CFE-DM

CENTER FOR EXCELLENCE
IN DISASTER MANAGEMENT & HUMANITARIAN ASSISTANCE
WWW.CFE-DMHA.ORG





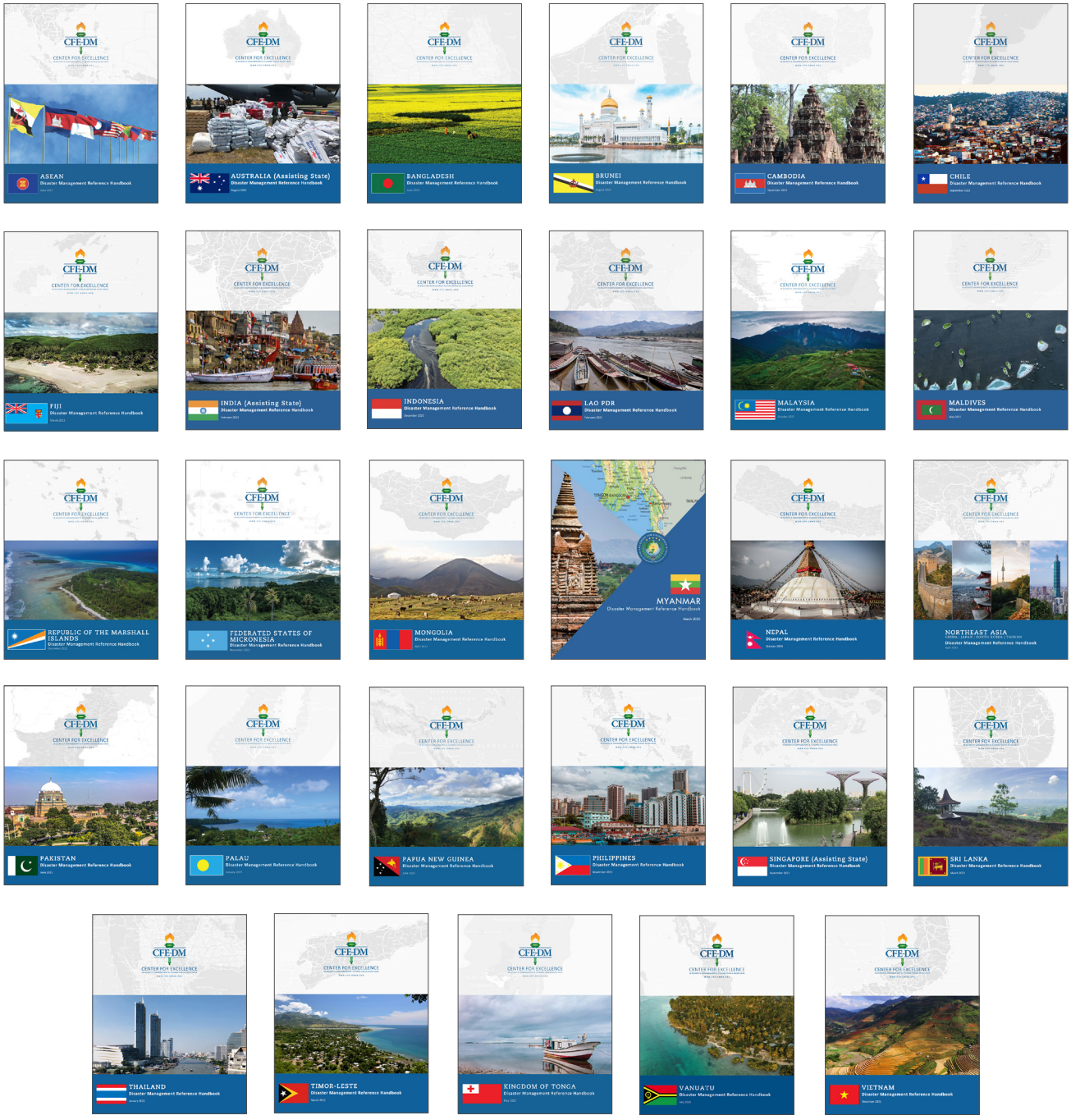
VANUATU

Disaster Management Reference Handbook

July 2023

Disaster Management Reference Handbook Series

Download books at https://www.cfe-dmha.org/Publications/Disaster-Management-Reference-Handbooks



Acknowledgements

The CFE-DM would like to thank the following people for their knowledge and support in developing this resource: Maciu Nokelevu, Senior Disaster Risk Management Officer, Country Cluster Delegation for the Pacific, IFRC; and Ganesh Navaratnum, Regional Civil-Military Relations Coordinator, Asia-Pacific Regional Office, IFRC.

Front Cover

Vanuatu by Seiji Seiji on Unsplash.com, https://unsplash.com/photos/JxL6t8iVri4

Disclaimer

This handbook has been prepared in good faith based on resources available at the time of publication. Information was gathered from the public domain, from local and government sources, as well as from subject matter experts. Where possible, a link to the original electronic source is provided in the endnote (reference) section at the end of the document. While making every attempt to ensure the information is relevant and accurate, the Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) does not guarantee or warrant the accuracy, reliability, completeness, or currency of the information in this publication. Each handbook is a working document and will be updated periodically as new and significant information becomes available. We hope that you find these handbooks informative, relevant, reliable, and useful in understanding disaster management and response. We welcome and appreciate your feedback to improve this document and help fill any gaps to enhance its future utility. For feedback, comments, or to request a printed copy please email cfe.dmha.fct@pacom.mil. Please visit our website to download copies of this publication and other products (https://www.cfe-dmha.org). All parts of this publication may be reproduced, stored in retrieval systems, and transmitted by any means without the written permission of the publisher.

ISBN 978-1-955429-48-1

Table of Contents

Acknowledgements **3**

Letter from the Director **7**

About the Center for Excellence in Disaster Management & Humanitarian Assistance **8**

Executive Summary **9**

Country Overview **10**

History 10

Culture and Demographics 12

Ethnic Makeup 13

Key Population Centers 13

Language 13

Religion 13

Vulnerable Groups 14

Economics 19

Government 21

Environment 22

Geography 22

Borders 22

Climate 22

Disaster Overview **24**

Climate Change 24

Hazards 26

History of Natural Disasters 29

Country Risk 35

INFORM Risk Profile 35

World Risk Report 36

Global Climate Risk 38

Organizational Structure for Disaster Management **39**

Lead Government Agencies in Disaster Response 39

Disaster Relief and Emergency Response 40

Armed Forces Role in Disaster Relief 41

Disaster Management Partners 42

The International Red Cross and Red Crescent Movement 43

U.S. Government Agencies in Vanuatu 43

Laws, Policies, and Plans on Disaster Management 44

Disaster Management Communications 47

Early Warning Systems 48
Information Sharing 49
Infrastructure 54
Transport 54
Airports 54
Seaports 56
Roads 58
Railways 58
Waterways 58
Schools 58
Disaster Risk Reduction in the Education Sector 59
Communications 59
Utilities 60
Power 60
Water and Sanitation 61
Health 62
Health Care System Structure 62
Health Strategies and Surveillance 64
Communicable Diseases 68
Non-Communicable Diseases 71
Training for Health Professionals 72
Women, Peace, and Security 74
Conclusion 78
Appendices 79
DoD DMHA Engagements in the Past Seven Years (FY 2016-2023) 79
International/Foreign Relations 80
Participation in International Organizations 82
Force Protection/Pre-Deployment Information 82
Passport/Visa 82
Safety and Security 82
Emergency Contact Information 83
Currency Information 83
Travel Health Information 83
Sendai Framework 86
Country Profile 89
Acronyms and Abbreviations 101
Endnotes 105

