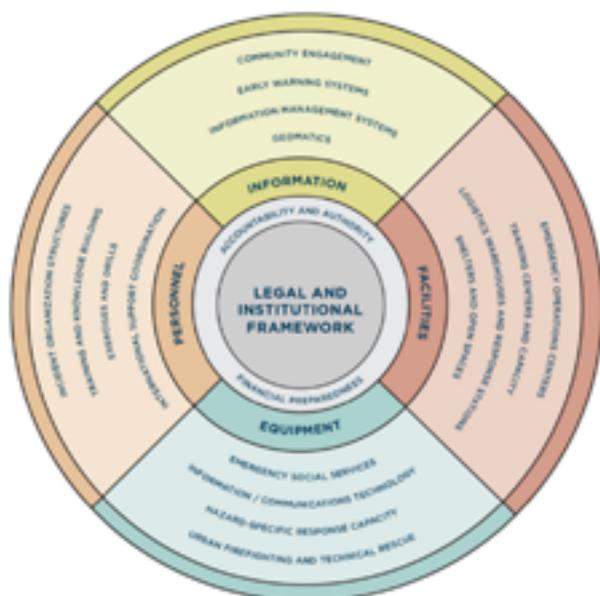


#### Aim

Improving resilience mechanisms at the national, sub-national and city levels, safeguarding development gains by informing investment decision-making in the field of EP&R system based on quantitative data.

The Diagnostic was established to be an objective, data-driven foundation to engage country counterparts on emergency preparedness and response development projects. The methodology builds on five core components of emergency preparedness and response: Legal and Institutional Frameworks; Information; Facilities; Equipment; Personnel.

Each component was measured by a set of criteria that addresses a particular aspect of a functional EP&R system for Cabo Verde. In addition to each criterion, indicators were developed to score a given criterion. The Diagnostic included five components within total **18 criteria and 72 indicators**.



**Figure 2:** Methodological Characteristics of the World Bank Group Ready 2 Respond Rapid Diagnostic.

#### Methodological Advantages

- Data collection on a wide range of components, criteria, and indicators aims at resulting in a comprehensive assessment of the EP&R system, leading to the identification and prioritization of actual investments to be done. The diagnostic methodology was designed to engage a wide variety of country counterparts, whereby the opinions and perspectives of all relevant stakeholders should contribute to an overall picture of the situation. This has to be considered together with an in-depth background research and data analysis prior to the mission's fielding.
- Since the results of the diagnostic were quantitative in the first place, the findings were carried out to be replicable and comparable. All information needed to be verified and compared. This was expected to benefit the accuracy, validation, and completeness of the findings.
- In addition to the quantitative diagnostic, the team did a qualitative assessment, detailing questions on the specific situation in Cabo Verde that contributed the overall diagnostic.

The team followed the usual **three-phase approach of the Diagnostic:**

Introduction and Data Collection	Data Validation and Analysis	Report Development and Discussion Support
<ul style="list-style-type: none"> <li>• Introduction of the concept to the Government and confirmation of buy-in</li> <li>• Use of an expert team to undertake data collection</li> </ul>	<ul style="list-style-type: none"> <li>• All collected data was validated for accuracy, understanding, and completeness</li> <li>• Data was analysed and contextualized</li> <li>• Initial findings were discussed with the World Bank Diagnostic lead and country counterparts</li> </ul>	<ul style="list-style-type: none"> <li>• Formalization of Diagnostic results in detailed report, including “tipping point” opportunities</li> <li>• Follow-on discussions between World Bank and country counterparts (and possible external consultants)</li> <li>• Development of Investment and Procurement Report (as a separate document, based on this report)</li> </ul>

## Execution of the Assessment

### Step 1: Pre-mission Preparations

#### Step 1.1: Literature and Document Review

The first step in the process was to conduct a **review of academic and gray literature** to explore the organizational structure and background of Cabo Verde’s EP&R system.

The inception phase included a **stakeholder analysis**. In a preliminary stakeholder map, key actors were separated into levels, ranging from macro, encompassing international organizations with representation and influence on Cabo Verde; meso, consisting of actors at headquarter/capital level in Cabo Verde; and micro, civil society representatives and vulnerable groups.

#### Step 1.2: Mission Planning

Consultations were held with the SNPCB during the inception phase to prepare and plan the field mission. A key factor was the availability of the relevant stakeholder representatives. Close consultations continued during and after the field phase, allowing for an effective approach to data collection, and for open discussion of the challenges and opportunities related to the methodology and the diagnostic.

## Step 2: Cabo Verde Field Mission

During the mission, the main objective was to gather data through primary data collection with stakeholders. The mission included visiting capital stakeholders, the island of Santiago, and four of the other islands identified in Step 1.2.

In total, the team collected information from 154 informants during the mission. The team used different assessment methods in order to carry out its task. These included:

- Interviews with various national (from both public and private sectors) and international actors of the (emergency) management system at all levels;
- Participatory network analysis with actors at macro and meso levels;
- Field visits to previously identified hazard-prone areas, and focus group discussions with vulnerable groups and civil society representatives at the micro level;
- Table-top exercises at both decision-making and operational levels;
- Visits to physical infrastructures of the national emergency management structure;
- Observation of simulation exercises;
- Review and analysis of official documentation and relevant secondary reports; and
- Participation in presentations and other meetings.

The high number of key informants provided the needed insight, but at the same time, also created a stronger ownership of the process with the Government, the institutions, and the informants of Cabo Verde.

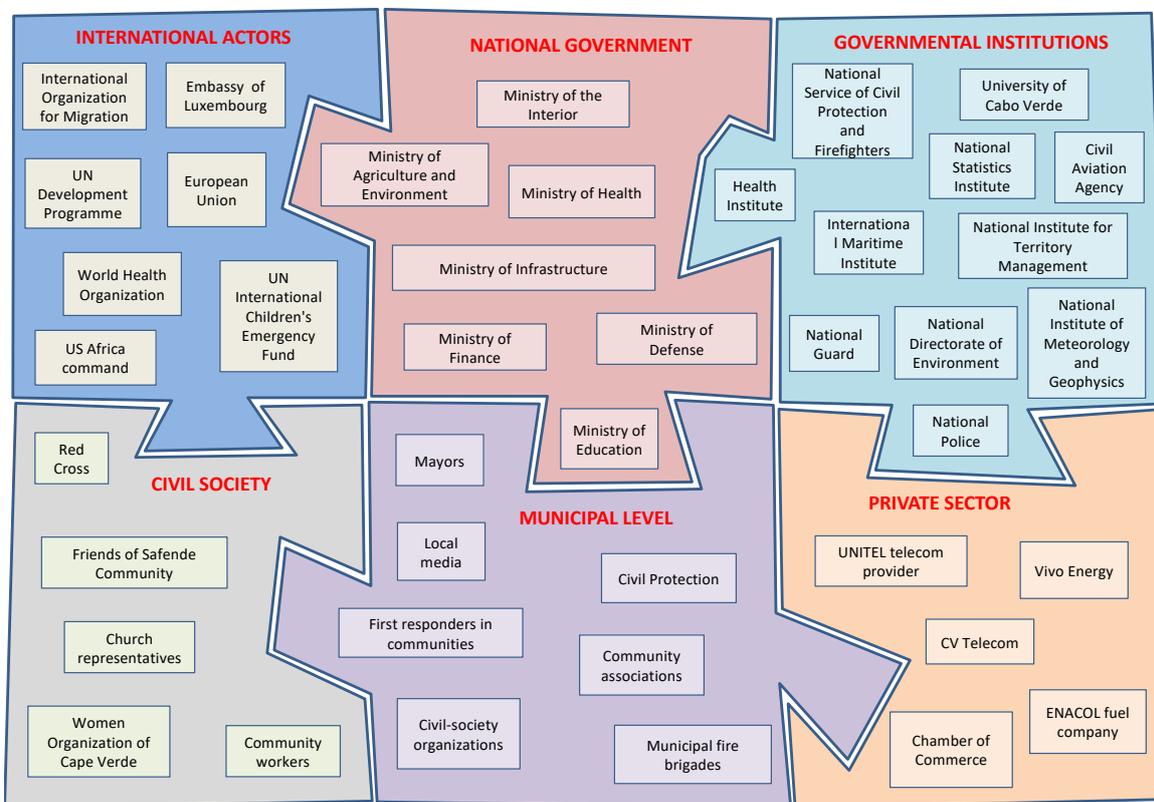


Figure 3: An overview of the stakeholders participating in the Diagnostic.

### Step 3: EP&R Diagnostic Report

The R2R Diagnostic framework is based on all five components, with each four indicators of emergency preparedness as the backbone of the report's structure. The report identifies progress to date, the strengths of key stakeholders, as well as remaining gaps. The report also puts forth inexpensive and quick wins which, during the diagnostic process, were identified to certain EP&R system capabilities as part of the Investment plan to improve the capabilities of the State's EP&R system. Finally, it includes actionable recommendations to address identified gaps.

### Step 4: EP&R Investment Plan

Based on the Diagnostic report, a separate sequenced investment plan to strengthen the EP&R system in Cabo Verde was developed. The plan's design followed the rationale of continuously building on the current strengths of the EP&R system, as well as developing capabilities in those components assessed as weaker, and to establish a future pathway toward a more resilient EP&R structure for Cabo Verde.

### Step 5: Final Presentations and Workshop

A final presentation was convened in Praia in November 2019 to present the outcomes of the diagnostic report to the Government of Cabo Verde, civil protection actors and development partners. Following discussions took place with the SNPCB to discuss next steps in the implementation of the investment roadmap. In additions, meetings with development partners took place to discuss recommendations outlined in the report.<sup>10</sup>



**Picture 2:** Village Palmeira on Sal island, Cabo Verde.  
Source: iStock

---

<sup>10</sup> [http://www.rtc.cv/index.php?paginas=13&id\\_cod=84912](http://www.rtc.cv/index.php?paginas=13&id_cod=84912)

## Data Collection in Cabo Verde

A variety of data collection tools were used in the field research phase in order to gather as much data as possible to complete the Diagnostic, while allowing for data verification and comparison.

The multi-method research design encompassed the following methodology:

- 1. Engagement with SNPCB:** Close consultations with the main counterpart in the country were of utmost importance in terms of ownership and effectiveness. At the end of the field mission, the team presented the findings of the mission to SNPCB to allow for comments and feedback, and to make sure that data collection throughout country had been as comprehensive as possible.
- 2. Key Informant Interviews:** The main data collection tool was key informant interviews, to collect information according to the Diagnostic methodology. The initial stakeholder analysis in the inception phase provided a first overview of which stakeholder was expected to provide which information, pertaining to which component. This mapping continued in the early days of the field mission. Interviews were carried out with informants from both a technical and a more political level.
- 3. Two Table-top Exercises (TTX):** In the scope of the study, two TTXs were facilitated in-country: one focused on the decision-making level, and the other focused on the operational level. Following multiple disaster scenarios, participants had been asked to describe the early warning messages and alert systems across the responsible organizations; develop a mass evacuation plan including evacuation from the one island to the other, IDP reception, consular issues, etc.; mapping the rescue phase during both disaster scenarios, including requesting international assistance (bilaterally and through different networks, like diplomatic channels, the UN and EU, the possible application of the cluster approach) and many more tasks were provided to participants from a wide variety of organizations involved in the overall EP&R system, from international actors to community NGOs. This provided the expert group with further insight into the status of the system on Cabo Verde and filled gaps in the Diagnostic.
- 4. Focus Group Discussions:** Focus group discussions were facilitated, so as to conjoin key stakeholders of the Cabo Verdean EP&R system during island visits. One was planned to be led with civil society representatives in the first week of the mission. The second one took place on the islands visited during the second week. The discussions allowed for an immediate verification of the information shared, whereby focus group discussion participants challenged and/or confirmed each other's opinions. The Diagnostic was used as the basis to facilitate these focus group discussions, whereby relevant criteria and indicators were transformed into open questions. The results of the focus group discussions were summarized in the template provided in the Diagnostic, and linked to the relevant Diagnostic elements.
- 5. Field trips:** The coordination center and dispatch center, as well as critical infrastructure, including ports, airports, and dams among others were visited on five different islands. These site visits allowed data collection and provided necessary first-hand information regarding the status of the EP&R system in the country.

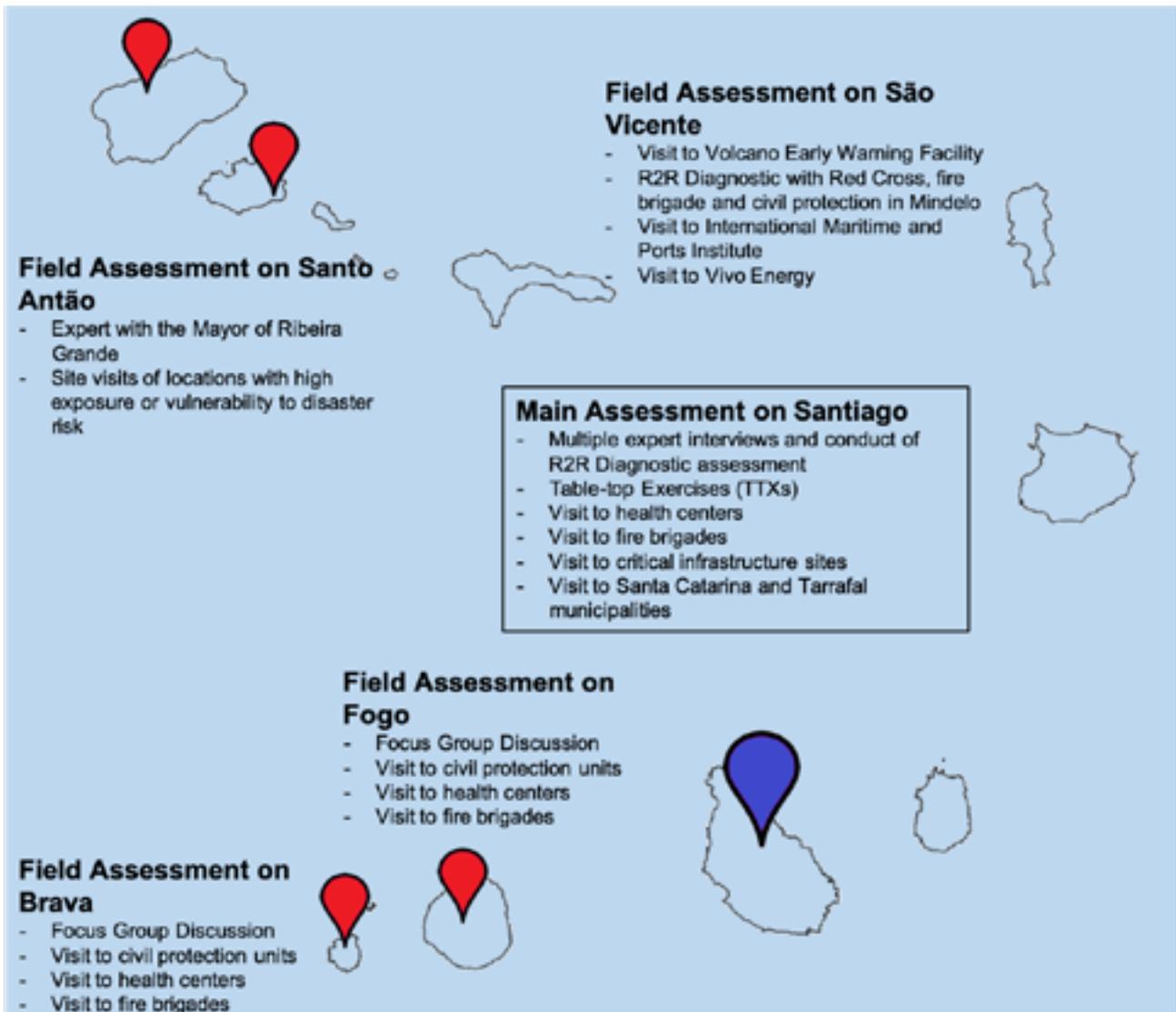


Figure 4: Overview of field assessments on different Islands.

## Activities of the International Community in Support of the EP&R System

Overall, there are few development actors on Cabo Verde compared to other Economic Commission For Western African States (ECOWAS) region countries. The rise of Cabo Verde to a middle-income country status has often been pointed out as posing a problem for institutions to access development programs and aid that could support them in strengthening their capacity. In addition, programs focusing on the wider field of disaster risk management are limited both in number of projects and scope. Several international actors noted as well that the Government of Cabo Verde had not requested any such programs from them.

As mentioned, the World Bank participates in strengthening the Republic of Cabo Verde's capacity to prepare and respond to emergencies. At the time of this Diagnostic, the Disaster Risk Management Development Policy Financing with a Cat DDO option was being implemented, and supported the capacity building of Cabo Verde's disaster risk management system. Likewise, the ability to access funding in the event of a potential future calamity can be seen as a game changer. The World Bank is committed to continuing to support Cabo Verde's Emergency Response and Preparedness system.

The United Nations (UN) System supports Cabo Verde with several projects. Under the Strategic Priority 2 of the United Nations Development Assistance Framework (UNDAF) 2018-2022, the combined UN family sets itself the goal that, by 2022, *"the population of Cabo Verde, particularly the most vulnerable, benefit from enhanced national and local capacity to apply integrated and innovative approaches to the sustainable and participative management of natural resources and biodiversity, climate change adaptation and mitigation, and disaster risk reduction (DRR)."*

While a row of organizations have committed to participating in the efforts to reach this goal, the United Nations Development Programme (UNDP) acts as the UN-led technical partner in disaster risk reduction to fulfill this commitment. Currently, UNDP is implementing the second phase of the "Capacity Building for Resilient Recovery" program. The program covers the whole of West Africa, and will be finalized in 2021. The legal side of the EP&R system focuses on a smaller UNDP intervention; at the moment of the finalization of this report, a national consultant was identified to support SNPCB in identifying gaps in the legal framework. The World Health Organization (WHO) will focus on strengthening the pre-hospital emergency aid and the ambulance system. The International Organization for Migration (IOM), the international leader in the field of mass evacuations in emergency situations, does unfortunately not participate in the efforts to support the emergency response system.

The ECOWAS has previously provided Disaster Risk Management (DRM) Training in Cabo Verde, and intends to further provide the country with training. Unfortunately, as most international and regional training is delivered in either English or French, there is limited accessibility for Cabo Verdean experts.

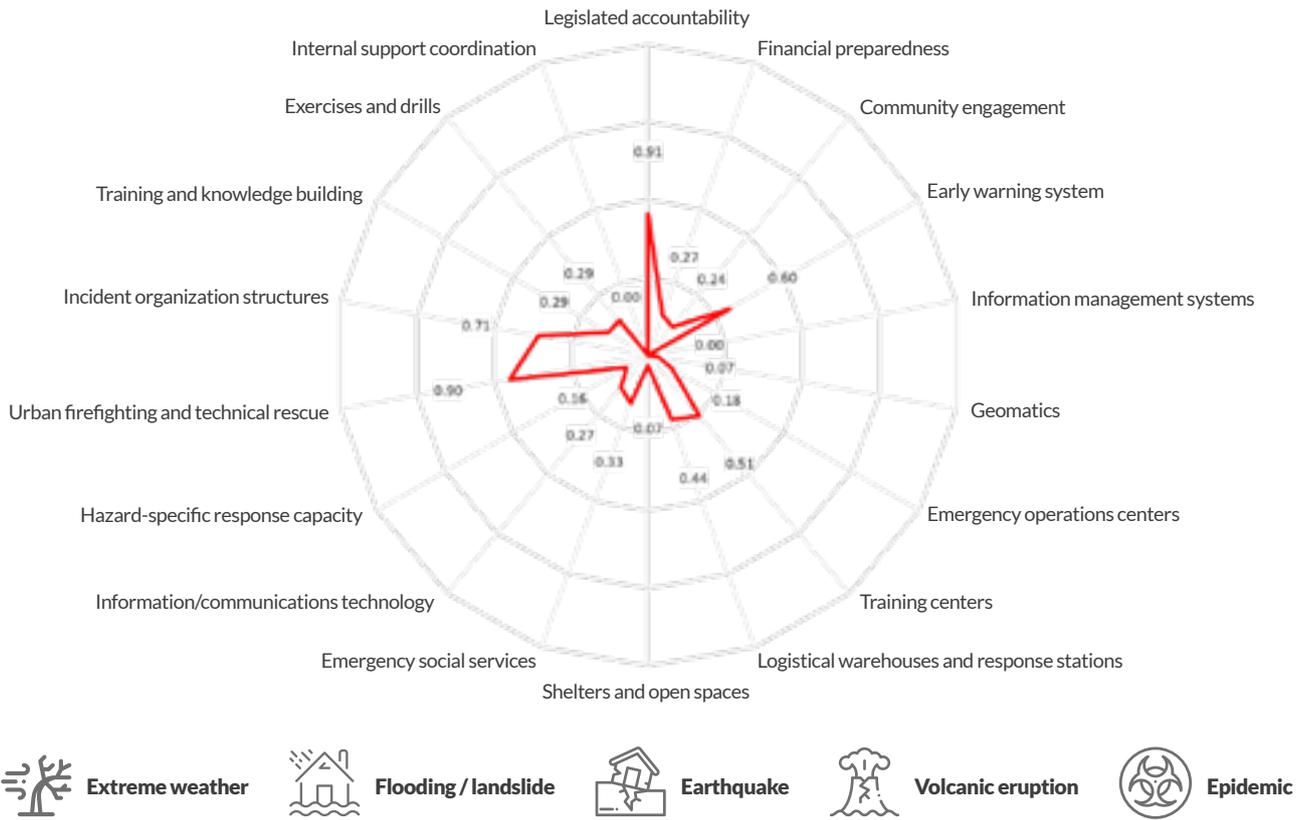
The European Union (EU), represented in Cabo Verde by the Delegation of the European Union, does not implement any disaster risk reduction-related projects with the Government of Cabo Verde, but has previously provided support emergency response by expertise and funding through budget support operations (for example, flooding in Santo Antão in 2016, and the 2017 droughts). Cabo Verde has the possibility to trigger the EU Civil Protection Mechanism in response to emergencies, and participates in several cooperation frameworks with European countries.

Key bilateral donors to Cabo Verde in the field of disaster risk reduction include Luxembourg and the United States. Luxembourg has been supporting the development of Cabo Verde for a long time, for example, via support for NGOs working for the most vulnerable, by supporting international organizations' activities in the field of DRR (like for example UNDP's work and studies, such as this Diagnostic), and via their own development assistance programs, such as, at this time, the fourth Indicative program 2016-2020. Like other donors, Luxembourg does also support the emergency services with direct equipment donations. The United States supports the field of emergency preparedness and response via the U.S. Africa Command. The latter puts a strong focus on maritime security, manifesting in the donation of two vessels and the provision of capacity building for officers. In July 2019, the United States have started undertaking an in-depth assessment of Cabo Verde's National Disaster Preparedness with the support of the Pacific Disaster Centre, which should provide the background of future interventions from their side.

# Assessment Findings

## Overall EP&R System

R2R Diagnostic results for Cabo Verde



Note: Actual scale runs from 0 to 5, results shown on a scale of 0 to 2.

Figure 5: Diagnostic Results for the EP&R system in Cabo Verde.

The infographic shows the diagnostic results for all eighteen criteria for Cabo Verde. The maximum score for each criterion is five (5). The overall conclusion is that the EP&R system of Cabo Verde is in the primary steps of its development. With many elements of the system not being in place, the scores for Cabo Verde are on the lower spectrum of the scale. The results in the graph are shown on a scale from zero to two (0-2) to better visualize the relative differences in scores. The fact that zooming in on the measuring scale was necessary for clear visualization of small differences in absolute terms, emphasizes how low the scores actually are. The EP&R system is missing important components in its foundation to respond to crisis.

In fact, as a result of its current basic level of development, many of the indicators and attributes of the diagnostic were not applicable. For example, in the absence of an Information Management System – one of the four criteria of the information component – all four indicators pertaining to information systems became irrelevant, significantly lowering the overall score of the component. During the assessment, many criteria were found not to be in place, leading to significant parts of the Diagnostic to score zero (not in place) or irrelevant. An example of a non-applicable attribute is “the resilience of systems in an Emergency Operations Center.” (EOC) With no EOC in place, the resilience of systems is at this moment irrelevant. Likewise, the following eleven criteria, out of a total of 18, had many indicators and attributes which were not applicable:

1. Information management systems;
2. Community engagement;
3. Geomatics;
4. Emergency Operations Centers;
5. Shelters and open spaces;
6. Hazard-specific response capacity;
7. International support organization;
8. Information/communication technology;
9. Financial preparedness;
10. Training and knowledge building; and
11. Exercises and drills.

The highest scoring criteria are “Legislated accountability” (0.91) and “Urban firefighting and technical rescue” (0.90). Two criteria score are as low as zero, meaning that these are completely absent from the EP&R system, namely “Information management systems” and “International support coordination.”

The following table shows the average scores per component:

Component	Score on a 0–5 scale
Legal and Institutional Frameworks	0.59
Information	0.23
Facilities	0.30
Equipment	0.41
Personnel	0.32

**Table 1:** Average scores per diagnostic component.

The diagnostic shows a relatively high score in “Legal and Institutional Frameworks.” Still, the assessment showed an overall weak system, based on an incomplete legislative foundation, with no operational guidelines and procedure. The incomplete legislation paired with scarce capacity results, both in isolated institutions that need improved accountabilities, and in an ambiguous system with multiple interpretations as to the governance structure. The resulting unclarity shows primarily in the relation between the national and municipal levels.

This diagnostic allowed to identify critical findings for the development of the EP&R system of Cabo Verde, that do not fall under a specific component of the aforementioned methodology. These findings include:

- Norms for minimum personnel and equipment requirements have not been established by law, as is done in many countries;
- Many organizations lack an explicit vision for development. Capacity assessment in the fields of policy, information management, and coordination are extremely insufficient;
- As a result of former placements and the absence of (selection) criteria in the law, fire departments are, to a significant extent, staffed with personnel who do not meet accepted physical standards for firefighters. In theory and practice, firefighters can delay retirement well beyond the age at which the average individual is able to handle the heavy equipment required to cope with extreme situations firefighters typically handle;
- There is no (mass) evacuation plan to protect inhabitants and visiting tourists on the islands of Fogo, Brava, and Santo Antão; it is required in order to help prevent potential loss of life and to build resilience;
- Legislation and capacity for building code inspections are insufficient to protect infrastructural development gains; and
- Besides arrangements made with oil and gas distributors, there is no capacity to respond to incidents at sea and to mitigate any resulting environmental impact.

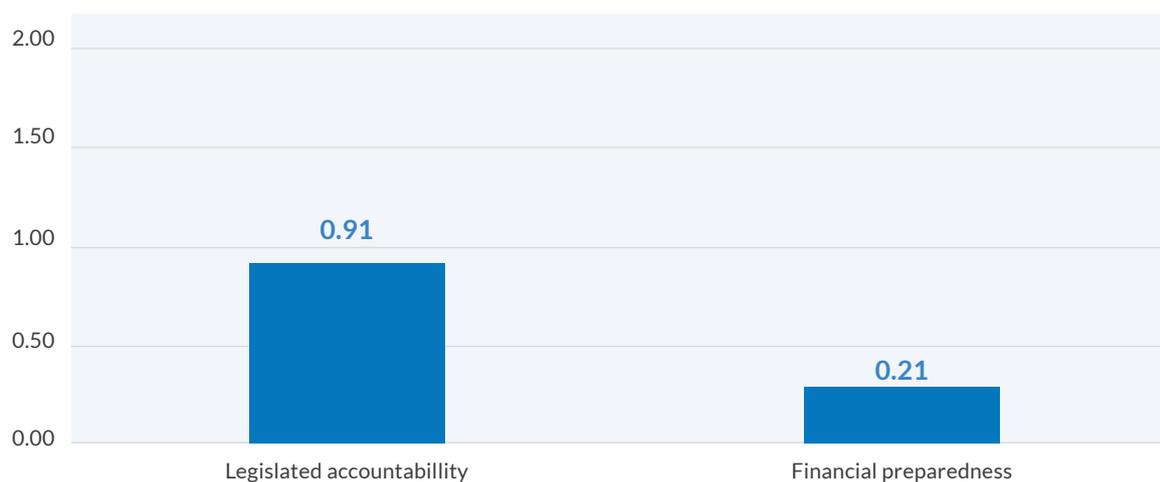
**On the whole, Cabo Verde's EP&R system shows many opportunities for improvements. The current state of the EP&R system leaves the country vulnerable to losses and damage to her development gains, and to potential losses of lives. The EP&R system in Cabo Verde deserves urgent strengthening in order to guarantee public safety.**

*In the following sections, results per component are presented.*



**Picture 3:** Ocean front road in Faja D'Agua on the Island of Brava, Cabo Verde.  
Source: iStock

# COMPONENT 1: Legal & Institutional Accountabilities



Note: Full scale runs from 0 through 5, results shown on scale from 0 to 2.

**Figure 6:** R2R results for both criteria of the component. Overall score for the component is 0.59 on a scale from 0 to 5.

## Problem Statement

This chapter provides an overview of the existing legal and institutional frameworks pertaining to a state of emergency, and an appropriation of the necessary budget, summarizing their scope and operability assessed during the Diagnostic.

It is an internationally accepted practice to build an EP&R system around formally established norms of readiness. These norms should answer to the following question: “What crisis scenarios should the EP&R system be able to handle?” Such norms are however not established in Cabo Verde. Equipment and personnel requirements are therefore implicit. In this assessment, an internationally accepted norm will be used.

The basic legal framework for EP&R is in place, but requires amendments and changes – which the governmental authorities are mostly aware of. Many articles of the legislation mention operational procedures and policy plans that should be established and implemented as an extension of the law. However, the majority of these procedures and policy plans are not worked out and/or not yet officially endorsed by the authorities. An example of a fundamental missing policy document is a general crisis management operational plan, which should include separate operational plans for the identified main risks. The lack of policy documents, operational plans, and procedures has important consequences, since regulations declaring accountabilities are not enforced. For example, there remains too much room for interpretation of the base law, resulting in unclear responsibilities, and undefined lines of inter-agency communication and EP&R decision making.

In addition, the legal framework provides little guidance for organizations to efficiently focus on their responsibilities, hindering the development of key actors as part of a multi-sector and multidisciplinary collective of crisis prevention and management institutions.

Adding to this, the leadership between the national and municipality levels in terms of EP&R is not balanced, and lacks structure in terms of accountabilities. Currently, municipalities have the autonomy to decide to invest (or not to invest) in emergency services and preparedness, making the strength of the EP&R capacities at the municipal level subject to political willingness to invest in the sector. Key positions, such as the role of the Regional Commander, are insufficiently anchored in and defined by law.

Financial resources available to DRM actors on Cabo Verde are scarce, with few appropriate financial instruments for EP&R and early recovery. In 2018, the National Emergency Fund (FNE) was approved, but at the time of writing this report, it was not fully functional yet, and many of the assessed actors are not aware of its existence, procedures, or functioning. In practice, this leads to confusion on the national and even more so on the municipal level in terms of financial responsibilities for incident and disaster response. As a result, the municipalities assume that the national budget will be accessible for calamities, and they make no according provisions in their respective budgets. Finally, there are no emergency procurement procedures for response.

## Criterion 1.1: Legislated Accountability

Guided by the diagnostic tool, the field assessment researched the availability and status of emergency management legislation, delegations-of-authority for expedited decision-making, as well as the existence of agency-specific response plans in order to display the wider vision of legislated accountability in the field of EP&R in Cabo Verde.

### Indicator 1.1.1: Emergency Management Legislation

At this moment, the emergency management legislation available for the Cabo Verdean jurisdiction is defined in three key legislative documents:

1. The Regulatory Decree on the National Civil Protection Service (DR n.º 18/99, 20 December 1999);
2. The National Contingency Plan (Resolução n.º 10/2010, March 15, 2010); and
3. The Civil Protection Base Law (Lei n.º 12/VIII/2012, March 7, 2012).

The *Regulatory Decree* enforced in 1999 (DR n.º 18/99, December 20, 1999) is the primary legal document declaring the existence of the SNPCB as a central actor in civil protection, with the role and responsibility of carrying out technical assessments and the operational coordination of civil protection activities across the country. SNPC responsibilities include technical support to the National Council for Civil Protection (Conselho Nacional de Protecção Civil – CNPC) with regards to civil protection coordination, implementation of civil protection plans at the national level, carrying out preparedness measures, providing technical support to other entities responsible in civil protection, and forecasting and assessing disaster risk.

The *National Contingency Plan*, established in 2010, determines the State's response structure for civil protection activities, and intends to activate the National Operations Center of Emergency and Civil Protection (CNOEPC). The Prime Minister is responsible for directing civil protection operations, and may delegate responsibilities to the Minister for Internal Affairs. The Prime Minister is the director of the plan. The president of the National Service for Civil Protection is the president of the CNOEPC.

The incident organization structure applies four levels of alert:

- I. Blue (routine);
- II. Yellow (serious accident);
- III. Orange (emergency situation); and
- IV. Red (maximum level with CNOEPC activated).

In practice, the structures defined in the contingency plan have not been put into action. A CNOEPC has not yet been established, and alert levels have not been implemented either. The specific actions and response structures remain undefined in the document, and therefore, in the implementation of the plan. The 2010 plan mentions the establishment of specific contingency plans and municipal emergency plans, but none has been either written or implemented so far. Hazard-specific contingency plans have been established and are used in the private sector, by energy provider ENACOL, for instance.

In 2012, the *Civil Protection Base Law* (Lei n.º 12/VIII/2012, March 7, 2012) was established as an outcome of a plenary session of the National Assembly, with the aim of building the general basis of civil protection in Cabo Verde (Lei de Base de Proteção Civil). It is the Prime Minister's responsibility to direct political decision making with regard to civil protection, and he can entrust responsibility to the Minister of Internal Affairs. As such, the base law identifies all main actors with core responsibilities in the civil protection structure, and defines organizational relationships among Government actors, making sure that decentralized responsibility is shared among all public administration bodies, and setting the ground for cross-departmental support. General definitions – such as alert, contingency, and calamity – are outlined, as well as clear objectives of the legislation encompassing the fields of risk reduction, preparedness, disaster response, and reconstruction.

Depending on the nature of events to be addressed, and the severity and extent of their effects, three emergency levels of declarations by designated Government officials have been established:

**Alert Declaration** – To be declared at municipal level by the president of the municipality council. At the State level, this alert is declared by the competent member of the Government to the whole country, or circumscribed to a portion of it.

**Contingency Declaration** – To be declared by the member of the Government responsible for internal administration, for the whole country, or with a scope limited to a part of the country.

**Calamity Declaration** – To be declared by the Government as a resolution of the Council of Ministers.

In addition to this, procedures for risk management and analysis, information management, and capacity building among the people are introduced. Response planning is said to include search and rescue, evacuation, inventories of response material on both national and local levels, as well as the protection of cultural heritage. The legislation outlines citizen's rights on information, transparency on responsibility of Government bodies, and receiving training for self-protection. Simultaneously, the legislation states the citizens' responsibility in supporting civil protection measures in case of an emergency. Direct and indirect employees of the public administration with qualities or skills relevant to civil protection are exempted from public service to act in support of disaster management, noting that withholding support means committing the crime of disobedience.

### **Indicator 1.1.2: Delegation of Authority**

Little coordination and accountability could be identified in terms of the delegation of authority between designated institutions at the national level, as well as vertical lines of responsibility across national, regional, and municipal levels. In EP&R systems, it is often observed that the enforcement of disaster management structures at the regional and district levels is problematic due to unclear communication and coordination between different levels, and a lack of political priority-setting and low levels of effectiveness in municipal structures for disaster management. This was equally assessed in the Cabo Verdean context. By law, the delegation of authority between the national municipal levels is regulated as follows:

### National level

As previously outlined, the first legislative document establishing the National Civil Protection Service (SNPC) was established in 1999. The Civil Protection Law, completed in 2012, was since re-published and the designation of SNPC changed to the National Civil Protection and Fire Service (SNPCB) (Civil Protection Base Law, art.43/n.º 3). With the amendment, the fire service became tutored by the SNPCB, but the concrete and legally defined set-up and accountability of the fire brigade was not clarified. The necessity of a statute to grant the fire brigade a legislative framework is mentioned throughout the field diagnostic.

### Regional Level

The Civil Protection Base Law of 2012 introduced the regional level as the intermediary stage of influence over the civil protection authority, through the setup of Regional Relief Operations Commands (Civil Protection Base Law, art.43/n.º 2). Separating Cabo Verdean national territory into five separate regions, the base law of 2012 set the ground for new positions in the EP&R structure to build the liaison among actors at the national and municipal levels. Throughout the field assessment, the addition of Regional Operational Commanders is seen as vital by stakeholders across all levels of influence. The base law declares the existence of the Regional Operational Command posts, but does not elaborate upon the actual roles and responsibilities entitled to the position, with little executive and only consultative power at the municipal level. The necessity to amend the law with regard to this is a recurrent topic, often expressed with urgency by various actors throughout the field diagnostic.

### Municipal Level

The existence of a well prepared, trained, and maintained municipal civil protection service rests within the responsibilities of the mayor. The field assessment – using international accepted norms for equipment and personnel requirements – identified that there is no municipality with an adequate municipal civil protection service. The weak or missing installment of civil protection representation at the municipal level leads to a lack of implementation of civil protection policies overall. As such, the vulnerability of the communities at risk is not sufficiently reduced. This leads to an inadequate preparation for emergency response, and reduces the capacity of the legal and institutional framework to mobilize executive powers in the aftermath of a disaster.

The difficulties faced in aligning the implementation of the legal framework at the national and municipal levels is a symptom observed often in EP&R systems, as local leaders operate on behalf of their own agendas, priorities, perceptions, and with limited budgets. This may often interfere with the agenda, priority, and perception of the national disaster management authority. The position of Regional Operational Commanders carries the potential to align priorities of the municipal and national levels, when given the necessary legal support.

## Indicator 1.1.3: Agency-Specific Response Plans

The operational response instruments, such as the incident commander and the appropriate delegation of authority, are not officially established by the authorities. Examples of such instruments to be put into place and made operational are the following:

- The Protection and Relief Operations System (Civil Protection Base Law, art.40) – *not regulated by the authorities;*
- The Integrated Response System for Protection and Relief Operations (Civil Protection Base Law, art.46) – *not officially established adequately for different levels of alert; and*
- Training and Instruction (Civil Protection Base Law, art.53) – *not officially established and endorsed by the authorities for the Armed Forces.*

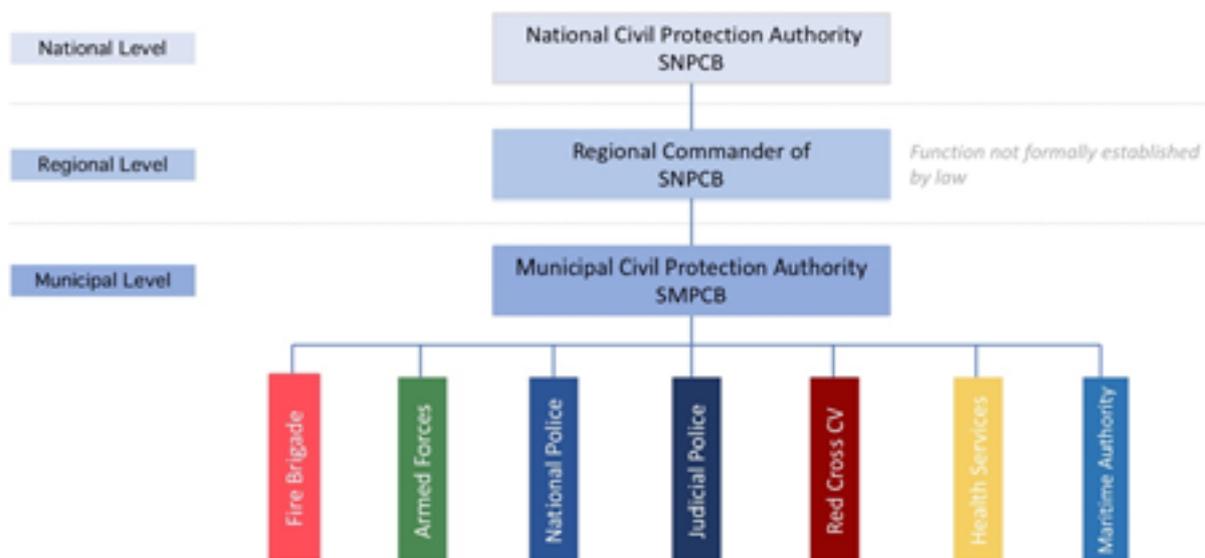


Figure 7: Organigram of Cabo Verdean EP&R Stakeholders on various levels, with the Regional Level without legal foundation.

### Response Plans at National Level

With regard to national emergency plans (Civil Protection Base Law, art.48), the assessment found that operational response plans are insufficient in number and mainly focus on the risk of floods. The National Contingency Plan (Resolution n.º 11/2010) requires an update in order to align with the base law in place, and to incorporate the lessons learned from past emergencies, such as Hurricane Fred, epidemics (for example, Zika and Dengue), the volcanic eruption on Fogo island, and floods. In addition, the national emergency and contingency plans need to broaden the scope of potential hazards and prepare for the potential event of a large-scale disaster.

Throughout the assessment, a recent document, the *National Strategy on Disaster Risk Reduction (ENRDD) Cabo Verde* (Resolution n.º 114/2018, October 20, 2018) was often mentioned by key informants when asked about emergency response plans. However, the national strategy on DRR is only a strategic document that outlines necessary developments in the field of disaster risk reduction until 2030. This document elaborates how a national DRR strategy should be integrated in the national system for disaster risk management (SINAGRED) by 2030, and presents the seven priority areas. The document describes the disaster risk profile of Cabo Verde, based on a study carried out by UNDP, United Nations International Children’s Emergency Fund (UNICEF) and United Nations Population Fund (UNFPA), namely targeting droughts, flooding, flashfloods, wildfires, and earthquakes. Yet, as a strategy paper, the document’s aim is to add structure and clarity with regard to roles and responsibilities, as well as a strategic pathway on DRR, but gives little latitude to enforce key stakeholders’ accountability.

## Response Plans at Municipal Level

As of today, none of Cabo Verde's municipalities has implemented an emergency response plan. There is no functioning municipal civil protection service in Cabo Verde with the minimum human resource capacities for the complete fulfillment of the responsibilities assigned to them.

Following a United Nations Disaster Assessment and Coordination (UNDAC) mission deployed on request of the Government of Cabo Verde in response to ongoing tremors on the island of Brava in 2016, the team established a Contingency and Evacuation Plan for the island. Since its completion in 2016, the plan was never approved by the CNPC. The document would need further elaboration and research, and would require the involvement of relevant response actors of Brava Island through simulation exercises. Therefore, the plan should be perceived as contingency planning rather than a complete evacuation plan. The mayor of Brava rates the current operational power of the plan as very low.

### Indicator 1.1.4: Critical Infrastructure Assurance Program

*The assessment did not result in any finding for this indicator.*

#### Intermediate Conclusions on Legislated Accountability

The overall EP&R system on Cabo Verde is young in age, with an existent but weak basic legal and institutional framework. Some important regulations have been established, while some legal documents require updating – or would still need to be established. However, existing gaps in the framework lead to a severe lack of accountabilities at all the levels of the system – national, regional, and municipal.

Many of the laws are insufficiently enforced, leading to a lack of clarity with regard to roles and responsibilities of institutions with EP&R mandates. The civil protection mechanism established by law is only weakly anchored at the municipal level, with no single municipal civil protection services either implemented or running. Hence, civil protection representation at the municipal level is reduced to the Regional Operational Commanders, who have no clear mandate defined by law, and can only take on an advisory function.

#### Recommendations

- Revise **legal and institutional frameworks** with external consultation support;
- Establish **Municipal Civil Protection Services** and their **emergency response plans**;
- Establish a statute on the position of **Regional Operation Commanders**;
- Install an inter-agency **“Legislation for Emergency Response” working group**, in order to enhance ownership of, and involvement in, relevant institutions, each assigning their civil protection focal points; and
- Establish a **critical infrastructure assurance program**.



Picture 4: Examples of what is locally known as “spontaneous construction” in the city of Praia.

## Criterion 1.2: Financial Preparedness

Appropriate budgeting for disasters and the installment of efficient financial instruments for DRM are key in assuring that expedited disaster response receives necessary funding, that relief reaches affected communities, and that financial damage is reduced. This chapter assesses the status of Cabo Verde’s financial preparedness with regard to civil protection expenditures and insurance schemes.

### Indicator 1.2.1: Financial Instruments for Emergency Response and Early Recovery

Today, State spending on DRM expenditures is made on behalf of the municipal councils, who receive their respective parts of the State budget.

The State budget preparation process in Cabo Verde is defined by:

- The budget of the local administration, which is approved by the Municipal Assembly; and
- The State budget, which is approved by the National Assembly.