Figures

Figure 1: Exports and Imports as a Percent of GDP 20
Figure 2: Map of Vanuatu 23
Figure 3: Disaster Occurrence in Vanuatu (1940-2020), by Hazard 26
Figure 4: NOAA Database Map of Cyclones in Vanuatu (2000-2020) 28
Figure 5: Vanuatu's Daily COVID-19 Incidence (March 2020 - May 2023) 32
Figure 6: INFORM Risk Index, Vanuatu (2023) 37
Figure 7: Vanuatu's National Coordination Structure for Disaster Management 40
Figure 8: Vanuatu's National Coordination Structure with Clusters and Leads for Disaster Response 41
Figure 9: Map of Vanuatu's Key Transport Hubs 55
Figure 10: Top 10 Causes of Total Deaths (2019) and Percent Change (2009-2019), Vanuatu 62
Figure 11: MOH Organizational Structure 64
Figure 12: World Economic Forum Global Gender Gap Index, Vanuatu (2022) 76
Figure 13: UN Sendai Framework for Disaster Risk Reduction 2015-2030 88
Figure 14: Population Pyramid, Vanuatu (2023) 91

Photos

Photo 1: Nakamal in Vanuatu 13
Photo 2: Ipota Village after Cyclone Pam (2015) 34
Photo 3: Pacific Angel 2018 79
Photo 4: Exercise Equateur 2017 79
Photo 5: Vanuatu Pacific Disaster Response Exercise and Exchange 80

Tables

Table 1: Vanuatu International Airports 56
Table 2: Vanuatu Domestic Airports 56
Table 3: Advice for Vaccine-Preventable Diseases in Vanuatu 84
Table 4: Advice for Non-Vaccine-Preventable Diseases in Vanuatu 84

Letter from the Director

The adaptability of Vanuatu's people has always been important and will remain critical in the coming decades as climate change influences the country's hazard landscape. Already, cyclones, volcanic eruptions, floods, earthquakes, tsunamis, droughts, and sea level rise affect the population and economy every year, and the frequency of very intense events is expected to rise, thereby depleting the country's resources and undermining communities' resilience.

Since the major impacts of Tropical Cyclone Pam in 2015, Vanuatu has undertaken disaster management reforms to focus more on risk mitigation and prevention actions rather than disaster response. Moreover, given the clear threat posed by climate change to Vanuatu's people and land, climate change adaptation (CCA) is an inseparable part of disaster risk reduction (DRR) activities that the government undertakes alongside community groups and non-governmental organizations. Vanuatu has also focused its international and regional engagement, especially in the Pacific Islands Forum, in such a way as to ensure that the norm becomes integrated CCA and DRR. As a partner of Vanuatu, the U.S. respects this focus and hopes to reinforce the island country's efforts with programs under the auspices of the 21st-Century U.S.-Pacific Island Partnership, which incorporates various components that will undergird Vanuatu's own standing disaster management processes. Alongside the State Department, USAID, the Peace Corps, and other U.S. agencies, the U.S. Department of Defense and Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) will continue to grow our involvement alongside Vanuatu's government and people to bolster communities' resilience to disasters and climate risks, among other priorities.

Already, there are experiences that have brought U.S. military members and Vanuatu leaders and communities together to build cooperation. For ten days in 2011, members of the U.S. armed forces joined Vanuatu community leaders along with military forces from regional partners to conduct humanitarian activities as part of Pacific Partnership 2011. A 2016 Pacific Resilience Disaster Response Exercise and Exchange also brought the U.S. Army together with Vanuatu's government to test the island country's ability to coordinate humanitarian assistance arriving from a variety of institutions and countries. More recently, U.S. military personnel and Vanuatu authorities conducted a humanitarian assistance engagement during Exercise Pacific Angel in 2018.

This Vanuatu Disaster Management Reference Handbook is a contribution from CFE-DM to ensure that these experiences are integrated into our future engagement with Vanuatu. The handbook provides background on the country, its disaster management institutions and structures, and the hazards it confronts. It is intended to lay a foundation of knowledge for U.S. personnel who are undertaking a DRR or humanitarian mission in Vanuatu or alongside responders from the island country.

Sincerely,

Joseph D. Martin, SES
Director

About the Center for Excellence in Disaster Management & Humanitarian Assistance

Overview

The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) is a United States (U.S.) Department of Defense (DoD) organization comprised of nearly 30 subject matter experts that provide academic research, civil-military coordination training, and operational insights to support decision making before, during, and after crises. The Center is designed to bridge understanding between humanitarians, civilian, and military responders. CFE-DM partners with a diverse group of governmental and nongovernmental actors, as well as academic institutions to increase collaborations and capabilities in humanitarian assistance and disaster response. While maintaining a global mandate, the Indo-Pacific region is our priority of effort and collaboration is the cornerstone of our operational practice. The Center is a direct reporting unit to U.S. Indo-Pacific Command (USINDOPACOM) and is located on Ford Island, Joint Base Pearl Harbor-Hickam, Hawaii.

Vision

The Joint Force, allies, and partners are fully prepared to conduct and support foreign humanitarian assistance.

Mission

CFE-DM builds crisis response capacity in U.S. and partner militaries, enhances coordination and collaboration with civilian and foreign partners, and strengthens those relationships to save lives and alleviate human suffering before, during, and after humanitarian crises.

Contact Information

Center for Excellence in Disaster Management and Humanitarian Assistance
456 Hornet Ave
JBPHH, HI 96860-3503
Telephone: +1 (808) 472-0518
https://www.cfe-dmha.org

EXECUTIVE SUMMARY

Vanuatu is an archipelago of over 80 islands in the southwestern Pacific Ocean. Its population of more than 300,000 people, the Ni-Vanuatu, have faced a changing environment for centuries, and their lifestyle, traditional knowledge, skills, and practices underpin their ability to thrive. Adaptability will be important in the coming decades as climate change further influences the hazard landscape.