In Cabo Verde, ten percent of the state budget is allocated to the municipalities, with regulations in place which define the distribution of the budget through various indicators (for instance, size of population, size of municipality, poverty rates). The law does not oblige municipalities to allocate a part of the budget to EP&R or crisis management measures. The investment in civil protection is a political decision made on behalf of the municipalities, and becomes subject to priority-setting by the respective political leadership.



Figure 8: 2019 budget of the SNPCB

The budget for the SNPCB in 2019 amounts to 29,706,975 CVE (approximately US\$302,700), of which over 55% (approximately US\$195,290) is allocated to human resources. The financial impact of emergencies and natural extreme events represent a major challenge to the State budget of Cabo Verde.

Following the recent volcanic eruptions, droughts, forest fires, and heavy rains, the Cabo Verdean Government created the National Emergency Fund (Fundo Nacional de Emergência – FNE) (Decree Law n.º 59/2018, November 16, 2018).

The FNE was established with the aim of creating a fund for operational response – in the scope of the legal regimes of autonomous funds – to finance actions and means which participate in enhancing operational response by national authorities with responsibilities in DRM (including search and rescue, disaster response, and recovery). It covers preparedness actions, as well as actions in the field of rapid response and disaster recovery. The financing is set to provide for the costs of food items, water, medicine, first-aid material, hygiene articles, clothing, shelter material, materials associated to installation of emergency shelter, costs associated to vehicles and transport (fuel etc.), search and rescue material, and logistical support to teams involved in operations.

Access to the FNE is granted either when the state of calamity has been declared, or when the state of alert has been declared by a Mayor and the Minister of Internal Administration, as defined in Section IV of the Base Law for Civil Protection (2012). The approval of the Manual of Procedures, which defines all the procedures enabling access to the fund, is fundamental; yet, it has not officially been established by the authorities to date.

The Disaster Risk Management Development Policy Financing with a Catastrophe Deferred Drawdown Option (Cat DDO) by the World Bank Group is subscribed by the Government of Cabo Verde, and can be used for post-emergency recovery and reconstruction investments.

At municipal level, there are no implemented emergency funds or accounts for EP&R activities. If the jurisdiction is affected by an extreme event, the municipality is required to mobilize funds from the regular budget. The FNE was approved to reinforce actions at the local level. If an event exceeds the capacity of the municipalities, the central Government provides for the funding of the interventions. There are reports that, during major forest fires, the firefighters faced difficulties in getting basic necessities like food and water. The same challenges exist when evacuation is necessary, and relief, like shelter, food or water, needs to be provided to a certain number of people for a certain number of days.



**Picture 5:** Illustrating financial context: investment in the EP&R system is one of the many needs in a middle-income SIDS.

### **Indicator 1.2.2: Emergency Procurement Systems and Frameworks**

Appropriate procurement practices are essential for efficient, effective, and accountable governance in emergency response. This involves procurement forecasting for stockpiling relief items.

In the Cabo Verdean context, the Diagnostic identified no legal frameworks or formal systems to support emergency procurement. Procurement for EP&R is carried out at the municipal level and becomes subject to the municipal councils' political priority-setting – as described above. Throughout the country, there is little to no procured material, and response actors often rely on donated equipment. This leads to a lack of procurement mainstreaming, which would ensure that expenditures are tracked, that procured material is inter-operable, and that it is distributed centrally. The underscored caveats are consistent with further shortcomings, which will be elaborated upon in the coming chapters, such as the lack of a warehousing system and logistical hubs.

### **Indicator 1.2.3: Public Financial Management Policies and Procedures**

*The assessment did not result in any finding for this indicator.*

### **Indicator 1.2.4: Personal Financial Risk Transfer Programs**

*The assessment did not result in any finding for this indicator.*

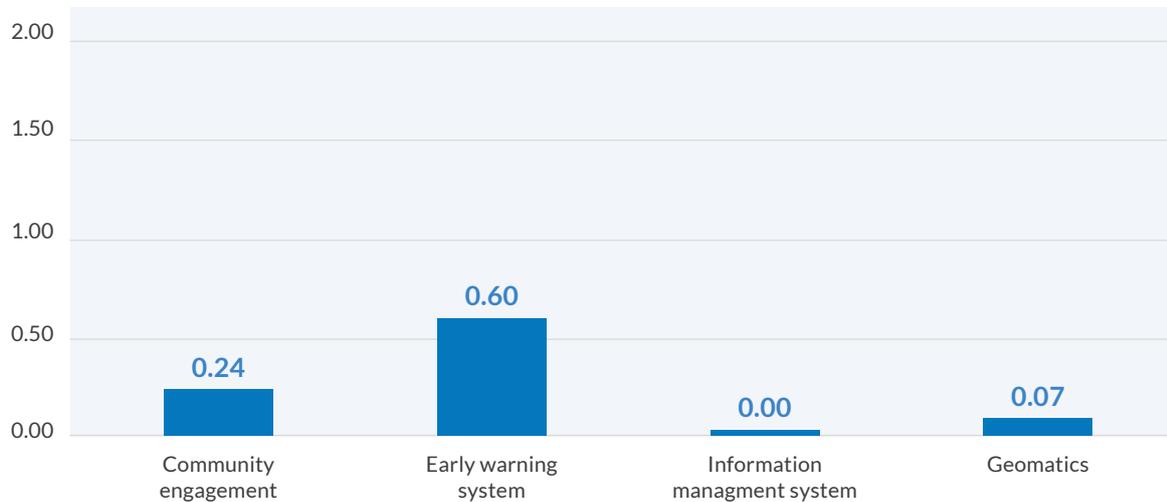
#### **Intermediate Conclusions on Financial Preparedness**

There is no operational running and centralized system for the financing of emergency services. Investments in the field of DRM are financed by municipalities, who operate on tight budgets and often focus on other perceived priority investments. The recent establishment of the FNE is a step in the right direction. The manual of procedures needs to be implemented for the FNE to become operational and fulfill its mandate.

#### **Recommendations**

- Revise the mechanism for **financial preparedness** with external consultation support;
- Establish a manual with **FNE procedures**, and create a centralized body for procurement;
- **Centralize procurement processes** in order to cut costs and ensure both **continuity and equality** across all municipalities, and to bridge considerable discrepancies in financial resources allocated to DRM spending among municipal councils;
- Establish **public financial management policies and procedures**; and
- Establish **personal financial risk transfer programs**.

## COMPONENT 2: Information



Note: Full scale runs from 0 through 5, results shown on scale from 0 to 2.

**Figure 9:** R2R results for all four criteria of the component. The overall score for the component is 0.23 on a scale from 0 to 5

### Problem Statement

The Diagnostic results indicate that there are only a small number of information systems and programs which have been implemented. Still, a relatively large amount of background information was gathered on this component during field visits, meetings with Non-Governmental Organizations (NGOs), and (group) interviews.

NGOs like the Red Cross and community-based initiatives are well established and rooted in many Cabo Verdean communities. These organizations show a significant potential for public engagement. Cohesive communities demonstrate a high level of spontaneous resilience driven by individual initiatives, during and after recent calamities. However, community engagement in building resilience to disasters on Cabo Verde lacks a strategic and programmatic approach.

Early warning systems operate with a minimum of basic instruments, and are not integrated in operational organizations and communities in Cabo Verde. Information sharing among organizations in the EP&R system is limited. As a result, there is no foundation in current practice for the development of a shared Information Management System. Disaster prone areas in all islands, with the exception of Brava, have been identified and plotted on maps, but even though these maps have been used to inform zoning plans for spatial planning, they are neither widely available nor used.

## Criterion 2.1: Community Engagement

Communities are both the first affected and the first to respond in the case of hazard impact. An all-inclusive EP&R system provides a structure to engage actors at various levels, ranging from the national to the local level. Enhancing community awareness can be achieved through accessible and regular training and capacity-building formats that are accompanied and maintained by civil protection actors. Empowering communities through enhanced risk understanding and knowledge of short-term preparedness measures for auto-protection carries the potential to significantly and safely reduce disaster response time, as well as to establish awareness to build resilience.



**Picture 6:** The many unstable structures on the archipelago put vulnerable groups like children at risk.

The 1992 Constitution of Cabo Verde defined as core principles the encouragement of social solidarity, the autonomous organization of the civil society, and the nourishment of individual creativity. The legal framework of Cabo Verde, more particularly its decree-law 42 of 2010, anchors and regulates voluntary services of Cabo Verde in the field of civil protection. Throughout the research process, it becomes evident that the society of Cabo Verde is a strong, cohesive bond of community support with strong mobilizing potential in emergency situations. A multitude of actors on the macro, meso, and micro levels report past experiences of creating ad hoc community support to emergency systems. The following chapters elaborate on evidence gathered with reference to community engagement, encompassing both quantitative and qualitative data from the field assessment.

### Indicator 2.1.1: Local-Level Volunteer Emergency Responders

Although there are legal incentives to encourage the establishment of voluntary services in the field of civil protection on behalf of Government actors, their current implementation is rather ad-hoc and lacks structure. Cabo Verdean law declares the existence of a volunteering structure at the Red Cross National Society (Cruz Vermelha de Cabo Verde) and the Humanitarian Associations of Volunteer Firefighters (Associações Humanitárias de Bombeiros Voluntários, AHBV), acting in direct support to executing Government bodies of the civil protection, the SNPCB, and the SMPC. The latter is in charge of encouraging volunteerism in the field of the civil protection, supporting small-scale, community-lead mitigation works, and providing both education and tools to local leaders.

The following analysis will first assess activities carried out on behalf of the SNPCB and other official institutions, then elaborate on the corps of Red Cross volunteers of the Cabo Verdean Society, and end with an introduction to other nongovernmental civil society organizations with strong community outreach.

### Firefighters Volunteering Activities on Behalf of Official Institutions

There is a corps of local-level volunteer firefighters established and maintained by SNPCB in various municipalities, but it is mostly a young and unstable structure. The main focus has been to train and equip volunteer firefighters that build the basis of response personnel of the Cabo Verdean fire brigade. The pool of SNPCB firefighters currently includes a total of 331 volunteer and 97 professional firefighters at the national level.

Island	City / Locality	Nb. of professional firefighters		Nb. of volunteer firefighters	
		male	female	male	female
Santo Antão	Paul	–	–	8	–
	Porto Novo	–	–	32	3
	Planalto Leste	–	–	21	4
	Ribeira Grande	–	–	30	–
São Vicente	Mindelo	24	–	12	2
São Nicolau	Ribeira Brava	–	–	10	5
	Tarrafal	–	–	6	1
Sal	Espargos	11	1	6	6
Boa Vista	Sal Rei	3	–	–	–
Maio	Vila do Maio	–	–	18	6
Santiago Sul	Praia	48	7	–	–
	R.G. Santiago	–	–	6	–
	São Domingos	–	–	12	–
Santiago Norte	Órgãos	–	–	8	1
	São S. do Mundo	–	–	7	–
	Santa Catarina	–	–	14	7
	Tarrafal	–	–	8	2
	Santa Cruz	–	–	17	3
	São Miguel	–	–	5	–
Fogo	Mosteiros	–	–	17	3
	Santa Catarina	–	–	17	3
	São Filipe	–	–	14	4
Brava	Nova Sintra	3	–	13	–
Sub- total		<b>89</b>	<b>8</b>	<b>281</b>	<b>50</b>
Total		<b>97</b>		<b>331</b>	

**Table 2:** Overview of the corps of professional and volunteer firefighters (SNPCB).

The strongest representation of professional firefighters is found in the capital, Praia, which in addition to São Vicente, Santa Catarina, and Santa Cruz, are the only facilities to ensure 24/7 response capacity. Volunteer firefighters are provided minimum monetary incentives, and, by law, need to be provided with social insurance (Decree-Law 42/2010).

It is noteworthy that having volunteer firefighters is of great added value when they can assist their professional colleagues, for instance with larger scale incidents. With eighteen municipalities having only volunteer firefighters, volunteering appears to be an alternative to professionals. This practice saves costs, and it is consistent with the Cabo Verdean tradition to help and to contribute to one's neighborhood; but when it comes to responding to an incident or crisis in a timely fashion, resorting only on volunteer firefighters is, by far, insufficient. It is noteworthy that there is strong solidarity within Cabo Verdean communities, and neighbors typically act as first responders in case of an emergency in the community. Private cars are used to transport injured people to the hospital, but this means that there are no minimum standards of hygiene, no pre-hospital medical assistance, and no medical skills in a majority of emergency vehicles. Response time is essential to prevent loss and damage, as well as loss of lives, and this can only be achieved by having a professional response team on standby.

The strength of volunteer services is largely dependent on political willingness at the municipal level, to invest in such incentivizing contributions for volunteers, to allocate funding to the design and implementation of training courses, and to provide necessary equipment. The strong dependency on investment decision-making on behalf of municipal leadership makes the system of volunteer firefighting services vulnerable to staff turnover and changes in the political landscape. In general, equipment made available to volunteer firefighters is minimal and often unsafe, with low security standards and weak maintenance, if available at all.<sup>11</sup> Where Government funding allows it, volunteers carry out awareness-raising visits to schools and organize trainings with communities at risk.

Usually, the regularity and extent of such efforts are linked to the initiative of, and the political advocacy work carried out by, the Regional Commander, who is supported by the SNPCB to build the link between national and municipal levels. The position of the Regional Commanders is pointed out as key for advocating for civil protection matters at the municipal level, and for ensuring that community outreach and awareness building in the field of EP&R is on the political agenda.

Overall, the sustainability of volunteer services is not guaranteed by a detailed program and secured funding is not implemented as to carry out continuous trainings and capacity-building, and to adequately maintain necessary safe equipment. Nevertheless, the current body of volunteer firefighters builds a link between national institutions and communities, and has the potential to undertake community engagement work in the twenty-two municipalities of Cabo Verde.

Other Government actors carry out community engagement campaigns sporadically only, and often with reference to precise risks. The Ministry of Agriculture, for example, runs programs to support the mitigation of forest fire risks. Funds are allocated to carry out forest protection educational projects. The National Police has started a community outreach campaign under the title Proximity Program, as part of a wider Government incentive, so as to mobilize institutions to approach the community level and to ensure closer contact with the local population. In the framework of that campaign, the National Police attempts to ensure close contact with the community, and carries out education programs. The National Police sees potential to incorporate EP&R-related causes into their proximity campaign.

---

<sup>11</sup> More equipment-related findings are to be found under Component 4: Equipment

### Corps of Red Cross Volunteers of the Cabo Verdean National Society

As auxiliary to the Government and with a solid basis in voluntary services, the Red Cross Movement is an important component of the EP&R system, with strong links to both Government authorities and local communities. A representative of the Red Cross Delegation on Brava Island clearly noted that the National Red Cross Society has strong community outreach with its solid base of Red Cross volunteers. Because it is strongly embedded in communities and builds upon strong organizational loyalty, many volunteers have provided their services over years, and gathered considerable community response experience in emergency situations. The representative was able to provide insights into progress made in the field of Government actors' EP&R, as well as the Red Cross Movement itself, noting a sharp increase in capacities since the island suffered heavy damage due to the exposure to Hurricane Beryl in 1982. The Red Cross National Society takes on a major role in awareness building within communities, and in carrying out first-aid trainings. The National Society is highly limited by a shortage of financial means and humanitarian relief items, with most of its stock in the capital, due to a lack in warehousing capacities on the island. Nevertheless, their strong agency and ownership in the field of community outreach is widely respected at the local level. More details on the Cabo Verdean Red Cross can be found in the best practice in Appendix A.

### Other Non-Governmental Civil Society Organizations With Strong Community Outreach

The potential of other civil society actors with strong community outreach has been identified at the capital and municipal level throughout the field visits. Some key, non-governmental actors with capacities to strengthen outreach to communities and mobilizing volunteers for emergency response are:

- Churches;
- Community associations; and
- NGOs, such as women (Cabo Verdean Women' Organization - OMCV) and youth organizations, religious and sports associations.



Figure 10: Non-governmental actors with strong community outreach in Cabo Verde.

Initiatives are largely driven by individuals, and their success in getting funding for their causes. Their influence within the communities does tap into disaster risk and response to extreme events, but they have had no concrete EP&R focus so far. The organizations hold large mobilizing capacities, and could be a fruitful ground to carry out joint risk awareness campaigns and trainings related to early-warnings and short-term preparedness measures.

Church communities and their leaders were at the forefront in the response to the volcanic eruption on Fogo Island in 2014 by providing shelter, supporting local authorities in evacuation efforts, and handing out non-food items during the response phase. Religious leaders have a strong influence on the local community and the network of the Church has the capacity to create a cohesive and supportive safety net in an emergency setting. The initiatives of the Church already involve community outreach and educational programs on various topics, but little has been done in the field of raising risk awareness among the local population. Some churches identified vulnerable families and individuals, and helped facilitate community outreach campaigns and trainings targeting vulnerable groups.

Similarly, community associations often take on the role of first responders to incidents which affect their respective community. For instance, in the Community Association of Fajã de Água, all eleven members make a major contribution in liaising with the Maritime Institute, with regard to informing residents on sea conditions and the safety of fishing practices. Similar responsibilities are seen in other community associations. Tapping in the potential of community outreach through these associations in the framework of community resilience programs, and facilitating trainings on emergency response, is advisable.

The remarkable involvement of non-governmental organizations in the response to the volcanic eruption on Fogo Island in 2014 was clearly identified by key actors at municipal and national levels. Response efforts mobilized by civil society groups and their volunteers were mostly ad hoc, and the Civil Protection found it impossible to know in which way they supported the overall response operations.

The OMCV, for example, prepared a three-phase post-eruption response project on Fogo, including a first phase for the mobilization of funds in order to finance relief efforts, a second phase developing a microcredit project for the creation of small businesses, and a third phase establishing a plan to enhance local livelihood recovery by using volcanic lava material to make handicrafts, rebuild animal husbandry, and through ecotourism initiatives. Due to a change in the ruling party at the municipal level, the project was never fully implemented. OMCV has local representation on the islands, allowing for expedited response with focus to vulnerable groups. If necessary, the organization can deploy additional human resources to support response efforts from the capital.

The OMCV case study testifies to the mobilizing power of non-governmental organizations in an emergency context. These efforts are un-channeled and uncoordinated by national actors who could benefit from the organization's community ties, especially with a focus on vulnerable groups. The actors are well organized and often attract solid (international) funding. They generally have strong personal leadership, with a tendency to low staff turnover rates. This translates into significant institutional memory with regard to community dynamics and past disaster events. Approaching such organizations in order to identify concrete civil protection focal points therein, is expected to enhance community outreach and avoid duplication of efforts among various actors.

Whereas the national strategy for DRR states the need to establish a mechanism to incorporate civil society groups in high-risk zones into the civil protection mechanism and to establish DRR campaigns targeted at community-level with focus on vulnerable groups (such as children, women, youth, and disabled), there have been no implementation efforts on behalf of Government actors in the field of EP&R to date. Fogo Island emphasized the strong necessity to develop awareness-raising campaigns directed toward the communities, general public, schools, and hospitals.

## Indicator 2.1.2: Community Education on Local Emergency Preparedness and Response

*“To build the knowledge of Government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning.”<sup>12</sup>*

Education programs at local level are key in raising risk awareness and building communities with enhanced resilience toward to calamities. Most interviewed actors acknowledge the necessity of educational programs, yet refer to the lack of required financial resources, skilled human resources, and occasionally, of information material on community-specific disaster risks, as hindering factors.

The National Institute of Meteorology and Geophysics (INMG), responsible for the running and maintenance of the seismic monitoring network of Cabo Verde’s active volcanoes, notes that risk awareness should start with educating the people and decision-makers on the principles of risks, threats, incidents, and potential impact. According to this organization, education should begin in schools, in order to support the next generation with a basic understanding of these terms in order to build future community resilience.

So far, community outreach campaigns are mainly carried out prior to the rainy season via radio and TV, with a focus on the risk of flooding, which has now turned into a tested seasonal practice with perceived success. Generally, interviewees pointed to the lack of financial means to carry out education programs, without any guarantee of having the capacity to sustain them.

In some communities at risk, risk perception is low because the local population has never experienced an emergency situation. An interviewed sand mine worker experienced both recent eruptions— 1995 and 2014 — and noted that the people’s reaction to the second eruption was calmer, since the damage of the previous eruption had not caused any casualty and physical damage which the communities had been unable to recover from. He mentioned that the community of Chã das Caldeiras had been thriving since the last eruption, as international aid had provided for its reconstruction. To a certain degree, this equally applies at national level, insofar as none of the disasters experienced in the last ten to fifteen years has taken a high toll among the people.

The risk awareness among the population is perceived to be linked to the nature of disaster risks which are likely to occur, and to the people’s experience with regard to a given risk. The SNPCB Regional Commander observes a higher risk awareness among the population of Brava than among the population of Fogo, for example. The more frequent occurrence of low intensity seismic activity exposes the population to low risk on a regular basis. In comparison, the population of Fogo Island has a lower perception of disaster risk, as an irregular occurrence of natural extreme events on Fogo leads to lower risk awareness among the people. Key Government actors in the field of civil protection, such as mayors of the three municipalities, the National Police, and the Red Cross National Society present on Fogo island, noted that some of the people had been reluctant to follow advice and orders from authorities during the volcanic eruption in 2014.

*“The community of Chã das Caldeiras was evacuated during the eruption. But the moment that it was communicated that the volcanic activity had stopped, everyone returned. So, you have that problem — they want to be there. They think: Everything we have, the volcano gave us, so we have to give back. Since they want to be there, you should give them the dignity and provide the means in the way they want to be there.”<sup>13</sup>*

<sup>12</sup> Sendai Framework for Disaster Risk Reduction (UNDRR 2015, P. 15)

<sup>13</sup> Interviewee on Brava Island

One of the authorities on Brava identified disaster risk information and mapping as the number one investment priority for awareness raising with local communities. This is consistent with the Sendai Framework for DRR commitment to develop, periodically update and disseminate, if relevant, location-based disaster risk information – including risk maps – to decision makers, the general public, and communities at risk in an appropriate format by using geospatial information technology, when applicable. Effective information outlets summarizing disaster risks and visualizing regions at risk are a vital basis for education programs at community level.

### **Indicator 2.1.3: Support to Small-Scale, Community-Led Mitigation Works**

*The assessment did not result in any finding for this indicator.*

### **Indicator 2.1.4: Provision of Education and Tools for Local Leaders to Advocate for Resources, Policies, and Programs**

By law, it is incumbent to the municipal governments to inform local leaders about action plans and danger levels of a given at-risk situation through communication means, such as radio and television. While they are requested to abide by established procedures of “coordination of security services and forces,” no mention is made of either actual bodies or details on these established procedures.

Community leaders can be key actors to be targeted through education programs and trainings, with focus on disaster risk management. The SNPCB aims to carry out such programs at municipal level two to three times per year, but this intention is once again hindered by limited financial and human resources. The regularity and sustainability of this undertaking is not guaranteed. Representatives of the SNPCB estimate that 35% of community leaders have received training in the field of disaster risk management, with the Northern Islands identified as having the lowest capacities, as no Regional Commander of Civil Protection has yet been appointed to that region.

The importance of the more recently established function of Regional Commander becomes once again obvious, and is clearly identified as an investment priority. The role of the Regional Command post is vital in creating DRM awareness with the local leaders and mayors of municipalities under concern. Besides being a predominantly young pool of volunteer firefighters with minimum training, they are the only representatives of civil protection at the local level. Strengthening the system of regional commanders would have a positive impact.



**Picture 7:** Street of Santa Maria in Sal, Cabo Verde.  
Source: iStock

### Intermediate Conclusions on Community Engagement

There are no ongoing programs for local emergency preparedness. Frequent earthquakes on Brava keep the community aware of possible disasters, whereas the people of Santo Antão has very little awareness that they actually inhabit an island which, according to the INMG, could possibly suffer a severe volcanic eruption. Other than education on viruses like Zika, there is little information provided to the public in terms of risks. Maps of disaster-prone areas are available for all islands with the exception of Brava.

The main challenges for community engagement are the changes in Government officials and the inconsistency in political decision-making (often related to the findings in component 1: Legal and Institutional accountabilities). The incorporation of civil society and its strong institutional memory, along with a close contact with communities and a potential for inter-generational memory, would greatly increase the communities' ownership in the field of EP&R.

The lack of resources and capacity at SNPCB has directly contributed to an insufficient situation in terms of capacity building and provision of both education and tools to local leaders.

### Recommendations

- Improve **risk awareness** through education in order to improve the **preparedness and resilience of communities**. Start education at school to create **better-informed future generations**;
- Consider an **all-risk communication strategy** including epidemics and transmissible diseases through vectors, in order to continuously inform the public on (seasonal) risks, and on how best to prepare. In this communication strategy, consideration could be given to use modern technology like cell broadcasting for public outreach and to reinforce preparedness with cell phone risk awareness and preparation applications already implemented;
- Develop a **national plan** to support and successfully design a **disaster risk awareness and management program for all communities**, which leads to Community DRR councils to take responsibility locally, in order to create awareness and support risk reduction, and strengthen response efforts and the coordination of actors;
- Establish a **fruitful exchange and cooperation with the Earth Sciences Department of the University of Cabo Verde**, which was on the field right after the eruption to gather data, and worked closely with the communities in order to gather information, based on untapped potential for community engagement identified by the university, such as the capture of intergenerational knowledge;
- **Improve the use and availability of the maps** which point out disaster-prone areas on the islands;
- Design a program to support **small scale, community-led mitigation works**;
- **Empower stronger inter-agency coordination and cooperation** in order to avoid duplication of activities, embedding civil society organizations in the official Civil Protection structures;
- Hire a **Regional Commander** for Civil Protection Region North;
- Enable Regional Commanders to **enhance systematic assistance to local leaders** with educational tools and support; and
- Strengthen the **capacity building** of Regional Commanders and relevant staff.

## Criterion 2.2: Early Warning Systems

There is no integrated all-hazard monitoring and surveillance program in place for Cabo Verde, but there are multiple single warning systems in operation. A lack in both information sharing and capacity hinder the development of an overall system. No established procedure to develop early warning messages was found. The current practice of issuing SMS warnings via cell phone provides little control over the timely delivery of warnings, due to vulnerabilities of the cell phone system with no adequate back-up available. Formal agreements with telecom providers, such as a Memorandum of Understanding (MoU), are inexistent, but providers cooperate on the basis of informal agreements.

### Indicator 2.2.1: Functioning Monitoring / Surveillance Programs

The Base Law of 2012 mentions that a surveillance system should be implemented for the collection, forecasting, evaluation, and prevention of risks associated with natural, human or technological events, and to identify population groups exposed to the risks. By law, the Municipal Service for Civil Protection is identified as the municipal actor in charge of technical risk assessments and analysis, and responsible for maintaining information management at the municipal level.

In practice, however, early warning information exists solely for seismic and volcanic activity, and for extreme meteorological events. The key actor for the surveillance of these events is the INMG, with headquarters on Sal Island, and with geophysics mainly monitored from São Vicente. Since 2008, INMG has installed a geophysical hazard monitoring system and reports to SNPCB. INMG operates 17 Automatic meteorological synoptic stations, 4 stations ready to be installed, 20 stations in the scope of the REFLOR project (Resilience to climate change in the forestry sector, led by the Portuguese Instituto Politécnico de Bragança), and 278 pluviometry stations which cover 70% of Cabo Verde. The greatest amount of INMG funding comes from the Air Safety Agency (ASA), and only a small amount from the national budget.

#### Early Warning Illustration: Volcano Observatory and the Fogo Outbreak

In 2008, the INMG, with support of international development partners and research programs, managed to install the first components of the national geophysics network that was later expanded to additional islands, and was reinforced with the installation of a data processing laboratory in Mindelo. This data processing center receives real-time seismic data, and issues bulletins that are delivered to the SNPCB. Additionally, a partnership with the Institute of Renewable Energies of the Canary Islands, with financial resources from a program for external-border cooperation with ultra-periphery regions (Macaronesia Program) of the European Development Fund was made possible in 2008. Despite initial gaps between the mandates of both institutions and overlaps between the LEC, University of Cabo Verde, and INMG monitoring initiatives, the Regulatory Decree 13/2009 of July 20, 2009, clearly assigns responsibilities of seismic monitoring to INMG, and ordered the transfer of the VIGIL Network equipment from LEC to INMG. With regard to early warning system performance, the onset of the eruption was predicted thanks to the seismic monitoring system, and the national and local authorities were alerted according to established protocols. However, local communities did not receive any official warning alert, but initiated evacuation as they perceived the signs of the eruption's onset.

Additionally, the University of Cabo Verde runs the Volcanic Observatory, a project established on Fogo as part of the international cooperation with the Canary Islands. However, several actors pointed out the difficult coordination of the monitoring of volcanic data, which is split between INMG and University of Cabo Verde. There is a lack of information management and sharing among institutions. Furthermore, political sensibility was noted with scientific data and the monitoring of natural hazards. Split responsibilities in the monitoring of seismic and volcanic activities between University of Cabo Verde in cooperation with the Institute of Volcanology of the Canary Islands and INMG, with its headquarters on island Sal, led to the collection and hence the analysis of incomplete data sets by both actors, as there is no data exchange. There is a strong need for inter-institutional information exchange to be enhanced, and a necessity to encourage the use of risk surveillance data and analysis to be used in political decision-making. This was an observation made by the UNDAC team during their response to the volcanic eruption in 2014, and continues to be an obvious and hindering factor in information management among institutions.

In the imminence of a storm or a hurricane, a crisis team – sometimes referred to as a cell – meets and issues a radio, newspaper, and television bulletin. Information will be shared with the Port Authority, Civil Protection, Red Cross, etc. Seasonal forecast information is passed on to the Minister. In emergency situations, the INMG organizes meetings with Civil Protection. Every day at 07:00 and 16:00, on a regular basis, they issue a bulletin to Government institutions, and a maritime bulletin, issued every day at 12:00, to fishermen. Every 10 days, a multidisciplinary working group issues a newsletter on the drought situation to all State services. Broadcasts by radio stations and television broadcasts have stopped for reorganization, but in case of emergency, they are activated through a press conference. In case of an extreme event, INMG provides early warnings to SNPCB, and Civil Protection actors inform the people of self-protection measures.

With reference to health risks surveillance, the National Service for the Surveillance of Epidemics and Investigation (SVEI - Serviço de Vigilância Epidemiológica e Investigação) acts as the national service in charge of monitoring disease and epidemic outbreaks, and of the coordination of medial investigations on risks to public health. Information on health risks is provided by municipal health delegations and reported to SVEI in weekly reports. In case of critical incidents, the case is reported immediately by telephone. High staff turnover and a lack of skilled human resources are named as key factors which hamper local capacities to conduct monitoring and surveillance of multiple health hazards, tailored to the local and cultural context.

Capacities in hazard-specific analysis vary according to specific hazard risks and agencies in charge. While INMG, for example, provides a reliable monitoring and analysis system, as well as a solid dissemination mechanism among key actors, the data gathered and analyzed by other agencies, such as the Volcanic Observatory, is less referred to by the Government Civil Protection authorities to inform decision making or raise risk awareness on the municipal level. Information management lines are not clearly defined, and there is a general hesitation in information sharing among institutions – which was mentioned by various institutions involved in the field assessment.

It becomes clear that early warning information focuses only on the latest emergency which has taken place in Cabo Verde, and not on all the risks which have been identified as threatening Cabo Verde. This means that key actors of Cabo Verde's growing economy – namely, tourists – are not aware of those risks, and lack information as to what they should do in case of an emergency.

### **Indicator 2.2.2: Evidence-based and technologically sound program to analyze data gathered by the monitoring system**

*The assessment did not result in any finding for this indicator.*

### **Indicator 2.2.3: Capacity to develop simple, accurate, and real-time warning messages to people at risk (with constructive and reasonable response actions)**

The Base Law of 2012 declares the capacity to develop warning messages through social communication channels, such as radio or television. However, in practice, early warning messages are provided by INMG to ministries via e-mail, telephone or, sometimes, in person; the Director of Civil Protection passes the message on to the Regional Commanders who inform municipalities via e-mail, telephone or, sometimes, in person. The field mission could not find any evidence of an established and standardized emergency information system, and current procedures are highly vulnerable to disruptions. Communication lines were cut off after the volcanic eruption in 2014, as the telecommunications post was damaged by the outbreak, thus disrupting the communications network during the first five days after the eruption.

Communities are reached through early warnings via TV and radio services. Early warning messages to communities are provided in both Portuguese and Creole, but English (for example, for the large tourist and expat community) is lacking. Municipal leadership has identified a strong necessity for a more efficient risk communication system using 2G telecommunications networks, mostly used by the Cabo Verdean people, as one of the key priorities.

Inter-agency communication in an emergency context is limited to telephone contact and interpersonal bonds, making it a very volatile system, as it is bound to singular actors, leading to emergency response scenarios where key actors were out of credit or battery, and thus unable to reply.

Municipal-level authorities reach communities at risk through radio or TV alerts, telephone, or on-site contact.



**Picture 8:** In the socially deprived neighborhood of Safende in Praia, this drainage canal appears to have more capacity upstream than downstream.

### **Indicator 2.2.4: Functional and Multimodal Early Warning Distribution System**

*The assessment did not result in any finding for this indicator.*

### Intermediate Conclusions on Early Warning Systems

No all-hazard early warning system has been implemented in Cabo Verde, but key components to such a system are operational. Faulty information-sharing is hampering the collective development of early warning systems and its integration. There is very limited capacity for shared analyses. The field mission could not find evidence of an established policy to develop early warning messages. With the current practice of issuing warnings through cell phones, there is little control over the timely delivery of warnings because of the vulnerabilities of the cell phone system, with no adequate back-up in place.

### Recommendations

- **Fully implement the National Contingency Plan of 2010**, with a clear distribution of roles and responsibilities among involved actors, who should both be in place and adequately trained;
- Urgently **expand risk mapping and modeling capacities for contingency planning**;
- Establish both a **legal framework and guidelines for a single multi-hazard monitoring system**;
- Enable institutions through **knowledge building and hands-on capacity** to share information and contribute to a single integrated system;
- Start with building an **integrated all-hazard information management structure** among relevant actors, in order to organize the **dissemination of early warning information** across institutions.
- Develop a **standardized procedure and system**, using multiple communication technologies and channels, for the **delivery of timely early warnings** in several languages; and
- Implement a **multi-modal warning message distribution system** that is resilient to disruption, in order to quickly reach populations at risk.

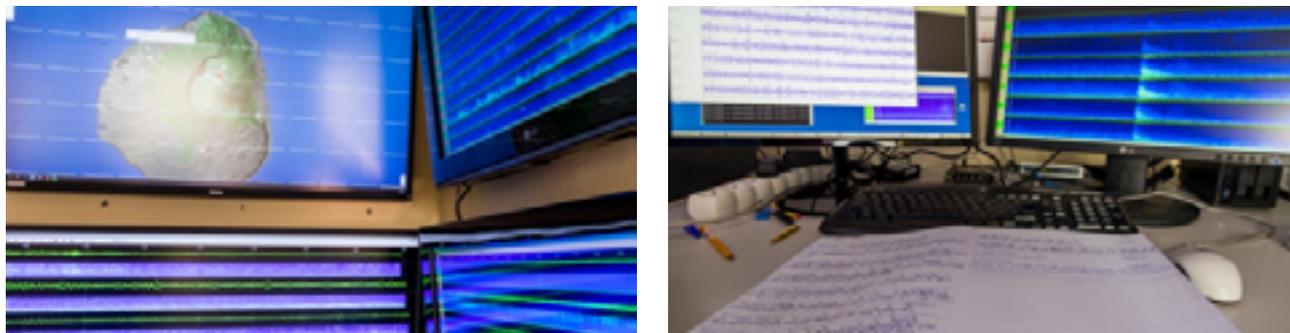
## Criterion 2.3: Information Management Systems

Data and information are not systematically shared in current practices. Obstacles include insufficient institutional clarity, a lack of accepted leadership, and insufficient capacity available to various bodies to structurally contribute to an information system. The assessment team sensed that the knowledge of the supportive role which a shared Disaster Management Information System (DMIS) could play for all stakeholders, is not broadly available.

### Indicator 2.3.1: Disaster Management Information System (DMIS) in Support of Emergency Management

There is no common information system available to support all emergency services. In terms of information management and early warning, all data collected in Cabo Verde is analyzed in the INMG center in Mindelo, São Vicente. Volcano eruptions are difficult to predict but the margin of error is reduced thanks to increased and diversified surveillance. Currently, seismic activity is the most important indicator, which is monitored by a small network of four stations on Brava. Gas emissions at Fogo are also monitored. Alert systems on the islands of Brava and Fogo are different, which makes it more challenging to determine trigger points for emergency action. Fogo Island has an alert-level system, and Brava Island has a monitoring system and no alert levels. Both islands fall under the same Civil Protection region, but there is no similar approach.

The limited amount of information generated by the INMG is delivered to a restricted number of stakeholders such as the President of the INMG, the Prime Minister, the Minister of Internal Administration, and the President of the SNPCB. Information is however not always translated into concrete warning messages and shared with end-users in a timely manner, thus preventing necessary response actions to be implemented.



**Picture 9:** Early warning system operated by INMG in Mindelo; monitoring seismic activity on Fogo Island.

**Indicator 2.3.2: Program Budget Allocations**

**Indicator 2.3.3: DMIS Capable of Integrating GIS-generated Data**

**Indicator 2.3.4: DMIS Capable of Integrated Early Warning System Data**

*The assessment did not result in any finding for these indicators.*

**Intermediate Conclusions on Information Management Systems**

Data and information, in current practice, are not systematically shared. This is the result of a lack of knowledge of the supportive role which a shared DMIS can play for all stakeholders. Second, most organizations lack sufficient capacity to structurally contribute to an information system.

**Recommendations**

- **Enhance cooperation** between SNPCB and the National Land Management Institute (INGT) with regard to information sharing on disaster risks; and
- **Create awareness, through education,** of the importance of a DMIS and of potentially drafting a pathway toward the establishment of a more exhaustive national DMIS.



**Picture 10:** These improvised erosion mitigations might not withstand torrential rainfall. Houses below are directly at risk.

## Criterion 2.4: Geomatics

Summarized findings for the following criteria:

### Indicator 2.4.1: GIS Capacity Available

### Indicator 2.4.2: Comprehensive Set of Geo-referenced Data Layers

### Indicator 2.4.3: Standards for the Compilation and Interpretation of Geo-referenced Data

### Indicator 2.4.4: Standardized and Periodic Processes for the Update of Data Layers

The fourth and final criterion under the information component focuses on geographical information systems and geo-referenced data on social, economic, and structural vulnerabilities – and their monitoring over time. Cabo Verde's first effort is its "Environmental Systems Research Institute (ESRI)" -based GIS system and georeferenced data and mapping.<sup>14</sup> This new process for the country is slowly being deployed at the moment. There is no integrated GIS system as envisioned in the R2R methodology. Relevant information in relation to geo-referencing is presented in the following paragraph, which closes with recommendations.

The National Land Management Institute (INGT) has access to satellite data which is intensively used with the aid of technical external support via UNDP, in order to create maps that identify disaster prone areas for risks of (flash) flooding, landslides, and coastal erosion. These maps of vulnerabilities are used to create zoning maps for special planning purposes, detailing the islands' different areas, and future functions for residential, industrial, commercial, touristic, and nature reservation developments. These maps are not available for Brava Island. It was also noted that in some islands, the maps were neither known nor used.

In cooperation with the National Civil Protection and the fire department, the INGT serves as an observatory for disaster risk in urban environments in the UNDP cooperation project: "Disaster Risk Reduction." In this project, the INGT, together with the fire department was trained to use GPS systems for the geo-referencing of vulnerabilities. The project provided a GPS system. All three institutes jointly deploy multi-disciplinary teams to evaluate and map urban risks. During the interview with the INGT, it was indicated that they lack the capacity, ICT, and software to turn satellite imagery into maps that could be used for emergency response. The Institute also hopes for a greater availability of geological and (real-time) satellite imagery.

<sup>14</sup> <http://idecv-ingt.opendata.arcgis.com>

### Intermediate Conclusions on Geomatics

Cabo Verde is not integrating geo-referenced data in one single system. The use of the spatial data platform of Cabo Verde (IDE-CV) has not been widely adopted by ministries and agencies, besides INGT. (Online) maps generated by the INGT are not known throughout the archipelago, and their use could increase.

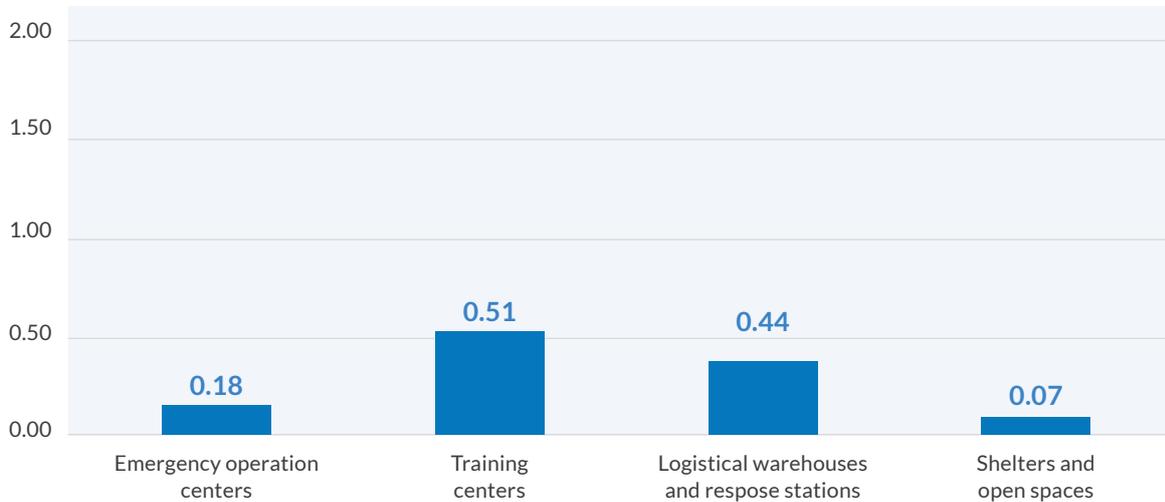
### Recommendations

- In line with the UNDP-supported project, further **strengthen mapping capacities for vulnerable locations**, and **implement the methodology of geo-referencing** more broadly; and
- When systematic information sharing becomes a more common practice and capacity is strengthened to support this process, an **integrated GIS system** is of great added value to Cabo Verde's EP&R system.



**Picture 11:** Coastal areas and hillsides, especially after wildland fires, are susceptible to erosion.

## COMPONENT 3: Facilities



Note: Full scale runs from 0 through 5, results shown on scale from 0 to 2.

**Figure 11:** R2R results are shown for all four criteria of the component. The overall score for the component is 0.30 on a scale from 0 to 5.

### Problem Statement

Facilities to support EP&R are underdeveloped, as indicated by the low Diagnostic scores. There are no Emergency Operation Centers (EOC) in place to support the functioning of civil protection actors in Cabo Verde. As a first step on the national level, an initiative is taken to establish a shared call and dispatch center in the building of the National Civil Protection for the fire brigade, ambulances, and the police. Next to the call and dispatch center, a large office space is designated to house an EOC in the future. The strengthening of information management and cooperation should be pursued in order to support the proper running of a future EOC. There is a lack of training facilities to maintain the basic level skills of emergency responders. A network of strategically located and supplied warehouses to support response and to be used as logistical hubs has not been implemented. Shelters and open spaces to temporarily house displaced persons are not officially identified. In practice, this leads to improvised solutions in schools or community centers that lack the facilities to provide basic living conditions and the safety and well-being of displaced persons, especially vulnerable groups.

### Criterion 3.1: Emergency Operations Centers

In the absence of a structural EOC, the four separate<sup>15</sup> EOC-related indicators do not match the current Cabo Verdean reality. All findings are therefore grouped together, and overall conclusions and recommendations are drawn. The importance of an EOC is elaborated upon in addition to this chapter, as the assessment team observed that what needs to be implemented for an EOC to function properly is not fully understood.

An EOC is not established in Cabo Verde. The existence of an EOC with sufficient back-up systems is however key in order to ensure coordination in the delivery of response to an extreme event or incident, involving the distribution of relief items, response personnel, and specialized equipment.

<sup>15</sup> Indicator 3.1.1 Back-up of emergency operations centers, Indicator 3.1.2 Mobile Command Post, Indicator 3.1.3 Clear Lines of Authority, Indicator 3.1.4 Standardized process for managing social media and crowdsource data.

The foundation to establish an EOC has been legislated. The 1992 Public Law establishing the National System of Civil Protection states the existence of a National Emergency Operations Center for Civil Protection (CNOEPC), the responsibility of its operation being entrusted to the Direction of Planning, Operations and Telecommunications (DPOT). The National Contingency Plan equally names the CNOEPC as the facility for the coordination of emergency operations.

The SNPCB is developing plans to equip a space which has already been identified for the purpose of an EOC. Some equipment has recently been procured. The SNPCB is also setting up a multi-agency dispatch center which is expected to become operational by the end of year 2019, with 24/7 incident surveillance and staffing. The facility has been implemented and will conjoin the National Police, fire brigade, and ambulance service emergency lines, which had until then been separated, under the central national emergency line #112. The multi-agency dispatch center is an instrument that will be beneficial to a future EOC.