Natural hazards confronted by Vanuatu include cyclones, volcanic eruptions, floods, earthquakes, tsunamis, droughts, and sea level rise. Nearly the entire population resides along the coastline and is, therefore, exposed to sea level rise, storm surges, and tsunamis. There is a 56.8% likelihood of a disaster occurring every year in the country. On average annually, these disasters affect some 12% of the population and contribute to a loss of 42.8% of Gross Domestic Product (GDP). Tropical cyclones and volcanic eruptions have the largest economic impact. Damage from the 2018 Manaro Voui volcano eruption elicited a US$3.4 million budget allocation from the government to address displacement and lost livelihoods.[1]

Since the major impacts of Tropical Cyclone (TC) Pam in 2015, Vanuatu has undertaken disaster management reforms to focus more on risk mitigation and prevention actions rather than disaster response. This reform was codified in the Disaster Risk Management Law of 2019, which outlined the lead government agencies and national structures for disaster response. This law tasks the National Disaster Management Office (NDMO) with coordination of preparedness and response across Vanuatu. The NDMO falls under the Ministry of Climate Change and Adaptation, Meteorology and Geo-Hazards, Energy, Environment and National Disaster Management (MOCCA); the Ministry also chairs the work of the National Disaster Committee, which is responsible for developing strategies and polices for disaster management. As the central hubs, the NDMO and Ministry target effective coordination among disaster and climate change stakeholders at national, provincial, and community levels before and after disasters.

Given the clear threat posed by climate change to Vanuatu, climate change adaptation (CCA) is an inseparable part of disaster risk reduction (DRR) activities. MOCCA oversees work to strengthen the country's climate change networks internationally, nationally, and at the sub-national level. The Ministry's Department of Climate Change integrates representatives of national and provincial governments alongside community groups and non-governmental organizations (NGO). The country is bolstered by its strong international relationships. Already, the Vanuatu Humanitarian Team (VHT) and Pacific Humanitarian Team (PHT) – networks of United Nations (UN), humanitarian, and development actors – support Vanuatu in mobilizing assistance and coordinating aid. These networks, along with Vanuatu's regional engagement, especially in the Pacific Islands Forum, provide the country a means to integrate CCA and DRR.

The country's economy is dominated by the services sector, which accounts for two-thirds of GDP, while agriculture employs or supports 80% of the population. Because of its reliance on agriculture and tourism and the importance of imports, Vanuatu's economy is highly exposed to international shocks and to the impacts of natural disasters. It has experienced disruptions since early 2020, which marked the simultaneous disasters of TC Harold and the Coronavirus Disease 2019 (COVID-19) shutdowns that, together, caused a massive reduction in GDP. Tourism was rebounding after borders reopened although storms and earthquakes in 2023 again damaged infrastructure, houses, and crops, and all but ensured that inflation would remain high and the population would confront food insecurity.[2] Both sectors will continue to face headwinds as climate change impacts rainfall, labor force productivity, and international travel.

COUNTRY OVERVIEW

Vanuatu has been inhabited for 4,000 years and first came into contact with Europeans in the early 17th century. Explorers were followed by missionaries, traders, and "black birders," who duplicitously and forcibly transported the islands' residents to other Pacific islands as laborers. After nearly three-quarters of a century under Franco-British rule, Vanuatu regained independence in 1980 as a parliamentary republic. The centuries of migration and trade left Vanuatu as a culturally diverse place where more than 100 languages are spoken across the islands. The country's people are mostly subsistence farmers whose land and livelihoods, like many of their South Pacific neighbors, are at risk of natural hazards and the impacts of climate change.

History

The earliest settlers are thought to have arrived in Vanuatu shortly after 2000 BCE. These were Austronesian-speaking people of the Lapita cultural complex that links back to Taiwan and that spread across many Pacific islands. Teouma, on the island of Efate, has become the most significant site in the Pacific for studying early Lapita settlement. Dated to approximately 1200 BCE, a cemetery in the settlement is the oldest such site found and, upon excavation in the early 2000s, it delivered to archeologists and historians more than two dozen skeletons or partial skeletons that allowed genetic and material culture studies.[3] Research on Teouma human remains and artifacts in the past decade have found that, by 1000 BCE, Papuan people had joined the Austronesian-speaking settlers. The findings of comparisons of skeletal DNA and modern Vanuatu gene sequencing indicate that Papuan groups became the dominant genetic ancestors of today's Ni-Vanuatu.[4]

Between those early settlers and approximately 1200 CE, successive waves of migrants brought other genetic and cultural influences. The islands and villages are thought to have remained mostly separate in terms of their government structures, but they are believed to have retained some level of communication amongst themselves.[5] By 1200, a highly stratified society had developed in the central islands of what is today Vanuatu. At this time, according to legend, Roi Mata (sometimes "Roymata") arrived[6] and united the warring tribes of the central and southern islands into a peaceful grouping. Roi Mata took the title of King but was killed in around 1265. The King's body was carried to Retoka (Hat Island) where he was interred. Following the interment, a 700-year-long taboo was placed on Retoka, which became known as the Island of the Dead. The tomb was found in 1967; it was excavated and then returned to its previous state. In July 2008, the site, known as Chief Roi Mata's Domain, was formally registered as a World Heritage site – the first in Vanuatu.[7]

European contact began with the Portuguese explorer Pedro Fernández de Quirós (1606), who was followed by the French navigator Louis-Antoine de Bougainville (1768) and Britain's Captain James Cook (1774), the last of whom mapped the island group and named it the New Hebrides. European missionaries and sandalwood traders settled on the fringes of islands from the 1840s, but their impact on the indigenous people was minimal at the outset.[8] Those Ni-Vanuatu who did convert often died of the diseases to which they were exposed as the missionaries converted them. By the 1860s, various Anglican, Presbyterian, and Catholic mission stations existed throughout the islands,[9] and significant cultural change began to ramp up. Up to that point, European "black birders" had kidnapped thousands of Ni-Vanuatu and forced them to work on sugar and cotton plantations in Fiji and Australia. Although "black birding" continued into the early 20th century,[10] Ni-Vanuatu who were able to return home in the mid- to late-19th century established new forms of political influence within the network of Christian missions or successfully competed

against European planters[11] who had begun to arrive in 1865.[12]

To protect the interests of the British missionaries and French planters, the British and French governments established rudimentary political control with a Joint Naval Commission in 1887. This arrangement was replaced in 1906 by the Anglo-French Condominium, under which resident commissioners in Port-Vila held responsibility for the needs and actions of their own nationals and jointly ruled the indigenous people. Despite this growing European influence, most Ni-Vanuatu remained aloof unless they had reason to be in contact with missionaries or planters.[13]

When Germany occupied France in 1940, the French and British sides of the Condominium were technically at war with each other although the French population of the New Hebrides immediately declared support for General de Gaulle's Free French. When Japanese forces reached the Solomon Islands in 1942, the New Hebrides became a new focus of tension, and, in May of that year, U.S. warships arrived in Mele Bay on Efate. They brought massive amounts of materials and personnel, built barracks, hospitals, roads, airstrips, and wharves, and prepared to push the Japanese back from the South Pacific. Throughout the islands, New Hebrides residents were struck by the respect and wages they received from the U.S troops. Moreover, Vanuatu was spared the horrors of war and, instead, experienced only better living conditions, modern medical aid, and economic growth. On top of this perception, when the U.S. left as swiftly as it had arrived, it bulldozed tons of equipment and cargo into the ocean. Throughout the islands, millenarian "Cargo Cults" that believed rituals would deliver advanced technology to their society had been proliferating, and the U.S. equipment disposal fed these Cults' development and stoked the growing resentment of native New Hebrideans to European Condominium rule.

Following the war, Condominium authorities were left with a legacy of how the U.S. had treated New Hebridean natives, and one of the authorities' responses was to enter locals' homes and take what the U.S. had left. On top of this abuse, post-War Britain and France were unable to take steps to address either the New Hebridean economy or political challenges.[14] Local political initiatives arose to address issues of land ownership because more than one-third of the island territory remained in the hands of foreigners.[15] In 1958, Condominium authorities established an Advisory Council that boosted local hopes that land sales would be stopped and decolonization started, but those hopes quickly died when, in 1959, France's President de Gaulle declared France would keep control of her Pacific territories even though the United Kingdom's Prime Minister Macmillan declared Britain would leave her colonies.[16]

In 1963, a political movement, NaGriamel, emerged on Espiritu Santo Island. Followers advocated the return of land to the Ni-Vanuatu and a return to traditional ways.[17] They were joined in the early 1970s when Ni-Vanuatu students who had been overseas returned home and began to work for political change.[18] In 1971, NaGriamel petitioned the UN to prevent further land sales to non-indigenous people.[19] In the 1975 election that would seat the first Representatives Assembly, the largely Anglophone New Hebrides National Party (NHNP), led by Father Walter Lini, won most Ni-Vanuatu votes but was denied majority control by six members appointed by the Resident Commissioners. The NHNP boycotted the Assembly. When requests for a more democratic system were refused, the party refused to take part in elections in 1977. A minority government formed, and public protests were quelled with teargas.[20] Representatives of the New Hebrides and the governments of Britain and France would finally agree on an independence plan that included a 1980 referendum and elections.[21]

In the 1979 Representative Assembly election, the Vanuaaku Party (VP, formerly NHNP) won 62% of votes and 26 of 39 seats. It boycotted constitutional meetings in Paris but attended discussions in Port-Vila until a new constitution

that restricted land ownership to Ni-Vanuatu was agreed.[22] However, the move to independence would not be easy. In June 1980, Jimmy Stevens, the leader of NaGriamel, declared Espiritu Santo independent of the rest of the New Hebrides and renamed the island the "Independent State of Vemarana." The insurrection elicited a response by Port-Vila's backers; Papua New Guinea troops, backed by Australia, put down the rebels. On 30 July 1980, New Hebrides attained independence under the name "Vanuatu." Father Lini became the first Prime Minister (PM),[23] and the country entered a defense pact with Papua New Guinea. The VP retained slim majorities under Lini's leadership through the 1980s, but after no-confidence votes from both the VP and Parliament, Lini was succeeded as party leader and PM by Donald Kalpokas. Lini returned after December 1991 general elections, which Lini and his supporters contested as the National United Party (NUP) and which formed a coalition government with the former opposition, Union of Moderate Parties (UMP), under the Francophone PM Maxime Carlot Korman, who retained the post through 1995, after which the country underwent six years of unstable parliamentary coalitions and six changes of prime minister.[24]

Frequent changes of government would continue into the early 21st century, but Vanuatu remained mostly peaceful and calm. Exceptions related mostly to natural disasters and community clashes. A 7.2-magnitude earthquake struck on 3 January 2002; it caused major damage to buildings and infrastructure, notably in Port-Vila. The Teouma bridge, which links southern Efate to the capital, was destroyed, and three bridges linking Port-Vila to North Efate were seriously damaged. Landslides blocked roads and damaged crops.[25] In December 2005, thousands of people were forced to evacuate as Mount Manaro, an active volcano on Ambae, erupted. In March 2007, a state of emergency was declared after islanders from Ambrym and Tanna clashed in the capital over allegations of witchcraft.[26] Then, on 13-14 March 2015, TC Pam struck the islands. It devastated many areas, including Port-Vila, which had just completed rebuilding from the 2002 earthquake,[27] and it killed at least 11 people.[28] In more recent years, additional storms, earthquakes, and the COVID-19 pandemic created economic and social consequences but, as of the writing of this handbook, had not had political repercussions.

Culture and Demographics

The population stood at 300,019 as of the 2020 census. There are roughly the same number of men and women (51% male and 49% female), and population growth stands at 2.3% per year.[29] Some 80% of the population lives on seven islands – Efate, Espiritu Santo, Tanna, Malekula, Pentecost, Ambae, and Ambrym. Nearly 75% of the population lives in rural areas. The median age of the population is 20 years, and 65% of the population is between the ages of 0 and 29 years. The average household size is nearly five people per house with males being the head of the household in 82% of homes.[30]

The people of Vanuatu (Ni-Vanuatu) have faced a changing environment for centuries, and adapting to this change is part of their lifestyle. Traditional knowledge, skills, and practices underpin their ability to survive and thrive. Communities share and transfer knowledge in custom schools and "nakamals,"[31] which are buildings like that depicted in Photo 1[32] and that serve as community centers. Rituals and ceremonies, such as pig killing to gain rank, also help to provide order and traditional authority. Community access to kastom (a term used to describe traditional practices, religious traditions, museums, community gathering sites, and traditional learning) cannot be overstated. Traditional nakamals themselves ensure the preservation of both tangible and intangible cultural heritage as they represent the authority of a customary area and embody the traditional governance system.

There are two national government institutions that work to safeguard the cultural heritage of Vanuatu. They are the Vanuatu

Cultural Centre and Malvatumauri, which is a national Council of Chiefs. The Vanuatu Cultural Centre is tasked with preserving, protecting, and promoting Vanuatu's rich and diverse cultural heritage. It collects and documents the country's cultures dating back to when the first settlers arrived. Malvatumauri works to strengthen, maintain, promote, and ensure the traditional governing systems of Vanuatu. Several NGOs and foundations also actively engage in the promotion of arts and culture. In addition to nakamals, infrastructure and assets in the culture sector include cultural sites, cultural centers, and churches, all of which have aesthetic, historical, or social significance.[33]



Photo 1: Nakamal in Vanuatu

Ethnic Makeup

The Ni-Vanuatu (people of Vanuatu) are primarily a Melanesian people although the people of some outlying islands are Polynesian. The Ni-Vanuatu make up more than 99% of the population.[34] The remaining 3,000 people are either part-Ni-Vanuatu or of foreign descent; the largest groups of people of foreign descent originated in Australia, New Zealand, and Europe, followed by Asia and Melanesian islands other than Vanuatu. The 2020 census indicates that the percent of total population made up of these residents of foreign descent has been on the decline for over a decade.[35]