In order to fulfill these functions, an EOC is divided into functions and their sub-functional units. Functions usually encompass command, planning, operations, logistics, and finance. Increasing national-level capacity is important, and the capacity at ESM services should also match a different and more coordinated response coordination. The successful implementation of an EOC falls or stands with a fundamental organizational development, and capacities which seem to be underestimated at this time.

Creating a national-level EOC on Santiago Island could significantly strengthen disaster response. A disaster that affects more islands, or another island than Santiago, would require the support of coordination organizations on other islands. During the visits to the other islands, it was observed that there are no plans to mirror the EOC national-level initiative on local, island, or municipality levels. The establishment of a National EOC is not included in a larger plan to strengthen the overall coordination of the emergency response system.

### **The Fogo Case**

In response to the volcanic eruption on Fogo Island in 2014, the local coordination was carried out in the lead of SNPCB, and an on-site operations and coordination center (OSOCC) was set up. The United Nations Disaster Assessment and Coordination team (UNDAC) advised and mentioned the need to invest in a stronger response coordination structure and in information management capacities for effective sharing as key priority to enhance institutional preparedness for future emergency responses. Government officials wish for the provision of facilities for on-site coordination at municipal level, in order to make sure that emergency coordination structures capacities are not only implemented, at central level on Santiago island, but also at municipal level in the remaining islands.

Except for SNPCB, actors coming both from the public and private sectors, have their own, mostly improvised, EOC set-up. There is no connection with the national level. The National Police operate a dispatch center, channeling incoming emergency calls over National Police line #132, and surveillance system for the city of Praia with 24/7/365 staffing. This dispatch system will transition into the #112 Civil Protection dispatch center. More emergency numbers used for the people of Cabo Verde would cause confusion.

The Cabo Verdean Navy runs the Maritime Operations Center with the support of the U.S. Navy. In case of a disaster at sea or involving ships, it would fall under the responsibility of the Cabo Verdean Navy. The staff has a moderate training level, and receives overseas training by and in the United States.

With regard to health emergency, a set of equipment was purchased by the National Institute for Public Health (INSP) to install an EOC following the ZIKA virus outbreak. Currently, the procured equipment has been identified as insufficient, and a new financial plan for further procurement is being run. The EOC for coordination in cases of public health disruptions is expected to become operational by the end of year 2019. So far, no clear definition was elaborated on how the center will become inter-operable with the National Surveillance of Epidemics and Investigation (SVEI).

The Civil Aviation Agency (AAC) operates EOCs on a 24/7/365 basis in the international airports and sees to EOCs in smaller airports which are not kept operative, but could potentially be used as local coordination cells during emergency response.



**Picture 12:** The future emergency dispatch center for emergency number 112.

### Intermediate Conclusions on Emergency Operations Centers

There are no national or local EOCs in Cabo Verde. The SNPCB has taken the initiative to establish an EOC, but this initiative is not connected enough to an overall plan to strengthen emergency coordination and the necessary capacity, building on national, island, and municipal levels.

There is a range of makeshift and/or temporary EOCs in Cabo Verde that make up a body of valuable action center structures which gather and process information that could be used by civil protection actors, would respective information management structures be in place. Establishing a central civil protection EOC as a coordinating body is vital to ensure efficient information management among the various actors, and to channel it so as to inform coordinated disaster response. In order to fill the gap in disaster response coordination and information sharing among key stakeholders, operational plans providing institutional clarity must be implemented, and the civil protection EOC must guarantee suitable staffing and equipment set-up with back-up facility for redundancy.

The results of the legal and institutional components of the R2R Diagnostic illustrated a lack in legislation, policies, and operational plans. Emergency response plans have never been elaborated, leaving gaps with regard to the definition of procedures and implemented roles for all actors in the field of disaster risk management, including the future EOC.

### Recommendations

- Support the initiative of the National EOC at SNPCB. Priority should be given to the elaboration of **operational procedures** and to the drafting of the lacking **crisis management operational plan**. Without strengthened operational clarity, the EOC cannot function and the initiative should be used to create awareness of the urgency to develop operational planning;
- Clarify, for all involved stakeholders, how **coordination mechanisms** will be strengthened starting at national level, step by step, to municipal level. **Political leadership** is essential during a process that will essentially change resilient organizational habits and practices. Focus should be put on the specific geographical context of Cabo Verde, assuring inter-island connectivity and collaboration among EOCs in the case of an emergency;
- **Coordination capacity** should be built within all relevant institutions. Without strengthened capacity aimed at facilitating coordination, the EOC cannot function. Accept that coordination takes time, training, and effort, before it actually saves time and lives, and prevents loss and damage in operations;
- Given the rough terrain of most of the islands, **mobile coordination units** should be considered, to fill the current coordination gap in small and medium-scale emergencies, while the required investment is comparably low;
- **Opening this training center** to other Portuguese-speaking countries and ECOWAS Member States could be envisioned and contribute to its financing; and
- **Procure mobile coordination units** for civil protection on all islands in order to bridge the distance and assist in information flow and coordination.



**Picture 13:** São Filipe in Fogo, Cabo Verde.  
Source: iStock

## Criterion 3.2: Training Centers

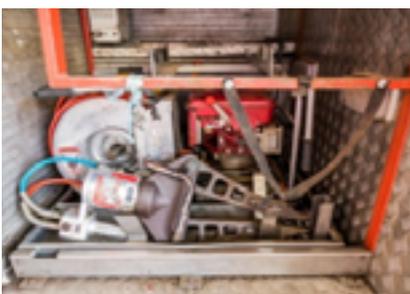
The National Police has a training facility for the six-month courses provided to incoming police officers. Otherwise, there are no training facilities other than meeting rooms where classes can be given. Trainers come from abroad because of a lack of certified trainers and teachers in Cabo Verde. The assessment results for the four indicators<sup>16</sup> pertaining to training centers are grouped together in this chapter.

### Case Study: The Firefighters of Praia

There is no firefighting academy in Cabo Verde. Older and therefore more experienced firefighters teach new incoming personnel. The force has very limited equipment; most of it is old, and not always reliable. Old used vehicles of different brands are used, which makes maintenance a challenge, with some of the vehicles dating back to 1975. Protective gear is very limited and most firefighters participate in deployments wearing clothes that they also wear when on standby at the fire station.

Some degree of cooperation with the firefighting force in Lisbon, Portugal, has been implemented, for assistance with training and capacity building, and for the donation of used equipment (some of which was also sent by France, Luxembourg, Japan, and the USA). There is no structural training program in place, and the last training involving external firefighting training capacity was provided over two years ago. The force is a little over 40-strong, and the personnel works in four 12-hour shifts. Many firefighters are past their prime, and will likely be physically unable to execute most of the more demanding tasks.

The force needs to be strengthened with a new generation of younger firefighters. Legislation for the selection of new recruits needs to be implemented in order to support the selection process. Compared to other firefighting stations in Cabo Verde, the Praia station is quite well staffed and equipped. Still, some degree of improvisation is required to fulfill basic responsibilities. When the force needs to cope with a bigger crisis, limitations in available capacity and equipment will lead to more damage to property, potential danger for people, and loss of life. Due to Cabo Verde's growing economy, more – and higher – buildings are being built. This requires more and better trained and equipped firefighters, and supportive facilities for all emergency services.



**Picture 14:** The best equipped fire department: fire and rescue trucks at the Municipal Firefighting department of Praia.

The 1992 Public Law on Civil Protection declared the necessity to implement trainings for relevant actors, and to provide necessary facilities accordingly. However, the law was never translated into operational matters, other than the recruitment of more police officers.

<sup>16</sup> Indicator 4.2.1 Capacity to accommodate and manage personnel, Indicator 4.2.2 Options for multi-agency training, Indicator 4.2.3 Effective utilization and maintenance, and Indicator 4.2.4 Geography and location

Both at national and municipal levels, training requirements, and the necessity for facilities to host them, are clearly and repeatedly expressed. Cabo Verde's civil protection system is young and developing, meaning that response structures defined by law in concrete large-scale emergencies have been so far seldom activated. In order to practice national-level inter-agency response (as well as municipal level, including first responders in communities), a regular organization of trainings is pinpointed as vital by many stakeholders.

Simulating response structures allows for relevant actors to take on increased ownership of their actual role within the broader picture, and to put greater emphasis on civil protection. Civil protection personnel repeatedly alluded that the training they had received had been minimal. The necessity for capacity building on all levels of influence, ranging from national to regional and local, has become blatant, as well as the lacking facilities to support training.

Again, public and private actors in Cabo Verde actually provide training programs and facilities at times. The Civil Aviation Agency, for example, trains airport security staff during table-top exercises at least twice a year. Safety staff receives firefighting training on-site, as well as table-top exercises and partial exercises once a year, in addition to full exercises twice a year. The AAC provides the necessary training facilities to carry out programs for their staff. The National Police provides a training academy with a total capacity of 120 participants. The facilities are sufficient for the police's training purposes, but they are neither fitted to facilitate the training of medics, firefighters and other first responders, nor for multi-agency training.

### Intermediate Conclusions on Training Centers

EP&R training facilities for civil protection actors are in planning but not operational. Generally, a severe lack of facilities to host simulations and trainings – both for operational and management level – is apparent in the Cabo Verdean context. The practice of lines of command through exercises (for example, table-top exercises) is missing, combined with the fact that the emergency-triggered mechanism is not activated, leads to a lack of awareness among actors. Training programs should be rooted in Human Resource Management and connected to the development of multi-agency organizational capacity. Both foundations for structural training programs are lacking in the country.

### Recommendations

- **Create awareness**, and address the need for **structural training programs**;
- Draft and implement **organizational development plans**, supported by Human Resource Management planning;
- Secure **structural funding for training**;
- Without the implementation of these three conditions above, a **future training facility** would be under-used;
- Establish a **training center** that covers both **operational and strategic training** for the overall disaster management field;
- Seek an **enhanced training exchange** through formal MOUs with other countries and organizations (for example, European Union); and
- **Open this training center to other Portuguese-speaking countries** and ECOWAS Member States would contribute to its financing.



**Picture 15:** The National Service of Civil Protection and Firefighters boasts strong development with new vehicles and headquarters in Praia.

### Criterion 3.3: Logistics Warehouses and Response Stations

#### Warehouses

Warehouse space and logistic hubs are very limited within the Government system, and mostly improvised. As a result, the findings during the mission on this topic following the R2R Diagnostic are scarce, and results for the four indicators on warehousing<sup>17</sup> are grouped together. Further explanations are provided on the purpose of warehouses, and some solutions are put forth to inspire better practices in the future.

The 2014 volcanic eruption on Fogo clearly illustrated the possible implications of not having logistical warehouses and response stations in place. There is a duplication of efforts in the coordination of incoming relief stock. Not only were responsibilities not fully divided among Civil Protection, the Red Cross National Society, and the municipal council, but lacking warehouse space added to the uncoordinated nature of logistics response. Interviewees noted a general lack in civil protection stock and relief items, as well as deficits in terms of the distribution of the stock across the island. Moreover, relief items would have to be transported from the capital to the islands in case of a state of emergency, resulting in delays in first response. In addition, accessing some of the islands and their more isolated communities proves difficult. As part of the UNDAC mission to Brava in 2016 in response to seismic activities, the team assessed that emergency stocks were not available, but there was warehouse capacity to manage stock if necessary. The team located multiple warehouses on Fogo, which could function to manage incoming assistance, and a logistical hub could possibly be established in the community hall.

In spite of the available physical space identified on the islands, key informants stress the fact that there is no coordinated system for stock management and warehouse management. Contingency stocks for an immediate first response to sudden-onset events should be implemented on islands with the highest disaster risk, such as Fogo, Brava, and Santo Antão. This could be located in smaller warehouses, which could be managed and coordinated at municipal level. In addition, sufficient buffer stock was not identified to supply ongoing programs without using the contingency stock. As an offset to this undertaking, an assessment of needs for the island's buffer stock should be carried out, taking into consideration:

- Estimated monthly consumption of the different articles;
- Frequency of orders to refill the stock; and
- Standard delivery time of the orders, taking into consideration the geographical location of the islands, and possible means and availability of transport.

<sup>17</sup> Indicator 3.3.1 Coordination and support logistics hub, Indicator 3.3.2 Capacities of logistics warehouse, Indicator 3.3.3 Capacities of local response stations, and Indicator 3.3.4 Specialized hazard response stations.

On islands with lower disaster risks, spaces that could operate as logistical hubs should be identified and mapped out, and agreed upon by all actors involved in disaster response. As of now, such spaces are improvised in the event of an emergency, which requires a full knowledge of the location of suitable buildings at all times. The choice of the geographic location of smaller warehouses and logistic hubs must be made based on a risk analysis and hazard mapping, in order to ensure safe and strategic access points for incoming relief items, and in order to identify the availability of distribution architecture (see Figure 12). This makes exhaustive disaster exposure analysis for the establishment of a network of buildings with suitable warehousing capacity a current priority.

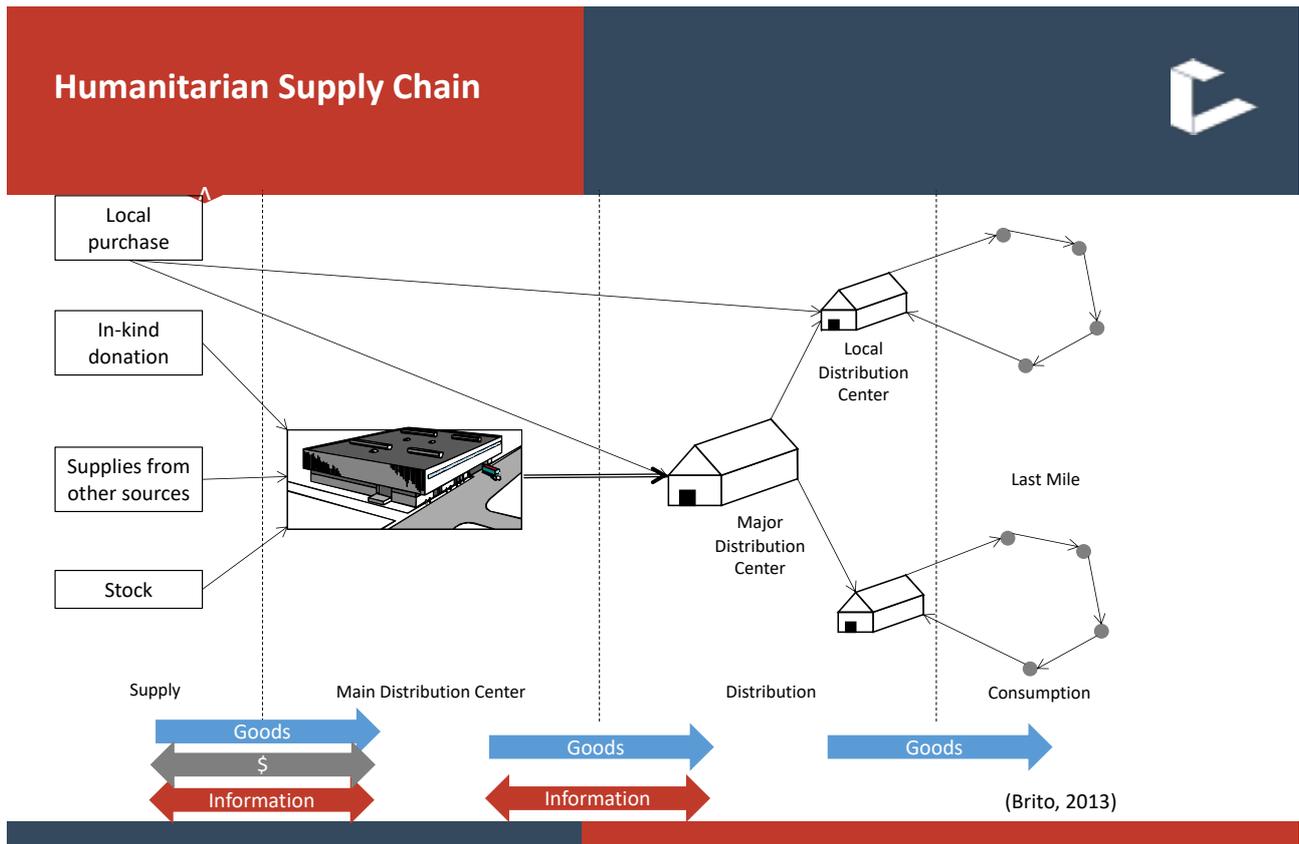
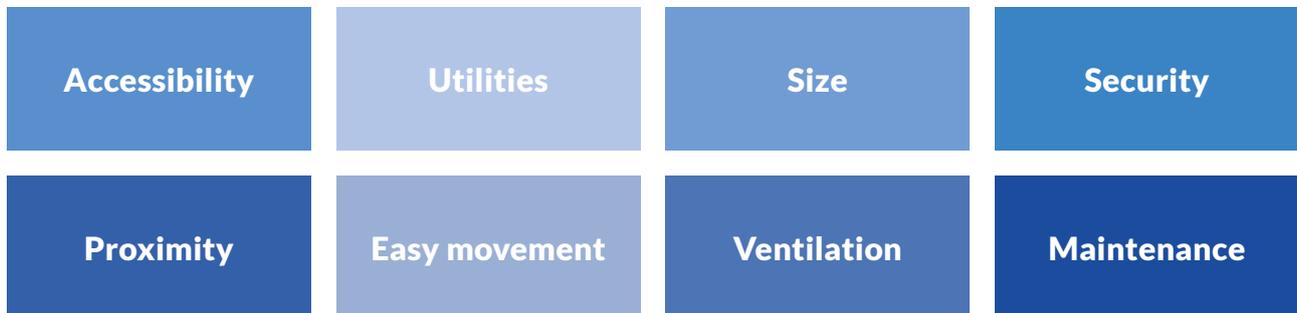


Figure 12: Possible Humanitarian Supply Chain Set-Up.<sup>18</sup>

The lack of a central warehouse for the management of larger stockpiles and more expensive equipment in the capital, Praia, became equally apparent during the field assessment. The current stock consists mainly of items mobilized by international relief organizations in response to the volcanic eruption in Fogo in 2014. It has been used periodically for other interventions, but is generally diminishing.

<sup>18</sup> World Food Programme (WFP), Logistic Cluster, Emergency Logistics Induction Training Course, Module 4: Introduction to basic logistics characteristics.

A central warehouse and logistical hub would enable the storage of relief items and maintenance of rescue equipment and cars, with solid stock management. Physical space should be selected or built, based on the following criteria:<sup>19</sup>



In order to ensure the maintenance of the warehouse, a storekeeper position must be offered, and personnel trained to maintain an overview of warehouse management and stock. It is recommended that the storekeeper should attend warehouse management training, as organized by the Global Logistics Cluster for example. Creating a practice of maintaining stored items and equipment is essential to ensure that unnecessary degradation of available resources is avoided.

### Response Stations

Local response services are a critical resource during disasters, since local response personnel will be among the first to be deployed. While the main focus remains the response to daily emergencies, their equipment and facilities will also be required in response to a calamity. A functioning and resilient network of response stations and a central oversight with clear understanding of each station’s response capacities and equipment is vital in assuring expedited response to an extreme event.

In Cabo Verde, response stations are mostly poorly equipped and the capacities of response stations are largely dependent on political decision-making at the municipal level, with regard to investment in equipment and personnel. The organization of regular trainings on the use of provisioned equipment and its maintenance are similarly challenged.

Additionally, some stations possess equipment or vehicles donated by emigrants, third countries or international organizations to various municipalities. On the island of Brava for example, both ambulance vehicles available for emergency transport have been donated by emigrants local to the island. The two vehicles are U.S. models and have been out of order, but there is no local expertise or material available to repair them. While municipalities can greatly benefit from donated materials, the dependency of emergency actors on such ad hoc donations, and the challenge in terms of maintenance and repair, poses considerable risks for the running of the response services.

In addition, a centralized procurement system is lacking, which is actually key in seeing that pre-defined standards of equipment are actually met. A centralized procurement system is a prerequisite for an inter-operable and extra-regional use of the equipment, which is of utmost importance when response personnel from one island or region are deployed to another. Ideally, such a procurement system is implemented at central level under strong leadership of the Civil Protection authorities in Praia. Such a development is key in assuring host nation support in the case of an emergency requiring international assistance. In the case of incoming international relief, SNPCB must hold strong ownership of the warehousing and procurement system, in order to function as central actors in liaison with international actors that support relief efforts.

<sup>19</sup> Warehousing and Storage (CARE Emergency Toolkit: <https://www.careemergencytoolkit.org/>)

### Intermediate Conclusions on Logistical Warehouses and Response Stations

Logistical warehouses and response stations play a critical role in disaster response. The Red Cross of Cabo Verde has a network of warehouses in place which is of great added value, however, Government entities have no facilities of their own. Considering that emergency first response organizations are generally poorly equipped and rely on mostly insufficient facilities, establishing a network of stocked functional warehouses has received little priority so far. Fogo and Brava put forth the most articulated requests for warehouse facilities, and should be given urgent consideration. Establishing a network of warehouse facilities on all islands should however be pursued by the Government as part of a strategic endeavor. Currently, the country fully depends on the Red Cross and international support in case of crises.

### Recommendations

- Recognize that the country is **fully dependent on Red Cross facilities and international support** in case of a disaster;
- **Raise awareness at the political level**, that the Government has its own responsibility to cater to affected people, and that warehouses are critical infrastructure to meet this responsibility;
- Draft a **plan for the financing and establishment of a minimal network of logistical warehouses and response stations**, including stock management and necessary capacity building;
- **Structural budget** should be secured in order to sustain the investment;
- Given their vulnerabilities, **Brava and Fogo** should be given priority in this plan;
- **Training on running these facilities**, as well as capacity building on emergency logistics, needs to be provided; and
- Establishing **stand-by contracts** with central actors from the private sector.

## Criterion 3.4: Shelters and Open Spaces

In this paragraph, the results on all four indicators<sup>20</sup> are grouped together, since the overall findings are too meager to fill out the Diagnostic in a complete manner. This is due to the fact that there are no designated open spaces such as parks, vacant land or green spaces for the purpose of organizing temporary shelter for displaced people in case of an emergency. At this moment, facilities are improvised in an ad hoc fashion during emergency situations, and these do not meet the minimal requirements, especially not for the accommodation of vulnerable groups.

The UNDAC team deployed to Brava in 2016 concluded that in case of a volcanic eruption, an evacuation of the full island of Brava would entail the movement and provision of shelter for almost 6,000 people. Yet, the capacities in meeting this need in initial shelter capacities were deemed insufficient.