Key Population Centers

About one-quarter of Vanuatu's population lives in urban areas.[36] The only two urban areas are Port-Vila and Luganville, both of which have grown significantly since independence.[37] As of 2023, the capital, Port-Vila on Efate Island, was officially home to 35,900 people.[38] The number of residents in informal settlements may push the capital's population above 44,000, but successive damaging storms may have seen many residents of informal settlements leave Port-Vila for their own original home areas.[39] Luganville, on Espiritu Santo Island, was home to 18,000 people as of the 2020 census.[40] No other town has more than 3,000 residents.[41]

The informal settlements of Vanuatu's two main cities result, in part, from economies of scale whereby more jobs and opportunities are available in the cities, and, in part, from shortages of affordable housing in the cities. Housing in Port-Vila's informal settlements tends to be unplanned and is highly vulnerable due to poor construction, hazard-prone location, and poor access to services.[42]

Language

More than 100 local Melanesian languages and dialects are spoken. Bislama, an English-based Melanesian pidgin, is the national language and is one of three official languages; the other two official languages are English and French.[43] As of 2018, an estimated 88% of people aged 15 years and older were literate.[44]

Religion

More than 90% of the population of Vanuatu adhere to Christianity; the largest congregations are Presbyterian (27.2%), Seventh-day Adventist (14.8%), Anglican (12%), and Roman Catholic (12%),[45] although other small Christian groups – e.g., Assemblies of God, Church of Jesus Christ of Latter-day Saints, and Jehovah's Witnesses – cumulatively comprise more than 10% of

the population. The John Frum Movement, an indigenous "cargo cult" with its own political party, is centered on Tanna and incorporates 5% of the population. There are also small numbers of Baha'i and Muslim faithful in the country.[46] Fewer than 5% of respondents to the 2020 census said they either follow customary beliefs or no religion.[47]

The constitution provides for individual freedom of "religious or traditional beliefs," and there is no official state religion. The law makes discrimination, including on the basis of religion, a crime. In most rural areas, in accordance with traditional customs, the establishment of a new religious group generally requires agreement by the chief along with community consensus.

Religious groups must register or face fines. The inter-denominational Vanuatu Christian Council, an umbrella religious organization representing the largest religious groups, is highly visible within government agencies as it organizes prayer sessions in almost all government ministries and has received government grants totaling several hundred thousand dollars for programming in furtherance of the "Government Church Partnership Program." Religious minorities have criticized the government for not including non-Christian faith groups in celebrations of national events although the Vanuatu Christian Council rejects this criticism and says any tension between groups is due to tribal and ethnic differences rather than religious issues.[48]

Vulnerable Groups

Community members have different roles when preparing for disaster and climate change impacts in Vanuatu. For example, men may build resilient houses and evacuation shelters and work on agriculture and gardening while women collect, prepare, and store food and clean water, and young people collect firewood and water and help to build houses. The result of these relatively unchanging roles means that information regarding a hazard or emergency must not only be tailored to specific activities, but it must be delivered in appropriate formats to reach each target audience effectively.

Similar to the different roles and means of accessing information among Vanuatu's social and economic groups, these groups can experience differing impacts from an emergency event. Age, sex, displacement status, economic class, and other characteristics can change a person's needs and available actions before, during, and after a disaster. The following large categories of vulnerable groups are intended to provide an overview of the coping capacities and vulnerabilities of various socio-economic categories of people. In reality, any one person may belong to several of these categories and, therefore, experience greater vulnerability.

Women

Kastom – social norms, values, and practices – continues to create a barrier for women to enter the formal economic and political spheres, thereby ensuring that women's voices are not as common in DRR and disaster management fora. The Government has attempted to address some underlying issues through a National Gender Equality Policy (NGEP), most recently revamped and published in 2021. The new Policy (2020-2030) includes strategic areas to address ending violence against women and girls, women's economic empowerment, women's civic participation and leadership, climate and disaster resilience, and gender mainstreaming across sectors to ensure that services are accessible.[49] Among the few top-level government bodies that did appoint and resource a gender focal point was MOCCA where the focal point is tasked with accountability on gender mainstreaming and integrating gender into internal work and external policies. This inclusion was accompanied by requirements for minimum representation of women on Community Disaster and Climate Change Committees (CDCCC), formed by the Vanuatu Meteorology and Geohazards Department (VMGD) and NDMO on behalf of the government. CDCCCs are responsible for coordinating local responses to climate change and natural hazards. One-third of committee leaders must be women, and

surveys suggest an increase in representation of women in decision-making in the CDCCC. This representation, in turn, meant women were increasingly considered for leadership on other committees.[50]

Nationally, 71% of women aged over 15 years have either no education or have only completed primary education; for comparison, some 67% of men have never been to school or only completed primary education. There is significant variation among regions as more than 80% of women in Malampa, Tafea, and Torba provinces have never been to school or have only completed primary education.[51] Given these shortfalls in education, opportunities for participation in formal labor markets is limited for Vanuatu's women. Only 55% of women between the ages of 15 and 49 years are employed while 82% of men of the same age group are employed; moreover, of employed women, 68.7% work in informal sectors.[52] The combination of work in the informal sector and a persistently lower (by US$1,200) average gross national income among women means that women's incomes are less secure and they have fewer assets and less wealth with which to build resilience.[53] On top of this economic marginalization, gender-based violence (GBV) is a major concern and, as past disasters globally have shown, incidence of GBV tends to rise in the wake of disaster events as interpersonal, financial, and social strains increase violence across affected communities. Around 60% of women have experienced some form of physical or sexual violence in their lives, and 68% report psychological violence. One in three girls under 15 years of age have encountered sexual abuse. These rates increase in rural areas in comparison to urban areas but violence against women is prevalent across all provinces, islands, age groups, education levels, and religions.[54]

Although all marginalized groups may also experience a loss of access to health care during a disaster event, emergencies are particularly dangerous for women and girls as social structures that would normally protect them are disrupted, and police resources are diverted. The cumulative effect is an increase in unintended pregnancies, maternal mortality and morbidity, sexually transmitted infections, and sexual and gender-based violence. There is an example of how this can be addressed in Vanuatu. During the September 2017 evacuation caused by the Monaro Voui eruption, more than 10,000 people moved to surrounding islands, including 2,500 women of reproductive age and pregnant women. As part of a localized emergency response, nurses and midwives offered contraceptive options to women and girls in affected and remote areas. The Vanuatu Family Health Association (VFHA), a provider of sexual and reproductive health services, responded to a government call for assistance. The VFHA Minimum Initial Service Package prioritized contraception and other sexual and reproductive health services in collaboration with the Ministry of Health, provincial health workers, the National Health Cluster, community leaders, and volunteers. Female service providers were at the center of the response. VFHA teams transported medical supplies and aid in small boats, and medical teams hiked or road trucks to reach remote villages. In total, they visited 23 villages over a three-week period. Each clinic began with awareness sessions to address common myths and misconceptions surrounding family planning to increase acceptance and uptake of services. Men and women participated in awareness sessions separately – as is culturally appropriate in Vanuatu. Nurses and midwives then provided consultations and contraceptive counselling to all clients seeking services. Of the 10,000 people affected by the volcanic eruption and evacuation, 834 accessed the services provided through VFHA, and for many, this was their first time accessing modern contraceptive methods.[55]

Children and Youth

An estimated 44% of the population (approximately 132,000 people) are children; under Vanuatu law, "children" encompass girls up to age 16 years and boys up to age 18 years.[56] Children and young people face serious short- and long-term impacts from disasters, and the influence of climate change on the hazards that

threaten Vanuatu will all but ensure that the country's youth experience more frequent and intense impacts on their mental health, education outcomes, and longer-term life trajectories. The most common direct disaster impacts on children and youth are disruptions to education as school facilities are damaged by storms although their health can also suffer direct effects as water systems are damaged and health facilities struggle to cope with higher numbers of patients.