At this moment, there is no infrastructure in place to deploy emergency housing and temporary shelter for displaced people during disasters. Temporary shelter is organized on an ad hoc basis. In the past, schools were used as spaces to shelter displaced people or even used as housing for a temporary period. This was a frequent cause of conflict around the use of space, as the running of the school was interrupted. In such improvised shelters, there are no safety or security standards in place to ensure safe sheltering for vulnerable groups such as women, children, and the disabled; nor could WASH (water, sanitation, and hygiene) facilities be pre-planned for temporary shelter places. It can be expected that evacuees would be in urgent need of access to clean and safe water and hygiene facilities.

<sup>20</sup> Indicator 3.4.1 Emergency housing and temporary shelter, Indicator 3.4.2 Designated open space for operations, Indicator 3.4.3 Disaster evacuation routes, and 3.4.4 Temporary shelter and emergency shelter.

### Intermediate Conclusions Regarding Shelters and Open Spaces

No designated open spaces such as parks, vacant land or green spaces have been pre-identified and mapped out for the purpose of organizing temporary shelter for displaced people in case of an emergency. In case of crisis situations, facilities are usually improvised, and thus cannot meet minimal requirements – which is especially a challenge for vulnerable groups.

### Recommendations

- **Raise awareness**, on the political level, of the **challenges of the temporary housing of displaced persons** that takes into consideration vulnerable groups such as women and youth, the elderly, and mentally and physically challenged individuals;
- Prepare an **overall sheltering needs assessment and identify safe havens**. Prepare an **overall plan for emergency temporary shelters** connected to evacuation routes for multi-hazard use;
- **Identify multipurpose buildings** that can be transitioned into adequate **temporary housing facilities**;
- **Schools should not be the first choice**, as children benefit from returning to their daily routine after a crisis, which includes going to school; and
- Given their vulnerabilities, **Fogo and Brava** should be given priority.



**Picture 16:** Street of Palmeira, Sal, Cabo Verde.  
Source: iStock

## COMPONENT 4: Equipment



Note: Full scale runs from 0 through 5, results shown on scale from 0 to 2.

Figure 13: R2R results for all four criteria of the component. Overall score for the component is 0.41 on a scale from 0 to 5.

### Problem Statement

The equipment available to the EP&R system in Cabo Verde is very limited – often to the point where it prevents the staff from being operational. The health care system of Cabo Verde operates at a basic level and is challenged by a lack of resources, equipment, and qualified personnel. Standardized procedures for medical first responders are not established, and most personnel are not trained beyond first-aid level. Ambulances are minimally equipped for pre-hospital health care, and serve essentially as a means of transportation to a medical center or hospital. At the time of the assessment, the island of Brava did not have a single operational ambulance. In case of an emergency with multiple persons injured, the existing medical services would immediately fall short.



Picture 17: Health center in Praia equipped with a redundant power generator.

Water, sanitation, and hygiene are not guaranteed for the entire population on a daily basis. Especially in socially deprived areas, services do not meet the minimum requirements set by the sustainable development goals. Equipment and facilities for the emergency deployment of WASH-related items are not available. Public awareness communication materials are broadly in use and include health-related issues, but social services for affected vulnerable groups are not in place. This part of the population has to rely on initiatives of NGOs, churches, and the goodwill of families and the community at large for support in times of crisis. Equipment and resources to manage mortality during crises are extremely limited, and most islands do not have anything, either in place or on stock.

Equipment for radio communication is scarce and highly limited. In most cases it doesn't work, and when it does, it isn't always inter-operable. Broadband is not deployed enough to be of any significance, whereas the cell phone 2G coverage is good with few exceptions. The commercially operated cell phone providers have mostly redundant radio coverage, and decent coverage can be maintained even when some of the antennas are affected by emergency or disaster. Equipment for emergency repairs is available throughout the country. Telecom companies will provide their services on request of the National Civil Protection to send information SMS messages to affected people, but cell phones are the main means of communication with and among first responders when no adequate back-up system is in place.

Since fire departments are minimally equipped with mostly old and used vehicles of different brands in various conditions, some are insufficiently reliable to deploy. The water supply in response to larger fire incidents relies mostly on the informal and spontaneous assistance of private individuals to assist with their water trucks. This is a practice in many small island development states. Yet, these private companies do not guarantee to be available 24/7, and 365 days a year. Safety equipment for firefighters is available in limited amount only. The availability of equipment for search and specialized rescue is far below minimum standards, and equipment to handle hazardous materials does not exist.

## Criterion 4.I: Emergency Social Services

### Indicator 4.1.1: Medical Responders, Pre-hospital Healthcare and Medical Transportation Resources for Casualty Care

There is no regulated system for pre-hospital medical care and transportation implemented in Cabo Verde. First responders such as firefighters are often not trained beyond minimal first-aid skills. Furthermore, there is no clearly identified institution accountable for emergency transport and pre-hospital medical care, which leads to emergency transport being carried out where capacities exist, thus on an ad hoc basis. Some fire brigades have ambulances, but these are mostly either poorly equipped or out of order. Other fire brigades have no ambulances at all. There is neither a consistent pattern or structure implemented, nor a complete overview of capacities in place. The picture is diverse, with ambulances being operated by the fire brigades, the Red Cross National Society, hospitals, or even private companies. The latter are mainly operational on the islands Sal and Boa Vista, where there is a strong tourism sector.

The absence of a legally regulated integrated medical emergency system impedes the following medical response requirements:

1. The attendance of emergency medical calls by qualified personnel;
2. The dispatch of appropriate response personnel and equipment consistent with the severity of the condition;
3. The reduction of response time for ambulances; and
4. The training and certification of the different teams according to their levels of responsibility.

The World Health Organization (WHO) provides technical assistance to a project aimed at assessing pre-hospital medical emergency of Cabo Verde, in order to inform the establishment of a system for pre-hospital care. This system would reinforce capacities of existing infrastructures and provide additional resources, such as ambulances, medical emergency motorbikes, medical vehicles, medical emergency helicopters, and so forth.

WHO further emphasizes the necessity of qualified medical personnel at central and municipal levels, able to provide effective leadership, education, and training. Most senior medical staff have received their training abroad, in Cuba and Brazil for instance, but the number of qualified graduates returning to their home country is limited.

**Indicator 4.1.2: Disease Prevention and Core Services**

*The assessment did not result in any finding for this indicator.*

**Indicator 4.1.3: Social Services Programs**

*General social services are in place, but are not targeted toward vulnerable people during emergencies and disasters.*

**Indicator 4.1.4: Mortality Management During Emergencies**

At the moment, mortality represents a challenge in regular day-to-day operations due to a lack of equipment and training on how to manage corpses. The transportation of corpses is a particular concern, since there are only a few vehicles (if any) to recover the bodies and transport them to the morgue. Currently, most transport is done by ambulance, with no clear decontamination procedures in place for the vehicles after transport.

An emergency or disaster with a high casualty rate overwhelming the current capacities, would represent an obvious challenge for the EP&R system. There is an urgent need to establish safety procedures for recovery, handling, transport, and for the storage of corpses.

**Intermediate Conclusions on Emergency Social Services**

Emergency social services are weak in Cabo Verde. There is no functioning system for pre-hospital medical care, and clear lines of responsibilities and institutional accountability are lacking. At the moment, emergency transportation is mostly carried out through private means, taxis, or ambulances – when available and functional at all.

As such, Cabo Verdean institutions are obviously largely unprepared for emergencies with high casualty rates, and lack any systematic approach to the management of mortality during calamities.

**Recommendations**

- Establish a **system for pre-hospital emergency care and transport system**;
- **Establish WASH standards** for institutional response during disasters and emergencies;
- Design and develop **standards for mortality management during disasters**, in order to enable an articulate use of the various institutions;
- **Establish disease prevention and core services in communities**, as the Diagnostic could not identify any; and
- **Create social services programs** to support families and vulnerable groups, as the diagnostic could not identify any.

## Criterion 4.2: Information and Communications Technology

### Indicator 4.2.1 and 4.2.2: Availability and Interoperability of Radio Communications in Support of Emergency Operations

The geographic characteristics of Cabo Verde poses challenges to the establishment and maintenance of a resilient communication network, in particular the fact that Cabo Verde consists of ten distant islands, with their respective landscape limiting access, and quite distant from one another.

The medium and long-distance radio communications network relies on repeaters whose operability depend upon power sources, electricity, and maintenance. It is unclear whether a radio communications network actually exists, that connects and supports fire brigades, the municipal Civil Protection Service, the National Police, and so forth.

With regard to small distances, there are few portable radios fitted to the average firefighter team, with the radios often obsolete, and vulnerable to several maintenance problems (batteries, etc.), and with no interoperability among various actors.

Many key informants pointed to a lack of a “radio communication culture,” tapping into the fact that, even if equipment actually existed, it is likely that firefighters would often forget the radios, or maintain them when not in use. These are mainly symptoms of a lack in training to stimulate best practices in the use of equipment.

For these reasons, the use of mobile phones is widespread. This practice had several drawbacks, as most mobile phones are personal, and restrictions in reaching key response personnel originate in a lack of phone credit to make calls or in battery shortages – to name only the usual situations.

### Indicator 4.2.3: Broadband Network Connectivity for EOC Use

Broadband network connectivity exists, but connectivity is low on some of the islands. On the islands, inhabitants mostly operate over a 2G network, while citizens of the capital Praia and the island of Santiago connect over a 3G network. Telecommunications providers are expanding to a 4G network.

According to the telecommunications provider CV Telecom, the broadband network is redundant, with a national reach of fiber-optic communication, as well as a backbone communication system of mini-link networks on all the islands. A case study of the volcanic eruption on Fogo Island in 2014/2015 shows the vulnerability of the communication system, since it was disrupted for a couple of days. CV Telecom had clearly identified a gap in the system, filled with the installment of further mini-link elements.

There is no satellite communications network – which generally represents an alternative in case the regular phone network collapses. It is absolutely necessary to explore the establishment of a network for satellite communications, in order to ensure continuous communication during emergencies, should the telecommunications network be interrupted.

### Indicator 4.2.4: Protection and Rapid Recovery of Public and Private Sector Communication

*The assessment did not result in any finding for this indicator.*

### Intermediate Conclusions on Information and Communication Technology

Capacities in information and communication technology are limited due to a lack of habitual use of systems and devices, and due to the general inadequacy of the equipment in place. Furthermore, responders often lack adequate training, and/or communication lines have not been tested as part of simulation or practice exercises.

#### Recommendations

- Foster a **practice of communication** through **simulation exercises**;
- Conduct **trainings on information management and communication** during emergencies;
- Enhance **equipment and communication lines** through a network of satellite communications; and
- Create a **plan for the protection and rapid recovery of public and private sector communication systems**.



**Picture 18:** Makeshift solutions in Cabo Verdean communities: on the roof of this improvised house, a bicycle wheel serves as a television antenna. Makeshift solutions are plenty throughout the country, showing the remarkable resilience of the people.

## Criterion 4.3: Hazard-Specific Response Capacity

The following section is organized according to topics rather than relevant criteria<sup>21</sup>, to get a better overview of hazard-specific response capacity.

### Response to Wildland Fires

In the recent past, Cabo Verde faced several wildland fires, mostly due to the occurrence of drought in the past two years, but also due to slash-and-burn agriculture practices. According to the Ministry of Agriculture and Environment, occurrences of wildland fires are mostly observed on the islands of Fogo, Santo Antão, and Santiago. Initiatives involving forest cleaning practices, population sensitizing, and awareness-raising campaigns, as well as the drafting of forest management plans, have been carried out on the islands of Fogo, Santiago, and Boa Vista, in order to reduce the occurrence of the fires.

<sup>21</sup> Indicator 4.3.1 Functional wildland firefighting capabilities, Indicator 4.3.2 Rescue during flooding or water-based emergencies, Indicator 4.3.3 Rescue capacity for structural collapse and entombed rescue, Indicator 4.3.4 Functional hazard materials' mitigation capability.

Year/ Island	Santo Antão	São Vicente	São Nicolau	Sal	Boavista	Maio	Santiago	Fogo	Brava	Cabo Verde
<b>2015</b>	15	5	3	4	0	0	26	4	1	<b>58</b>
<b>2014</b>	19	2	4	1	1	1	23	5	0	<b>56</b>
<b>2013</b>	13	6	2	0	1	1	23	15	2	<b>63</b>
<b>2012</b>	17	4	2	5	1	0	33	3	0	<b>65</b>
<b>2011</b>	12	5	0	1	2	3	33	5	1	<b>62</b>
<b>2010</b>	9	7	5	7	1	0	25	11	0	<b>65</b>
<b>Total</b>	<b>85</b>	<b>29</b>	<b>16</b>	<b>18</b>	<b>6</b>	<b>5</b>	<b>163</b>	<b>43</b>	<b>4</b>	<b>369</b>

**Table 3:** Number of Fires on the islands of Cabo Verde between 2005 and 2010.

The main response capacity remains with local firefighters, who rely on light vehicles (pick-ups) with 500-liter capacity tanks. These are adequate for first interventions and smaller fires. A program from the Austrian Cooperation Agency has provided twenty-two pick-ups with firefighting capacities (one for each municipality), which resulted in the advantage that all vehicles are of the same brand, model, and type. This facilitates an integrated maintenance program. Nevertheless, most vehicles are poorly maintained in terms of mechanics, plate, and paint. The condition of these vehicles does unfortunately not guarantee efficient and effective first interventions.

The lack of water points needed to reload the vehicles also severely hampers the extinction of fires. Fire-brigades try to overcome this through cooperation with municipalities and private companies, who have water tank vehicles which they can support. For larger fires requiring more robust interventions, there is a need for additional 4X4 or 6X6 heavy fire trucks with higher water capacity to guarantee the extinction of more complex fires. A clear drawback in using heavy fire trucks is that due to the weak infrastructure in place, they cannot reach all incident locations, especially in remote regions of the islands as well as densely populated areas with spontaneous and unregulated constructions.

At the moment, using indirect firefighting techniques, namely the creation of fire lines that can stop fires from spreading, is not current practice. The use of fire line hand tools is also not common, as the necessary equipment is not available. These technique could complement the use of water to extinguish fires, thus making the overall response to wildlands more effective.

The lack of fire-resistant personal protection equipment poses a series of threats with regard to the safety of firefighters. This missing equipment includes, but is not limited to:

- Jackets and pants;
- Helmets;
- Balaclava;
- Boots and gloves;
- Goggles; and
- Fireproof blankets.



**Picture 19:** A firefighting exercise at a fuel station in the city of Praia. Not all firefighters wear basic protection gear like helmets and gloves.

The Ministry of Agriculture and Environment has implemented a range of programs to support community mitigation works regarding wildland fires. Whenever funds are available, they implement forest prevention projects to which associations can apply for forest-cleaning actions. There are also regular awareness-raising programs aimed at the people, mainly using media platforms such as TV programming and radio messages about mitigation on wildland fires.

Available capacities are nevertheless ineffective in containing the spread of wildfires within reasonable time. This deficiency exacerbates the current reality of drought in the country, as it hampers many of the country's reforestation efforts. Wildland fires also significantly increase soil erosion, because of the absence of vegetation capable of mitigating the effects of intense rainfall.

### **Response to Extreme Weather Events**

The geographic location of the Cabo Verdean archipelago and its frequent exposure to extreme weather events, such as tropical storms or hurricanes, require the installation of additional technical rescue capabilities, such as water rescue.

The risk of flash floods in Cabo Verde has increased exponentially due to the urbanization process taking place in the islands, as well as the occurrence of strong and concentrated precipitation. Most of the times, there is very little time to react. Coastal rescue capacities have been established with lifeguard presence and basic equipment, mainly in regions with strong touristic activity. These initiatives are taken on municipal level.

Unfortunately, response agencies have little rescue capacities for scenarios of flooding or water-based emergencies. The lack of technical equipment and technical training (surface water rescue) to perform this specific type of rescue makes any operation during strong currents unfeasible.

Rapid and dirty water streams, which are very common with flash floods in urban areas, present several difficult challenges to rescuers, and require advanced training and appropriate equipment.

### **Response to Industrial Accidents**

In 2015, a pipeline gas fire outbreak occurred in the harbor of Praia, and killed one person. Accident intervention involving hazardous materials requires the use of differentiated equipment and specialized training, which are not implemented in Cabo Verde. The private sector has taken the lead so far, and carried out material-specific trainings with civil protection actors, and has facilitated simulation exercises.

Generally, a need for further training and response capacities remains, and should be enhanced, especially with Government actors. Capacities to manage hazardous material incidents need to be set up and developed, according to the list of hazardous products available in the country.

### Response to Volcanic Eruptions and Seismic Activity

The risk posed by seismicity and volcanic activity poses considerable threats to the inhabitants of Cabo Verde. The country's main infrastructures and public and private buildings are at risk, with the potential of a vast financial impact. Evacuation plans have been prepared for the islands of Brava and Fogo; yet they require updating and practicing in the framework of simulation exercises. Severe seismic risk prevails for the island of Santo Antão, yet little to no attention is given to this last threat by Government authorities.

### Search and Rescue Capacities

Urban search and rescue capabilities are of central importance during disasters, when entombed people need to be saved. This is another form of technical rescue expertise that requires specialized training and advanced equipment. At this moment, there are no rescue capacities installed for trained personnel to perform these operations in the Cabo Verdean jurisdiction.

Search and Rescue capacities at sea were deemed to be insufficient, including for mass evacuations on ships, and would need further attention.

#### Intermediate Conclusions on Hazard-Specific Response Capacity

Hazard-specific response capacities have not been implemented so as to cope with the largest disaster risks to Cabo Verde. Capacities were detected in the field of response to wildland fires, some with regards to extreme weather events, and for evacuation in the scenario of seismic activity.

Generally, hazard-specific capacities are scarce and, where in place, need substantial enhancement and training. No hazard-specific response plans are either implemented and/or operational, and where they exist, require updating. The knowledge and skills of the response personnel with regard to specific hazard scenarios is lacking, and response teams require training.

#### Recommendations

- Completion of **hazard-specific emergency response plans**;
- Facilitation of **hazard-specific trainings** with response personnel; and
- **Inventory of hazard-specific response material**, and **provision of equipment** where necessary.

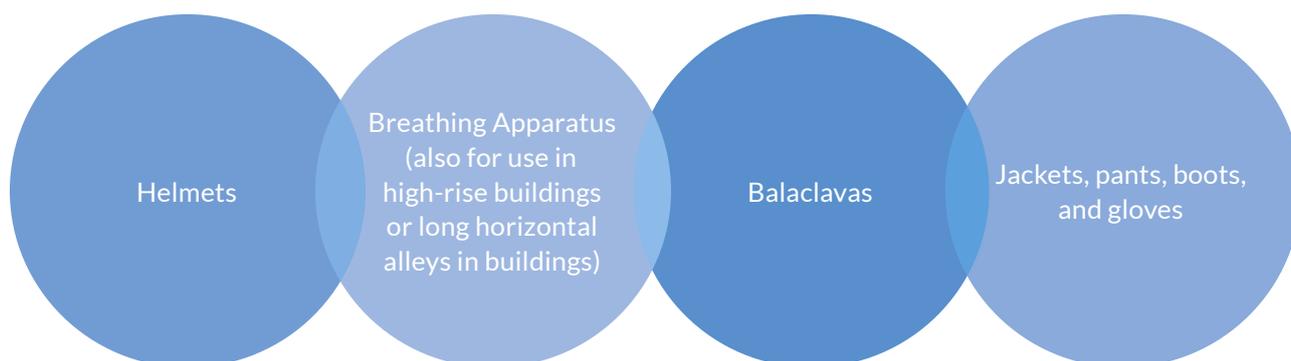
## Criterion 4.4: Urban Firefighting and Technical Rescue

The response to urban fires requires adequate equipment and trained firefighters who can take on the evacuation of buildings, rescue trapped people, and extinguish fires with the lowest impact and loss, and safely. This section summarizes the findings for the four indicators<sup>22</sup> for this criterion.

As mentioned in criteria 4.3, the main capacity to respond to fires is to be found with the local fire brigades, who are equipped with light vehicles adapted to wildland fires, and older vehicles with low maintenance. Some municipalities are equipped with modern fire trucks thanks to their own investment decisions, or donations. However, due to differences in priority-setting in the budgets of most municipalities, there are several cases where a lack of maintenance leads to a degradation of the vehicles' operational capacity, largely hindering the success of the interventions.

Urban fire extinction in Cabo Verde faces two additional challenges, which are 1) the absence of modern fire safety regulations in buildings, and 2) the lack of an organized and structured fire water network, at least in the main cities that can support firefighting operations. In particular, recent works by Chinese companies built high-rise buildings in the city of Praia, challenging local firefighting capacities to address potential risks arising from a new building trend on the island.

The extinction of structural fires, whether urban or industrial, requires highly trained personnel with the following adequate Personal Protective Equipment:



Modern fire trucks with higher extinguishing capacity, ventilation equipment, lighting, power generators, etc. need to be provided at least to response stations in large urban areas, but ideally, in rural areas as well. Hotels and other larger buildings are increasingly built higher, and require specific capacities to provide an effective response to urban fires and rescue operations in high buildings.

Road accidents occur frequently, often with significant impact. Existent entrapment and extrication capacities are insufficient, and the need for appropriate vehicles was underscored by both the fire brigades and the mayors.

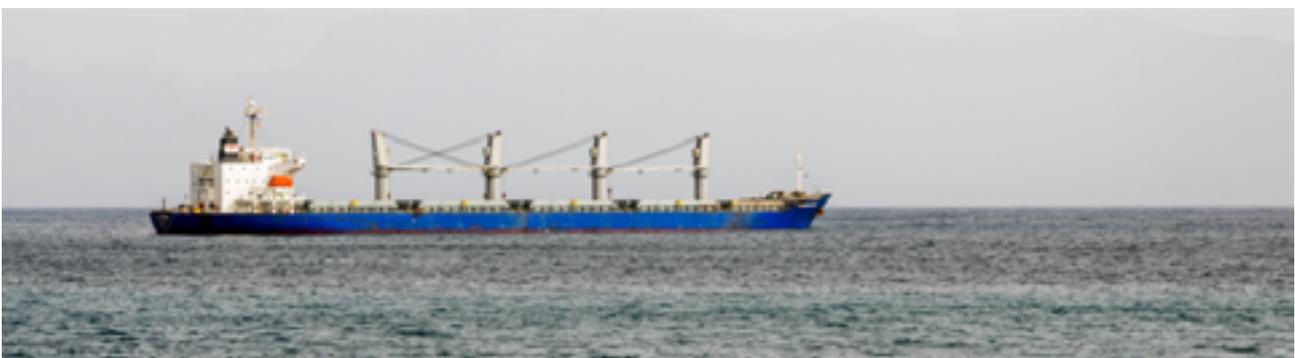
On the island of Santiago, there are two rescue trucks fitted with the essential equipment to carry out extrication procedures in light cars. Both these vehicles have been provided through a program from the Austrian Cooperation Agency, but the absence of a maintenance program is one of the main issues. They are fitted with basic equipment, however essential to extrication operations, such as blocks and edges for vehicle stabilization. The new condition of this equipment reveals that it has not yet been put to use due to the absence of relevant training or know-how.

<sup>22</sup> Indicator 4.4.1 Functional urban firefighting, Indicator 4.4.2 Entrapment and extrication rescue capabilities, Indicator 4.4.3 Functional rope rescue capabilities, and Indicator 4.4.4 Functional confined space rescue capabilities.

Cabo Verde’s mountain ranges attract considerable hiking-oriented tourism, which requires the knowledge of, and training in, rope rescue in order to respond to potential mountain accidents. The number of hiking tourists has significantly increased over the last years. While Cabo Verdean islands are generally popular destinations for hiking tourism, the islands of Santo Antão and Fogo receive the greatest number of hiking tourists, and should be seen as priorities in addressing the risk of hiking accidents. Basic trainings are carried out in the fire brigade of Praia, but the response station suffers from missing equipment and insufficient knowledge to carry out rope rescue. Considering that the technical response equipment for confined spaces represents the culmination of the whole technical rescue expertise, it is clear that there is a lack of capabilities to perform technical rescue.

Island	Name	Location		Predominant Orientation	Altitude (m)
		Latitude	Longitude		
Santo Antão	Tope da Coroa	17° 02' 05" N	25° 18' 00" W	Northwest-Southeast	1,979
São Vicente	Monte Verde	14° 52' 01" N	24° 65' 31" W	North-South	774
São Nicolau	Monte Gordo			Northwest-Southeast	1,304
Sal	Monte Grande			Northeast-Southwest	406
Boa Vista	Santo António				378
Maio	Monte Penoso			East-West	436
Santiago	Pico de Antónia	15° 02' 52" N	23° 38' 42" W	Northeast-Southwest	1,392
Fogo	Pico do Fogo	14° 56' 52" N	24° 21' 11" W		2,829
Brava	Fontainhas	14° 50' 54" N	24° 42' 54" W	East-West	976

**Table 4:** The highest mountains on each of the inhabited islands.<sup>23</sup>



**Picture 20:** Cabo Verde is situated in the middle of a busy shipping route, but has no capacity to mitigate environmental impact resulting from possible calamities at sea. This leaves both the environment and the tourist industry in a vulnerable position.

More ships, including cruise ships, pass by or visit Cabo Verde. An incident on a ship requires special training skills and equipment. Specified expertise does not exist within the fire brigade.

<sup>23</sup> Instituto Nacional de Estatística, Anuário Estatístico Cabo Verde. 2016 p. 70.

### Intermediate Conclusions on Urban Firefighting and Technical Rescue

The capacity of response personnel to attend to urban fires, as well as to carry out technical rescues, is limited due to a lack of specified knowledge and equipment. The growing tourism sector could lead to growing concerns about Cabo Verde's capacities to respond appropriately to potential accidents to the many adventurous tourists that might require rope rescue in the mountains.

With the country's economy relying largely on the growth of this sector, attention must be paid to ensure equipment availability, and skilled personnel able to operate it.

### Recommendations

- Carry out an **inventory of available equipment** for specified responses and urban firefighting. The investment plan provides an international reference for equipment (and personnel) requirements;
- Facilitate **urban firefighting** and **specific technical rescue**; and
- Maintain and enhance **international cooperation** to provide **better equipment for firefighters** on different islands.

## COMPONENT 5: Personnel



Note: Full scale runs from 0 through 5, results shown on scale from 0 to 2.

**Figure 14:** R2R results for all four criteria of the component. Overall score for the component is 0.32 on a scale from 0 to 5.

### Problem Statement

Many first response organizations operate with staff which does not meet current requirements set by international standards for first response teams. For firefighting, the standard practice is to work with volunteers, since eighteen municipalities have no professional firefighters. It is also noted that, for most organizations, there are no statutes which formalize their capacity requirements.

As mentioned under component one: “Legal and institutional accountabilities,” Cabo Verde hasn’t established any emergency response management policy or operational plan. As a result, there is no shared perspective on the structure of an incident organization. Incident response is deployed, based on implicit procedures which have been developed in practice over time. There is no formal evaluation of the response to incidents. The EP&R system is not organized in a way that it is able to systematically learn and improve either itself or its personnel.

Training is done ad hoc, and mostly on a basic level. In fire departments, the more experienced – but uncertified – firemen will train younger incoming firefighters. In addition, Portuguese fire departments provide training on the islands, but the last training on firefighting capacities to some municipalities was provided two years ago. Participation in trainings at fire stations that operate mainly or fully with volunteers, is low.

Medical first responders are also mainly trained by Portuguese fire departments, which provide basic first aid. The National Police are trained in a training center on Santiago Island. The training of personnel involved in emergency response planning is ad hoc and in cooperation with international partners, for instance, recently, in the context of ECOWAS. There is no formal program assessment to ensure the quality of training delivery, and the development of personnel is not systematically planned or tracked.

Exercises and drills are not organized according to programs or plans, and most are carried out under the pressure of international regulations for international airports, marine security, and private sector entities like oil and gas importers and providers. During the assessment, there were no indications that drills and exercises are used to further develop response procedures.

The coordination of international support is hampered by a lack of both capacity and clarity on responsibilities in law. There are no functional logistic systems in place to receive, stage, and distribute international support in response to situations of crisis.

## Criterion 5.1: Incident Organization Structures

As elaborated on in the previous chapters, there is no clear and fixed organizational structure in place, or no updated clear mechanism defined to ensure the flexibility and scalability of the response structure. Mechanisms for up-scaling disaster response are not implemented, making it difficult to flexibly organize and deploy the required services in accordance with the nature and impact of the natural hazard. Due to the overall absence of indicators under this criterion, specific indicators for this criterion are summarized in this section.<sup>24</sup>

For the scalability of response efforts to function, all relevant actors must be involved with clear roles and responsibilities, which are yet to be defined and enforced within the framework of national response plans. In addition, such a structure requires a strong body of technically skilled staff who receives regular training and is accompanied by capacity-building, which due to various factors displayed in previous chapters does not exist in response organizations. A key caveat of the current DRM structure is the lack of cooperation among response organizations. An increase in inter-agency cooperation can only be achieved through the practice and implementation of ongoing response plans and collaborative exercises.

The incident organization structure is not supported by resources meant for trainings and implementation, such as training material and technically skilled trainers. The assessment concluded that there is no identifiable training system in SNPCB. Rather, ad hoc implementations are carried out, making a structured approach for the processing of lessons learned and continuous institutional learning, difficult.

First, simple tools can be implemented in order to fill existent gaps. These would be scenario-based exercises, which do not necessarily need to be field exercises of a larger scale (requiring greater financial and logistical resources), but rather table-top exercises to train lines of command, practice roles, responsibilities, and information management among them.

Once training structures have been formalized, tracking the pool of trained staff must be possible in order to create a functional and up-to-date register of professionals who can be deployed to specific emergency contexts. Such a roster of emergency responders does not exist to this point.



**Picture 21:** Faja D'Água on the Island of Brava, Cabo Verde.  
Source: iStock

<sup>24</sup> Indicator 5.1.1 Policy to direct the use of common incident organization structures, Indicator 5.1.2 Flexible and scalable incident organization structure, Indicator 5.1.3 Availability of training and implementation resources, and Indicator 5.1.4 Roster of trained and experienced personnel and database of common response resources.

### Intermediate conclusions on Incident Organization Structures

Incident organization structures are successful if the system is directed by policies, when it is scalable and operational procedures are defined. Because of the lack of organizational clarity and political backing, response entities will not have the benefits of a comprehensive, jurisdiction-wide, systematic approach to manage incidents.

#### Recommendations

- **Establish a policy** for the Incident Organization that is scalable;
- Determine **operational procedures**;
- **Train, drill and exercise the operational procedures** of the Incident Organization Structure frequently and at least once a year include all levels of responsibilities including political leadership; and
- Create a learning organization by **revising operational procedures** at least once every two years.

## Criterion 5.2: Training and Knowledge Building

In line with the previous chapters, this section summarizes the four relevant indicators of this criterion.<sup>25</sup>

Urgent priority must be given to bringing structure into the current ad hoc nature of training programs. Examples from the private sector show positive experiences, in which training and knowledge building is carried out in a systematic pattern in order to meet requirements established by international standards, which the companies need to comply with. Examples include international aviation, which follows the ICAO rules, as well as maritime shipping, where SOLAS rules are valid. In addition, the companies which provide fuels, such as ENACOL, are insightful examples. Such actors conduct joint exercises in order to maintain their own operational certificates, with the current secondary effect of incorporating actors from the broader civil protection system. International rules are also valid for appropriate equipment use. For example, rescue equipment in airports is more modern than that which is available in the response stations of the Civil Protection and fire brigades in Cabo Verde (see image X of the RIV-Fire truck with handle-controlled roof monitor at Fogo Airport as reference).



**Picture 22:** The RIV Fire truck with handle-controlled roof monitor at Fogo (l) and São Vicente (r) airports.

<sup>25</sup> Indicator 5.2.1 Training Program in place, Indicator 5.2.2 Qualified trainers and appropriate training materials, Indicator 5.2.3 Formal assessment program, and Indicator 5.2.4 Personnel development

As such, private sector-driven exercises are useful for the civil protection system. They help in developing capabilities to respond to air accidents, accidents at sea, and fuel-related accidents (spills, pollutions, etc.). Such joint exercises also create a certain sense of security in the economy, as potential accidents do not cause significant economic harm when a proper response is given. There is also certainly a link with the magnitude of the damage caused to the reputation and image of Cabo Verde as a tourism destination.

As there is no common understanding of the design of rescue and response training, there are no high-level instructors. A training of trainers system could be installed in order to ensure that knowledge and capacities are passed on formally through trainings, but also through peer support, mentoring, and accompanied learning on the job. This aims at building on current practices among responders, in which knowledge and experience is mainly passed on from senior firefighters to junior personnel. A training of trainers program would use this dynamic and strengthen it with a more structured and technical skill-based approach, in order to enhance the quality of knowledge transferred.

The system for promoting and developing expert knowledge is also underdeveloped. As a possible solution to this, Cabo Verdean civil protection actors could become part of larger international systems and networks. The focus should be put on contributing to networks that deal with crises and disaster response. It would be possible to gather international best practices from the systems, and build a system that works with experts in Cabo Verde. The UNDAC methodology from UN-OCHA is an example and should serve as a basis for capacity building with Cabo Verdean emergency responders. It describes very accurately the coordination structures and approaches used in post-disaster situations. It is also possible to get ideas on how to set up a system of response personnel performance assessment. Cabo Verde has been a member of the UNDAC family since 2008, but never actively participated in the system.

Another input could be the possible participation in the INSARAG network. This global network of USAR teams would provide a good input to the Cabo Verde civil defense rescue capacities. INSARAG standards are internationally accepted and simple to integrate. For the development of national teams, the INSARAG Secretariat has the appropriate guidance material, and member countries can invite a mentor to help integrate the INSARAG approach to their national system. As a first step, USAR capacities could be established at local level. This process could end with certification, which would give Cabo Verde an internationally recognized status. In order to join the INSARAG family, it is necessary to appoint an INSARAG political contact person in the country, and send the application to the INSARAG secretariat.

The third network which could be considered is the European Union Civil Protection Mechanism. This system would help develop Cabo Verde's national disaster response capacity, and would also help in training professionals in the field. In addition, there is information on how to activate the mechanism in case of major disasters, in order to receive international assistance. Experts from outside the European Union also have access to the EU Civil Protection Mechanism training system.

Participation in international networks will certainly provide positive input to the capacity of Cabo Verde's own response, and put positive pressure on civil protection actors to build and maintain standards, such as private sector actors have already started doing in order to comply with international standards.

### Intermediate Conclusions on Training and Knowledge Building

The system of training and knowledge building on Cabo Verde is limited due to a lack of resources and skilled technical staff to facilitate trainings.

Positive examples of training programs can be found in the private sector, with Cabo Verdean companies pioneering in the organization of joint exercises in order to comply with international rules and regulations.

To date, Cabo Verde does not participate in international networks in the field of emergency response, such as the International Search and Rescue Advisory Group (INSARAG). The country is a member of UNDAC but does not participate actively, thus limiting the Civil Protection agency's access to the resources and knowledge available to those networks.

### Recommendations

- Strengthen **public-private partnerships** for joint exercise programs;
- Apply for **membership to international disaster response networks**, and actively participate in UNDAC and INSARAG in order to grant **access to training programs and facilitate compliance with international standards**; Key training topics are for example, international assistance, coordination, needs assessment, evacuation, sheltering, protection, etc.; and
- Create a **training of trainers program** in order to ensure institutional memory and knowledge management.

## Criterion 5.3: Exercises and Drill

This section summarizes the four relevant indicators of this criterion in line with previous comments pertaining to the absence of findings for all criteria of the Diagnostic.<sup>26</sup>

For civil protection structures and actors to be aligned, and in terms of preparedness for a possible activation, a formal and functional exercise and drill program must be implemented for important stakeholders to practice in a consequence-free environment. Exercises and drills carry the potential to foster team building within and among responder agencies, primarily when they are designed and delivered collaboratively. This is especially vital for a young civil protection system like the Cabo Verdean one. Exercises and drills performed should gradually increase in complexity and difficulty as the participants – the agencies and Cabo Verde's DRM system – increase their operational response capacity.

The concern of Cabo Verde's Civil Protection central actors about the lack of training facilities, as well as technical capacities and personnel to facilitate such exercises and drills, became apparent during the assessment. Interviewees often noted the lack of inter-institutional information sharing and coordination as central challenges. There is a lack of a common vision and pathway toward a coordinated, inter-agency DRM system. For this to fall in place, stakeholders must sense ownership and responsibility in their mission as civil protection actors.

<sup>26</sup> Indicator 5.3.1. Comprehensive exercise program, Indicator 5.3.2 Collaborative and coordinated exercises and drills, Indicator 5.3.3 Exercises to validate response plan, and Indicator 5.3.4 Robustness of planning process

SNPCB has carried out awareness-raising efforts with other responsible Government institutions in order to increase their ownership and agency in this field, but feel limited in their authority. Exercises of different scales and intensities are essential to bring actors together, bridging institutional gaps and creating capacity for cooperation. Collaborative and centrally coordinated exercises that involve multiple response agencies provide an opportunity for collective learning that could otherwise only be realized during actual emergencies and disasters.

Responsibility for trainings at community level lies with the municipal councils, which are often insufficiently equipped and show little willingness to invest in the matter. Hence, exercises and drills are only carried out on a sporadic, ad hoc basis, often due to initiatives tied to international cooperation. As there is no central oversight and coordination of trainings, capacities vary widely from municipality to municipality, making the assessment of community preparedness difficult.



**Picture 23:** Training of volunteer firefighters carried out on behalf of SNPCB upon request of the three Municipalities of Fogo Island (Source: SNPCB). Visible is the lack of (the use of) safety equipment.

Leading examples of exercises and drills exist in the Cabo Verdean private sector, in which companies take the initiative to facilities regular simulations in order to comply with international standards. ENACOL, the Cabo Verdean fuel supplier, for example, carries out a training exercise that involves external entities at least once a year, for each of their facilities. The assessment team took on an observer role during one of those exercises, carried out on June 6 at the fuel station at Palmarejo, in Praia. ENACOL staff, the National Police, and the fire brigade cooperated in a field exercise. The company has established partnerships with certain municipal fire brigades and hospitals.

At the municipal level, ENACOL is sensitizing local authorities and the community with regard to the need to test a neighborhood evacuation, since it is one of the scenarios in their in-house emergency response plan. In their strategy community outreach, they involve the fire brigade as a platform to share information with first responders and the community. ENACOL works in close cooperation with other companies, such as ENAPOR and Vivo Energy, in order to cooperate in case of emergency.

In addition, they have tried to implement training on the transportation of hazardous materials for fire brigades, the National Police, as well as other actors, but the initiative has not been fruitful with Government authorities to date.

The ENACOL case illustrates how complying with international standards, as well as the pressure to maintain a positive corporate image, creates incentives to carry out trainings and exercise, reaching out to build new key partnerships. It would be an added value to build public-private cooperation, and supplement an already existent exercise scheme as a first, immediate measure for civil protection actors.

On the medium and long term, establishing a program of exercises and drills under strong leadership of the SNPCB is important, as institutional development will depend on the monitoring and processing of exercise evaluation and the gathering of lessons learned and identified caveats. An essential part of a successful evaluation process is ensuring that objectives are developed, based on plans and assessed jurisdictional risks. Clear and concise objectives are key factors that form evaluation criteria and performance measures. Developing a post-exercise report on how to implement changes needs to be carefully documented.

Alongside actors being given a role and responsibility in the field of civil protection by law, nongovernmental actors with strong community outreach must be incorporated in the program as well. As alluded to earlier, such actors could be the Women's Organization of Cabo Verde (OMCV) and Church associations. Exercises help train the dissemination of early warning information, and play out on-site coordination in case of an emergency. A lack of coordination leading to the duplication of response efforts, as well as unclear lines of command and communication, have been identified as central gaps in the current status of the DRM system.

The Contingency and Evacuation Plan established as a result of the UNDAC mission to Brava island and the mayor of Brava are expected to have little supporting effect, as the evacuation was never simulated. In order to make sure that legal documents and contingency and emergency response plans reach their purpose, capacity for implementation and practicing must be supported in Cabo Verde. Hence, a separate budget for training, exercises, and drills must be allocated, and a precise plan should be developed, taking into consideration the concrete needs of all communities at risk.

The exercise and drill plan should tap in practicing, and alongside the overall coordination and information lines, in the following identified current caveats of the system:

- Internally displaced people and shelter management;
- Evacuation; and
- Coordination of international relief and host-nation support.

In addition, sector-specific exercises should be carried out with a focus on the tourism sector. The EU delegation to Cabo Verde has stated great concern for which response would be given to a major extreme event, and the management of emergency transfers to the nearest hospital for the treatment of complicated cases in Lisbon. European citizens' evacuation would be coordinated by Portugal, requiring training and exercises for that actual case.

### Intermediate Conclusions on Exercises and Drills

The responsibility for the organization and execution of exercises and drills, as well as their financing, lies with the municipal councils of Cabo Verde. As previously elaborated, there is little political willingness to invest in matters of civil protection, leading to exercises and drills being carried out only sporadically, and on an ad hoc basis.

Where emergency response plans are implemented, their operational value is estimated to be low, as no simulation exercises are carried out to train lines of responsibility and command. In order to strengthen institutional ownership among key stakeholders in the Civil Protection system, a system of exercises on the strategic national level is of utmost importance. When ownership is ensured, a common path of institutional development can be started.

### Recommendations

- **Increase advocacy at municipal level**, in order to enhance priority-setting for Civil Protection and the organization of exercises and drills;
- Facilitate **simulation exercises** in order to practice implemented emergency response plans; and
- Facilitate **national-level simulations** in order to enhance institutional ownership.

## Criterion 5.4: International Support Coordination

This section summarizes the four relevant indicators of this criterion.<sup>27</sup>

In case of a large-scale emergency requiring additional international assistance, SNPCB takes on the coordinating function. During the volcanic eruption on Fogo in 2014, the president of Civil Protection and a national-level coordinator for emergency response were deployed to the island in order to assist the national and international response actors and support on-site coordination.

During the response to the volcanic eruption on Fogo in 2014, the Ministry of Foreign Affairs played a major role in coordinating international assistance, while the national emergency task force (*Gabinete de Crise*) was designated as the main coordination body, supporting early recovery efforts as well as information and communication.

Opening up the Cabo Verdean Civil Protection system to further international networks is beneficial to increasing its exposure to international standards that ensure both service quality and consistency of aid during emergencies. International standards include formal procedures for joint decision-making, and include minimum standards for documentation, response monitoring, and operational framework and oversight.

Current gaps in the DRM system need to be addressed, in order to be best prepared for a potential future emergency requiring international assistance. This will entail strengthening the warehousing system and identifying logistic hubs, in order to ensure expedited management and distribution of incoming relief items. Additionally, there will be a need for defining distribution channels to areas with difficult access, as well as actuating a vital plan for the prioritization of aid items.

### Intermediate Conclusions on International Support Coordination

The international support coordination carried out by Cabo Verdean Civil Protection actors in past emergencies has proved functional. Nevertheless, opening up Cabo Verdean actors to international networks in the field of emergency response is key, in order to ensure their familiarity with international response systems and their standards, such as the UNDAC system.

Scalable response plans that prepare for the scenario of a large-scale emergency requiring international aid, need to be implemented with sufficient structure for logistical support and stock management of incoming relief items. The plans must be detailed to organize the provision of aid to remote communities with difficult access.