Even separate from a disaster scenario, there is evidence that Vanuatu's children are subjected to child labor, including the worst forms – i.e., in commercial sexual exploitation, sometimes as a result of human trafficking, and forced domestic work. Children routinely engage in dangerous tasks in forestry and logging, and many children work in small, street-based, informal retail. The challenge is that these conclusions are mostly based on anecdotal evidence. Vanuatu lacks data on the nature and prevalence of child labor, but the lack of educational opportunities, especially in remote areas, suggests that children living in those areas are at increased risk of involvement in labor. In the case of young girls, a lack of proper sanitation facilities at nearly one-half of the country's schools is a key concern as girls lack the ability to maintain menstrual hygiene at such schools. Finally, families sometimes send children to live with relatives in nearby towns or cities, and these children are subjected to forced labor as domestic workers.

Although Vanuatu has ratified various conventions under the International Labour Organization and the Committee on the Rights of the Child and has established some laws and regulations related to child labor, there remain significant gaps, including criminalization of use of children in illicit activity. The exceptions are laws against forced labor, child trafficking, and commercial sexual exploitation of children. Nonetheless, research indicates that Vanuatu does not have a formal mechanism for reporting and responding to children who need protection, and reports suggest that many cases of child labor are dealt with by kastom, which comprises informal children's services providers, including religious leaders, women's groups, and NGOs, to whom children are referred for services.[57]

Children out of school and who contribute to their families' incomes through labor either on a family farm or in another industry can be vulnerable to exploitation, trafficking, and abuse during post-disaster periods when parents or guardians may have been injured or killed, displaced, or impoverished.

The Elderly

As of the 2020 census, 6% of the population was over age 60 years;[58] there were fewer than 2,000 people over age 80 years. The number of those 60 years of age and older is expected to quadruple and hit about 14% of the population by 2050. Moreover, the population aged 80 years or older could near 10,000 by mid-century.[59] There are no central care facilities for Vanuatu's elderly people. In most communities, it is women's responsibility to help the elderly – both within their families and more broadly across the community – with cooking, washing, and self-care. The elderly who either do not have their own home gardens or cannot work those plots rely on their communities for food and, in case of emergency, are extremely vulnerable to hardship. With high rates of working age adult migration to cities, elder members of families are often among those left behind, and any disruption to remittances sent home from working adults in cities or overseas also means disruptions to household incomes.[60]

People Living in Poverty or Displacement

Based on the Vanuatu Hardship and Poverty Report, nearly half of Vanuatu's urban population either lives below the basic needs poverty line or is vulnerable to poverty. Meanwhile, nearly 40% of the rural population is in this situation of poverty or vulnerability to poverty. Luganville has higher poverty rates than any other area of the country with nearly one-quarter of residents living below the basic needs poverty line and one-half vulnerable to poverty. Port-Vila also has high rates of basic needs poverty (18%) and

vulnerability to poverty (44%) although with at least double the population of Luganville, Port-Vila's impoverished population is larger.[61]

These high poverty rates intersect with migration from outer islands to the cities of Port-Vila and Luganville. When a shortage of affordable housing in cities is added to the mix, the reasons are clear for a growth in informal, village-like settlements on the outskirts of cities. In Port-Vila and Luganville, a large swath of the population occupies substandard housing and lives in unhealthy conditions, due to a lack of affordable housing options. The 2009 census reported that 39% of the population in Port-Vila were renters, and another 10% did not have recognized land use rights across 30 or more informal settlements. Research shows that most housing in these informal settlements is built from whatever material is available: corrugated iron, wood, traditional thatch and bamboo, and recycled pieces of tin, plastic, and wood. These settlements also lack basic services like piped water and sanitation. Houses in these settlements are often built on marginal land, including riverbanks and floodplains that are regularly flooded even in moderately heavy rain. During disasters, households in informal settlements tend to be at higher risk given the structural integrity of their houses, the precarious location of their abodes, and their limited capacities to cope with external shocks.[62] These settlements were devastated by Cyclone Pam in 2015, an event that left many residents homeless and without access to safe drinking water.

The Internal Displacement Monitoring Centre (IDMC) began monitoring data on displacement in Vanuatu in 2009. An "internal displacement" refers to each new forced movement of person within the borders of the country. Over the decade (2011-2021), IDMC detected 19 displacement events in Vanuatu; these events triggered almost 175,000 internal displacements. About 87% of these internal displacements were triggered by weather-related events and 13% by geophysical events. In addition to sudden-onset hazards, slow-onset hazards, including sea level rise and coastal erosion, have led to the displacement and relocation of whole communities through state-led initiatives. After years of being threatened by high tides and other environmental stresses, the state led the relocation of the inhabitants of the Lateau community of Tegua island in Torba Province, to higher ground.

When people are displaced either by disasters or other drivers, they are separated from their communities and, often, their capital and assets. Their ability to earn a living is often compromised. Displacement also brings with it new costs, which are borne by internally displaced persons (IDP) themselves, the communities that host them, government agencies, and the humanitarian sector. These costs include rent for temporary accommodation and additional expenses for food and electricity incurred by those hosting IDPs in their homes. In some cases, IDPs' income, physical or mental health, and access to education or services can also be jeopardized. The impacts all have economic consequences, which can be particularly significant in the case of large-scale or protracted displacement. Reports emphasize that women, children, indigenous people, and people with disabilities are particularly affected by the negative impacts of disaster displacement in Vanuatu.[63]

People with Disabilities

Vanuatu's Disability Pilot Survey in 2014 found that approximately 5% of the population had a disability, and the Vanuatu Hardship and Poverty Report indicated that nearly one-quarter of people living with a disability in Port-Vila lived under the poverty line (23%).[64] As of the 2020 census, 14.7% of the population over 5 years of age reported a disability – defined in the survey as problems in seeing, hearing, walking, or remember or concentrating. Numerically, people living with one disability or more numbered 21,124 (seeing), 16,640 (walking), 11,555 (remembering or concentrating), and 10,845 (hearing). Total disability was reported by fewer than 1,000 people, a decrease in both numbers and as a percentage of the population

over the 2009 census. However, disability may be under-reported for a variety of reasons, including stigma, surveys not administered in accessible forms, or other lack of access.[65] People with disabilities are up to four times more likely to be injured or to die during a disaster than people without disabilities; they also face higher risk of property loss. Underlying disadvantages, such as higher risk of poverty, stigmatizing attitudes, exclusionary policies, and inaccessible built environments further marginalize people with disabilities in disaster preparedness and humanitarian response.[66]

The sudden nature of an evacuation can mean that people with disabilities face heightened risks to their quality of life and dignity. Reports from past events in Vanuatu indicate that almost 200 evacuees with disabilities have been temporarily housed separately from their assistive devices and caregivers, in inappropriate shelter, with no privacy, and with limited access to sanitation facilities. Nonetheless, there have been efforts to try to minimize the risks facing evacuees with disabilities. The Vanuatu Disability Promotion and Advocacy Association (VDPA) and others have, during past disaster events, successfully advocated for charter flights to gather evacuees' assistive devices. Despite this and other efforts, IDPs with disabilities have repeatedly been left out of immediate responses and have faced ongoing challenges accessing support throughout displacement.[67]

A study that focused on IDPs who had left Ambae due to the Manaro Voui eruption and arrived on Espiritu Santo between September 2017 and January 2020 surveyed 154 IDPs and 153 members of the local non-displaced population. Of displaced respondents, 5% were identified as having a disability. People with disabilities faced heightened challenges while evacuating. According to key informants, limited space on the ships and flights used to transport evacuees meant many people with disabilities were forced to leave behind their assistive devices or were separated from their caregivers.[68]

The VDPA is the only national organization of persons with disabilities. VDPA is governed and staffed by people with disabilities. Its mandate is to advocate for the rights and promote the abilities of people with disabilities in Vanuatu. It has developed 32 affiliate groups, which work to raise awareness and advocate for disability inclusion at the community level across Vanuatu; there are over 1,000 registered members. Vanuatu was the first Pacific Island state to ratify the Convention on the Rights of Persons with Disabilities (CRPD) in 2008, and it has developed policies that address disability inclusion and the rights of persons with disabilities. The Vanuatu Climate Change and Disaster Risk Reduction Policy 2016–2030 highlights the need to ensure the perspectives, needs, and capacities of people with disabilities are represented in planning and implementation of DRR. It recognizes that accessible information, such as the use of multiple media to communicate early warnings, is central to ensuring access to DRR services by various community groups.

Networks and grassroot organizations of persons with disabilities in every province provide VDPA with a strong base for channeling and representing the perspectives and priorities of a variety of people with disabilities. Successive post-disaster surveys have seen respondents identify VDPA as a key contributor. During the TC Harold response, VDPA's participation in the protection cluster was reported to have contributed to the prioritization of people with disabilities in the delivery of relief items. Since that response, the maintenance of active networks by VDPA has been characterized as challenging, especially in the absence of stable resources to ensure continuous reach and activity of provincial and community-based groups in the most remote areas.[69]

Sexual Orientation / Gender Identity

In Vanuatu, non-heteronormative sexual orientations or gender identities – often referred to in the West as lesbian, gay, bisexual, transgender, queer, intersex, and other diverse genders and sexualities (LGBTQI+) – are referred to by the initialism SOGI (sexual orientation and gender identity). The subject of SOGI

remains highly contentious in the country even though there are some indications of shifting attitudes, but the NGEP is silent on SOGI. In addition to this silence, there is limited data on the prevalence of SOGI individuals in Vanuatu. They are not explicitly measured in government census data. Admittedly incomplete data from VPride, a charitable organization working with SOGI communities in Vanuatu, shows that across Efate, Malekula, and Espiritu Santo islands, there are at least 400 transgender individuals, 100 gay and 100 lesbian individuals, and 200 gender-nonconforming individuals. In addition to taking in only three island communities, these figures likely also reflect an undercount in the surveyed communities as many SOGI individuals may be reluctant to identify themselves as such.[70]

The impacts of this invisibility and this silence for the community in a disaster context include a lack of access to aid if distribution relies on apparent sex or gender characteristics. Moreover, if social attitudes tolerate abuse of SOGI individuals, those people may be unwilling or unable to access shelters, see healthcare practitioners, or even raise their voices to advocate for their community before, during, or after an emergency.

Economics

In the past few years, Vanuatu's economy has experienced significant disruption. In early 2020, the simultaneous disasters of TC Harold and the COVID-19 shutdowns weakened the national economy. An early analysis of the potential impact of COVID-19, before TC Harold, suggested it would reduce Vanuatu's GDP growth rate in 2020 from an expected 3.8% to 1.9%. After incorporating the impact of TC Harold, the forecast of GDP growth rate was revised downwards to 0.6%.[71] As of latter 2022, recovery had begun with a GDP growth rate of 2%, but it was accompanied by significant inflation. Tourism was showing a slow recovery with less than half of pre-COVID numbers of overseas tourist arrivals by the end of the year. Additional factors in the economic recovery were dual storms and earthquakes in 2023 that damaged infrastructure, houses, and crops and all but ensured that inflation would remain high. A key challenge for the country's recovery from these disasters is competition for skilled labor between Vanuatu and its neighbors, Australia and New Zealand, whose labor schemes have long pulled thousands of agricultural, construction, and other skilled workers out of Vanuatu's domestic labor market.[72]

The overall agriculture sector (crops, livestock, fisheries, and forestry) is responsible for roughly 20% of GDP. At the same time, agriculture is by far the largest employer, with up to 80% of the population engaging in or relying on agriculture. Subsistence farming is crucial for ensuring the nation has sufficient food. Within the sector, crop production accounts for 80%, animal production 7%, forestry 8%, and fishing 5%.[73] Small-scale farms dominate the sector, and their main cash products are copra, kava, cocoa, coffee, and taro.[74] Despite widespread farming, Vanuatu is highly food insecure and imports much of its food. Rough estimates in 2020 indicated that imported foods provided 60-70% of the nation's recommended food energy needs. Apart from beef, food export earnings are near zero.[75] Thus, food imports contribute to a large trade imbalance, as shown in Figure 1,[76] even as they lead to negative health outcomes.[77]

Although the workforce is heavily employed in agriculture, the economy is dominated by the services sector, which accounts for two-thirds of the GDP. Tourism, a sub-sector of services, reportedly delivered 23% of GDP and employed 35% of the workforce prior to COVID-19. As of 2021, this sector was still recovering. Remittances are an important source of income with a contribution totaling nearly 4% of GDP (as of 2019).[78] As with all states that rely on remittances from overseas workers, Vanuatu felt a sharp contraction as its overseas workers returned home from pandemic-hit economies in 2020. However, many of these workers returned to Australia and New Zealand in 2021, and the country's remittances as a share of GDP skyrocketed to approximately 20% that year.[79] Given the country's exposure to both global