### Recommendations

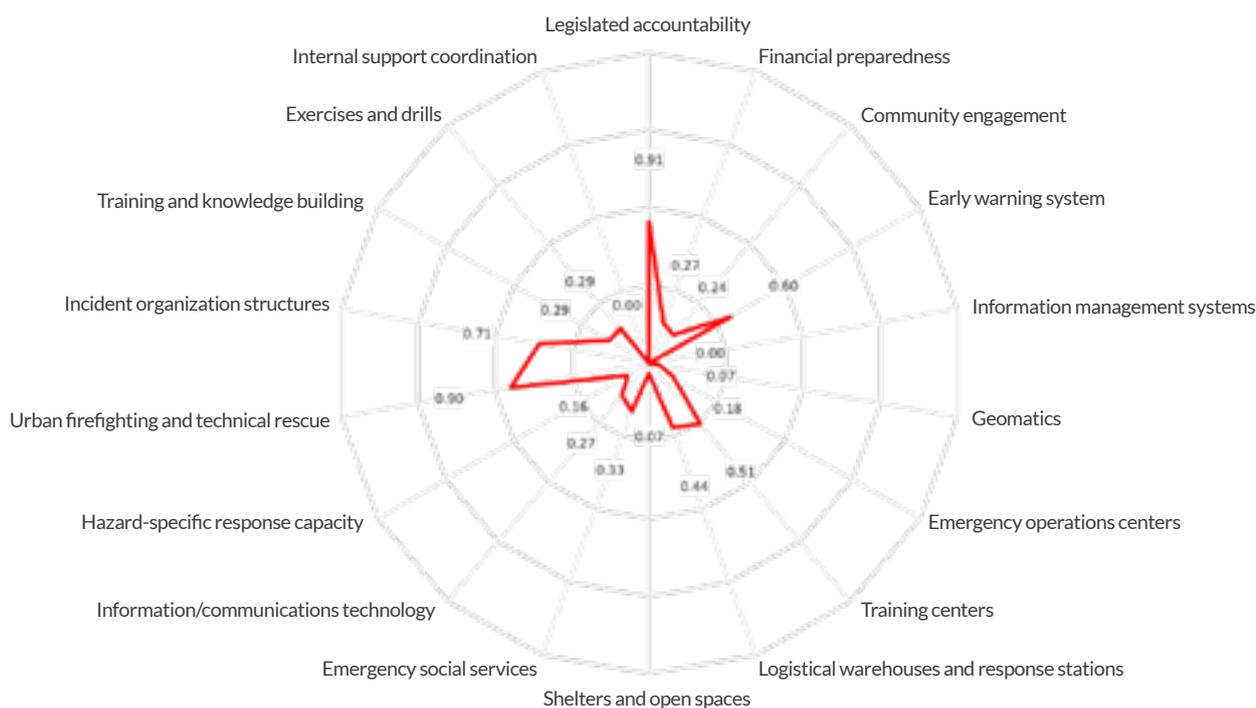
- Establishment of hazard-specific **emergency response plans** for the scenario of a large-scale emergency requiring international aid;
- Enhance Cabo Verdean **membership to international disaster management and coordination networks**, in order to familiarize the actors to international standards and mechanisms; and
- **Train and exercise international support coordination.**

<sup>27</sup> Indicator 5.4.1 Accountability, Indicator 5.4.2 Minimum Standards for the provision of aid for international groups, Indicator 5.4.3 Functional logistics system in place to receive international support, and Indicator 5.4.4 Functional logistics system in place to distribute international support.

# Summary of Diagnostic Conclusions

“Ready2Respond” hinges upon the four components of EP&R as constituent activities, and the pinnacle (core of the wheel) representing a fifth component which enables the others<sup>28</sup> to function.

R2R Diagnostic results for Cabo Verde



Note: Actual scale runs from 0 to 5, results shown on a scale of 0 to 2.

Figure 15: Diagnostic Results for the EP&R system in Cabo Verde.

On the whole, one can rule that Cabo Verde’s disaster preparedness and response system has fundamental weaknesses. The current state of the EP&R system leaves the country vulnerable to loss and damage to her development gains, and to potential loss of lives.

Whereas the EP&R system in Cabo Verde has sporadic and individual good practices – including via the support of the National Red Cross Society, civil society at large and the private sector – a strategic and comprehensive effort is needed in order relinquish ad hoc, reactive response practices, in favor of proactive and systematic preparedness capacities.

The R2R Diagnostic result supports the statement that an EP&R system begins with legislations and clear procedures. The low score on the first component illustrates an incomplete legislative foundation. The weak legislation, paired with scarce capacity, results in siloed institutions that need improved accountabilities, and contributes to an ambiguous system with multiple interpretations as to the governance structure and financial responsibilities. The resulting unclarity manifests itself primarily in the relation between the national and municipal levels.

<sup>28</sup> A framework for Ready2Respond, P 13.

## Critical and Conditional Factors for Development

With many aspects of the EP&R system requiring fundamental improvements, this diagnostic identifies the following critical and conditional factors that should be secured for any meaningful development to be successful and sustainable:

- When the current lack in capacity is combined with a lack in clear structure, even a small ambition for change is a major undertaking that takes a long time to implement. Structural funding for significant capacity building on policy and coordination levels, and for the primary processes, should be secured in the budget of Cabo Verde.
- An ambitious hands-on longer-term technical assistance program is essential. Technical assistance should focus on project implementation as much as on local capacity-building, using an inspiring coaching style and allowing for an all-stakeholder-inclusive development and project implementation. To secure knowledge transfer from technical assistance to local capacity, the number of personnel on coordination and policy level should be increased prior to and during the deployment of technical assistance.
- High level political ownership should lead the development of the EP&R system.

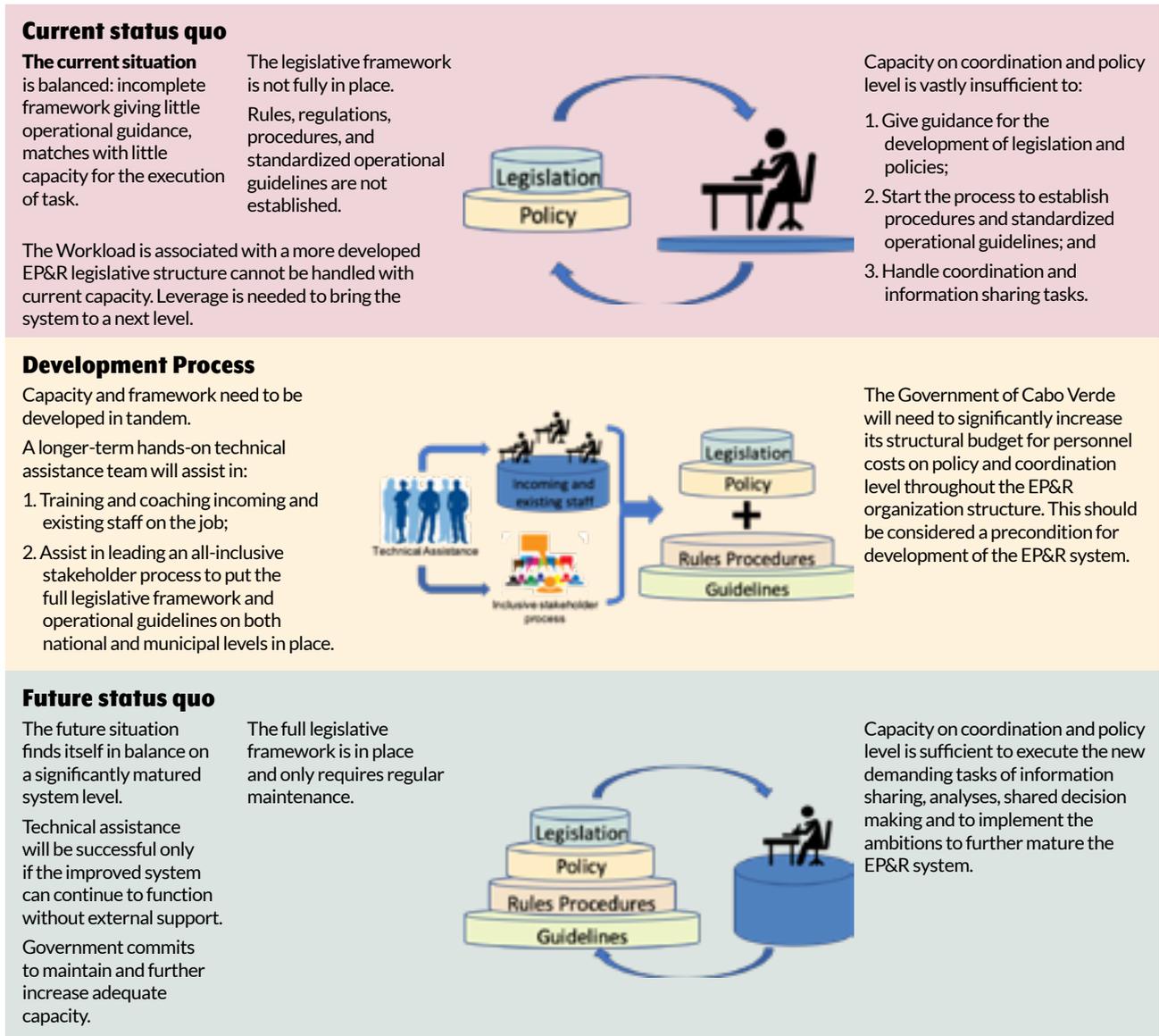


Figure 16: Infographic: Maturing the EP&R system in Cabo Verde.

## Tipping-Point Investment Opportunities

The R2R Rapid Diagnostic User Guide mentions “tipping points.” These are “*the development opportunities that may require limited targeted funding to reach a significant improvement of the EP&R system capabilities.*” The criterion of “*limited targeted funding*” is not easily met given the challenges of Cabo Verde. However, the field work identified two initiatives that could be considered by national and international actors for priority investments with great impact. These initiatives are:

- The establishment of a crisis management plan as an extension of the legislation; and
- The creation of a National Emergency Operations Centre (EOC).

The Diagnostic emphasizes these two tipping point opportunities, since there is a sense of urgency about these topics among local actors. Both initiatives are related: a crisis management plan is vital for an Emergency Operations Centre to function adequately. However, there is no capacity to start the process of drafting the crisis management plan while, on the other hand, a first move has been made to establish an EOC. To prevent the EOC initiative from possible failure because of a lack of broadly accepted procedures, technical assistance could be deployed to secure the synchronizing of both potential high leverage initiatives.

It is recommended to start with both mentioned initiatives on the short term in order to create a more significant impact at the very foundation of the overall EP&R system, and in parallel, to invest in a holistic plan aimed at strengthening organizational clarity by adjusting and fully implementing the legislative framework, including related policy plans and operational procedures. It is noted that the suggested approach will require significant financial resources for longer term technical assistance. The implementation of a functioning EOC supported by accepted crisis management procedures could however generate investment results on the relative short term.

## Recommendations per Component

---

### Component I: Legal and Institutional Accountabilities

#### Short term

---

- Support the **endorsement of a (operational) plan for crisis management** with technical assistance. This legislative document serves as a foundation for the EOC facility. The EOC and crisis management plan form a tipping point investment opportunity;
- Install an **inter-agency “Legislation for Emergency Response” working group**, in order to enhance the ownership and involvement of relevant institutions, each assigning their civil protection focal points. The working group should be provided technical assistance;
- Establish a **statute on the position of Regional Operation Commander**; and
- Revise the **mechanism for financial preparedness** with external technical support.

#### Medium term

---

- Revise **legal and institutional frameworks** with external technical support;
- Establish **Municipal Civil Protection Services** and **their emergency response plans** with external technical support;
- Establish a **procedure manual for the National Emergency Fund**, for the centralized instrument to become operational;
- Centralize **procurement processes** in order to ensure continuity and equality across all municipalities, and to bridge the wide gaps between financial resources allocated to DRM spending among municipal councils;
- Further explore **disaster risk financing instruments** to complement the FNE and the Cat DDO;
- Establish **public financial management policies and procedures**; and
- Establish **personal financial risk transfer programs**.

#### Longer term

---

- Maintain an adequate level of **knowledge and ownership** to match legislation with EP&R practices.

## Component 2: Information

### Short term

- Draft a **national plan** of approach to support the **establishment and successful design of community efforts**. This is expected to **strengthen both preparedness and response capacity**. On the other hand, a strong national strategy could also lead to a better coordination of the activities, and contribute to an overall, coordinated response;
- Introduce an **all-risk communication strategy** that continuously informs the public on (seasonal) risks, and on how to best prepare for them. In this communication strategy, consideration could be given to the utilization of modern technology such as cell phone broadcasting for public outreach, to the strengthening of preparedness through cell phone risk awareness, and to already existent preparation applications;
- Set-up a **fruitful exchange and cooperation with the Earth Sciences Department of the University of Cabo Verde**, which was present in the field during the post-eruption phase to gather data in close cooperation with the communities. Actors from the University of Cabo Verde saw untapped potential in community engagement, such as capturing intergenerational knowledge;
- Establish a **legal framework and guidelines** for a **single multi-hazard monitoring system**;
- Improve the **use and availability of maps** that identify disaster-prone areas on the islands;
- Enable the **sharing of information** for institutions through **knowledge building and hands-on capacity**, and contribute to a single integrated system; and
- Start providing **trainings and capacity-building** in terms of **information management** and the **assessment of emergency needs**.

### Medium term

- **Empower civil society and community efforts** through **stronger inter-agency coordination and cooperation**, in order to avoid duplication of activities and by, embedding civil society organizations in the official Civil Protection structures;
- Improve the **preparedness and resilience of communities** through education so as to improve risk awareness. Starting education at schools at an early stage will create a future generation that is better informed.
- Enable regional commanders to **enhance systematic assistance to local leaders** with educational tools and support;
- Start a program to support **small-scale community-led mitigation works**;
- Enhance **cooperation between SNPCB and INGT**, with regards to the sharing of information on disaster risks;
- Fully implement **early warning systems**, as mentioned in the National Contingency Plan of 2010;
- Develop a **standardized procedure and system for the delivery of timely early warning** in several languages, using multiple communication technologies and channels;
- Develop a **post-disaster needs assessment (PDNA) methodology** for Cabo Verde and support it with a data collection tool;
- Create awareness of the **importance of a DMIS** through education. A plan of approach to establish a DMIS should be drafted, based on an all-inclusive stakeholder process; and
- Strengthen the **capacity and equipment for geo-referenced data mapping** throughout the archipelago, in line with the UNDP project.

### Longer term

---

- Establishment of an **online Government platform for information management** (during and outside of emergencies), in order to facilitate inter-agency information exchange and real-time provision of response-related information.

## Component 3: Facilities

### Short term

---

- Support the **initiative of the National EOC at SNPCB**. Priority should be given to elaborate **operational procedures** and to draft the missing **crisis management operational plan**. Without strengthened operational clarity, the EOC cannot function, and the initiative should be used to create awareness for the urgency to develop operational planning;
- Create clarity for all involved stakeholders as to how **coordination mechanisms** will be strengthened, starting at national level, and gradually spreading to municipal level. **Political leadership** is essential during the process that will essentially have to change resilient organizational habits and practices;
- **Build coordination capacity within all relevant institutions**. Without strengthened capacity aimed at facilitating coordination, the EOC cannot function. Accept that coordination takes time and effort before it saves time, lives, and prevents loss and damage in operations. Coordination systems and capacity needs to be strengthened at all levels – municipal, regional, and national – as well as the capacity to coordinate regionally and internationally;
- Recognize that the country is fully **dependent on Red Cross warehouse facilities and international support** in case of a disaster;
- **Raise awareness**, starting at the political level, that the Government has its own responsibility to **cater to affected people**, and that warehouses are **critical infrastructure** to fulfill this responsibility; and
- **Raise awareness** on the political level of the **challenges of the temporary housing of displaced persons** which takes into consideration vulnerable groups like women and girls, elderly people, and mentally and physically challenged people.

### Medium term

---

- Create awareness of the **need for structural training programs**;
- Draft and implement **organizational development plans**, supported by Human Resource Management planning;
- Secure **structural funding for training**;
- Establish a **training center** that covers both **operational and strategic training needs** for the overall disaster management field;
- Draft a **plan of approach for the financing and establishment of a minimal network of logistical warehouses and response stations**, including stock management and the necessary capacity building. In order to sustain the investment, structural budget should be secured. Given their vulnerabilities, Brava and Fogo should be given priority in this plan;

- Identify **multi-purpose buildings** that can be transitioned into adequate **temporary housing facilities**. Schools should not be the first choice, as children benefit from returning to their daily routine after a crisis, which includes going to school. Given their vulnerabilities, Fogo and Brava should be given priority; and
- Establish a **mapping of potential shelters** in Cabo Verde, including access routes. Transform buildings to be used as shelters, with sufficient capacity and to provide safety to vulnerable groups. Train staff in the use and operation of the shelters. Establish a plan for the longer-term sheltering of civilians.

### Longer term

- Open the **future training center to other Portuguese-speaking countries**. ECOWAS Member States could be included in this approach, and contribute to its financing; and
- Create a **network of warehouses and logistical hubs** to support emergency response activities.

## Component 4: Equipment

### Short term

- Establish a **system for pre-hospital emergency care and transport system**;
- Implement **inter-operable radio equipment and redundant communication technologies** through a network of satellite communications;
- Implement **schedules for local maintenance**, create a strategy for a shared service for more complex maintenance and repairs on island and national levels;
- Procure **standardized equipment**;
- Create an **inventory of the emergency sheltering system** for Cabo Verde, and evaluate which equipment is needed;
- Procure **mobile command systems** that can also work as ambulances or transport for remote islands, and reach redundancy; and
- Carry out an **inventory of available equipment for specified responses and urban firefighting**. The investment plan provides an international reference for equipment (and personnel) requirements.

### Medium term

- Establish **WASH standards for institutional response** during disasters and emergencies;
- Develop **standards for mortality management** during disasters; and
- Create **social services programs** to support families and vulnerable groups, as the Diagnostic could not identify any.

### Longer term

- Sustain an **arrangement for equipment maintenance**. Make a longer-term plan for the acquisition of equipment that needs prescheduled replacement, and coordinate it at national level.

## Component 5: Personnel

### Short term

---

- Facilitate **field exercises, table-top exercises and trainings** in order to **enhance institutional readiness**. As an urgent priority, provide training on evacuations, coordination and sheltering, Human Migration Management, requirements assessment, Host Nation Support and protection including exercises; key training topics are for example, international assistance, coordination, needs assessment, evacuations, sheltering, protection, etc;
- Install a **training of trainers program** in order to ensure institutional memory and knowledge management;
- Install a **roster system of response personnel**; and
- (Active) **Membership to international networks of disaster response**, such as UNDAC and INSARAG, in order to grant access to training programs and compliance with international standards.

### Medium term

---

- Develop **scalable emergency response plans** to facilitate coordination between the municipal and national levels;
- Strengthen **public-private partnerships** for joint exercise programming;
- Design a **training program for the emergency field**, both for management and operational levels, to be introduced by the new training facility;
- Advocate at municipal level for the **enhancement of priority-setting for civil protection** and the organization of exercises and drills;
- Facilitate **simulation exercises** in order to practice implemented emergency response plans;
- Facilitate **national-level simulations** in order to enhance institutional ownership;
- Establish **hazard-specific emergency response plans** for the scenario of a large-scale emergency requiring international aid; and
- Consider Cabo Verdean **membership to international networks of disaster management and coordination**, in order to familiarize actors to international standards and mechanisms.

### Longer term

---

- Continue to maintain an **adequate level of human resource management** for the development of individuals and teams.

## Recommendations Outside of the R2R Diagnostic Methodology

### Short term

- Create awareness that the **current EP&R system has insufficient personnel capacity to protect citizens and tourists visiting the islands, and to protect recent development gains**. The country is very vulnerable in the event of a crisis, and basic mitigation measures are not implemented – with little sense of urgency to address this;
- Link the outcome of the Diagnostic to a **plan to strengthen capacity both on operation level and policy and coordination level**, matching the ambitions for development set on the short, medium, and longer term;
- Prepare for **structural additional expenditures for personnel** by significantly increasing the budget for EP&R in Cabo Verde;
- Establish a **Host Nation Support plan** that will coordinate efficient and effective international aid in response to a crisis. Currently, the system relies, to a great extent, on assistance from the international community;
- Establish an **operational plan and carry out mass evacuation drills** for – at least – the islands of Fogo, Brava, and Santo Antão. These islands, and their inhabitants and visitors are exposed to high risks with no plans in place to mitigate these risks; and
- Start negotiations for the **Centre of Excellence** to become a reality. It will provide strong political support, opportunities for capacity building and a long-term support with funding – absolute key points should a sustainable development of the EP&R system of Cabo Verde become a reality.

### Medium to long term

- Assist in **assessing the locations most vulnerable** to droughts, flash flooding, and landslides as a result of torrential rain. Create awareness of potential vulnerability to loss and damage, and potential for loss of life, by simulating crisis impact scenarios;
- Take **mitigation measures** by strengthening infrastructure and drainage capacity; and
- Strengthen **capacity for building code inspection**.

# Appendix A: Best Practice in Volunteering: The Red Cross

Red Cross Cabo Verde (RCCV) is a member of the International Red Cross and Red Crescent Movement, and the International Federation of Red Cross and Red Crescent Societies.

## Mission

---

RCCV's mission is to alleviate the suffering of people in Cabo Verde in case of war, catastrophe, or calamity and violence.

## Capacity and Organization

---

The Red Cross is present on all 9 inhabited islands, and in 19 out of 22 municipalities. The organization has 125 professional staff members and as many as 1,700 volunteers. The RCCV structure in Cabo Verde includes: a General Assembly, a High Council, an Executive Council, and is led by a president and a secretary general who carry the overall responsibility. In Ribeira Grande Santiago, São Salvador do Mundo e Santa Catarina do Fogo, the Red Cross is established in a way to possibly grow into more independent delegations in the coming years.

The RCCV operates independently of the Government, but there is a signed agreement that formalizes the cooperation. The RCCV has signed protocols with the Ministry of Internal Administration, Health and Municipalities. Before the creation of the National Civil Protection Service, response to emergencies and disasters in Cabo Verde was provided by the RCCV.

RCCV is supplementary to public authorities. The National Civil Protection Service is leader, but the Red Cross is an main and integral part of the Civil Protection system. They are organized in accordance with the National Contingency Plan and the National Strategy for Risk Reduction. The Government subsidizes the organization with 12% of Toto Lotto revenue.

## Way of Working

---

Access to social infrastructures, kindergartens and day-care centers for the elderly, is provided according to the level of poverty. Access to day-care is prioritized for children from disadvantaged and vulnerable families. The monthly fee for kindergarten is € 5. Elderly people living below the poverty line are picked up at home to spend the day at the different centers, where they are given meals. At the end of the day, the elderly people are brought back to their homes.

The RCCV has established partnerships with associations that cater to deaf, disabled, and blind citizens, like for instance ACARINHAR which focuses on the needs of people with physical or mental disabilities. In addition, the RCCV has partnerships with various associations that assist persons in their recovery from drug addiction. Their policy of operation is not to overlap the capabilities of other NGOs. The RCCV financially supports other organizations to manage projects in areas that RCCV itself does not cover.

Areas of focus:

- Education (kindergarten);
- Daily centers for seniors/elder people;
- First aid training (basic, advanced, and train the trainer):
- Disaster Management and Emergencies training and coordination;
- Training rescue volunteers, emergency management, logistics, and shelters.
- International humanitarian aid (mainly Portugal and Italy); and

The Organization plies for better international coordination by implementing a national Host Nation support strategy in Cabo Verde.

## **EP&R Facilities and Equipment**

---

- The RCCV operates a warehouse with pre-positioning stock for 500 families (estimated household size: 5 persons), with stock capacity for as many as 2,500 people;
- The RCCV operates three ambulances (Praia, São Vicente, Ribeira Grande de Santo Antão) and have first aid kits on all nine islands. The organization is making an effort to equip each island with at least one transport vehicle. In Praia, they have five transport vehicles;
- In the 19 municipalities where the RCCV is represented, the organization has headquarters that were either bought, or are rented; and
- The organization has no personal protection equipment.



THE GOVERNMENT  
OF THE GRAND DUCHY OF LUXEMBOURG

financed by



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

through