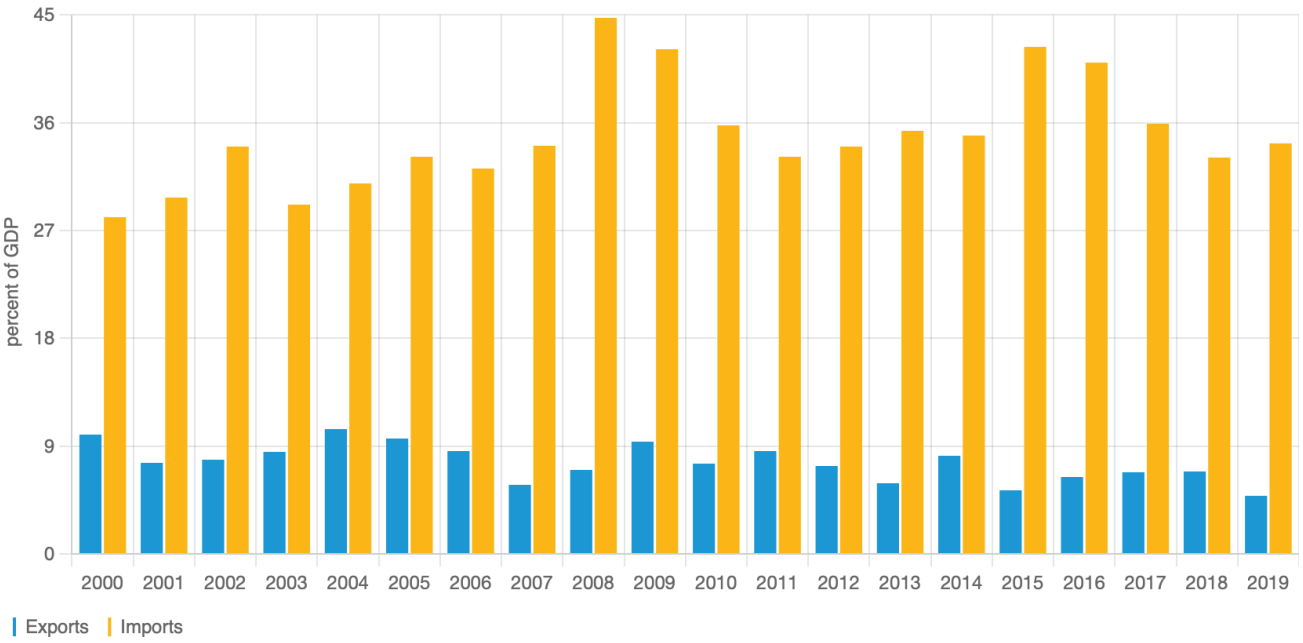


Figure 1: Exports and Imports as a Percent of GDP

food prices and global labor markets, it is highly vulnerable to shocks and recessions.

Baseline employment data from before the TC Harold-COVID-19 compound disaster showed that the total number of individuals actively employed in the formal sector was 46,698 and in the informal sector was 75,965. Informal workers are mostly subsistence workers. The national government is the biggest employer accounting for 24% of the workforce, while the tourism sector is the second biggest. Women made up the majority of people employed in the tourism industry. With massive job losses in this sub-sector during pandemic-era border closures, women stood to experience significant economic pressure as their primary incomes were gone and they would have relied on either government stimulus or subsistence farming.[80]

The most recent household income and expenditure survey, in 2010, found that 12.7% of households lived below the basic needs poverty line. Even urban wage laborers, especially those working for the national government, reported difficulty in meeting basic needs; 6.8% of government employees and 17.1% of private sector employees were below the basic needs poverty line. Insufficient full-time employment, especially for young people, contributes to multi-dimensional poverty and feeds migration and reliance on remittances. In general, men have a higher economic participation rate than women - 80% versus 61.4%. The formal economy produces fewer than 700 new jobs per year with about 5,000 young people joining the labor force annually, leading to a lack of opportunity, which, in turn, means many participate in seasonal employment schemes such as Recognized Seasonal Employers (New Zealand), Seasonal Workers Program (Australia), and the Pacific Labour Scheme (Australia) to work in horticulture and viticulture sectors.[81]

A considerable threat to the country's economic future is climate change. Potential direct effects on agriculture include shifts in the carbon dioxide cycle and precipitation and temperature regimes. Indirect effects include changes in water resource availability, soil transformation and erosion, changes in pests and diseases, the arrival of invasive species, and submergence of coastal lands. Saltwater intrusion is already impacting food production and will continue to worsen as sea levels rise. An additional influence is related to climate change impacts on the health and productivity of the labor force. A decline of up to 20% of productivity by the 2050s is possible under the highest emissions pathways. Beyond agriculture, there are multiple indications that the tourism

sector is particularly vulnerable to climate change. In the long-term, the dual threats of rising sea levels and coastal erosion could reduce the quantity and quality of available beach space and coral reefs and therefore attractiveness of the country as a tourist destination. In addition to direct physical impacts, climate change may affect the tourism sector through global efforts to mitigate climate change. One possible manifestation is an increased cost of international flights[82] and a reduction in global desire to expend carbon on long-haul flights.

Government

Under the 1980 Constitution, which is still in force, Vanuatu is a unitary republic with a parliamentary system of government. The President is Head of State and has limited powers. The Cabinet, headed by the Prime Minister (PM), has most of the executive powers and is accountable to Parliament.[83] The Constitution can be amended if a bill for amendment wins the support of two-thirds of Members of Parliament (MP) who attend a special sitting of Parliament at which at least three-quarters of MPs are present.[84]

The President serves a five-year term; the post is filled by election by an electoral college that consists of MPs and the Presidents of Regional Councils. The Electoral College may also remove the President for gross misconduct or incapacity. The PM, who is the Head of Government, is elected by a majority vote of a three-fourths quorum of Parliament. The PM, in turn, appoints the Council of Ministers (Cabinet); together, they constitute the executive government. The Parliament, sometimes referred to as the "Red Roof," is unicameral and has 52 members who serve four-year terms; terms can be shortened by a majority vote of a three-quarters quorum or by a directive from the President on the advice of the PM that Parliament be dissolved.[85] Seats are filled by a first-past-the-post system in single-member constituencies.[86]

With a turnout of more than 130,000 voters, Vanuatu's 2022 general election returns saw seven parties win seats in the Parliament.[87] Five of those parties, representing 30 seats, joined in a coalition government under PM Alatoi Ishmael Kalsakau, leader of the Union of Moderates Parties (UMP). UMP's Gloria Julia King was also elected to a seat from Efate Island;[88] she is the first female MP in the country since 2008 and just the sixth female MP to be seated since independence (1980).[89]

The judicial system comprises the Supreme Court, the Court of Appeal, the magistrates' courts, the island courts, and the Land Tribunal. The Supreme Court is presided over by a chief justice and has jurisdiction in civil and criminal cases. The magistrates' and island courts have limited jurisdiction in civil and criminal cases, and the Land Tribunal is concerned solely with land disputes. Judges are appointed by the President on the advice of the PM and the leader of the opposition as well as the Judicial Service Commission.[90]

The National Council of Chiefs (Malvatumauri) has an advisory role under Articles 27 and 28 of the Constitution.[91] District councils of chiefs elect the Malvatumauri to have a voice on customary law and traditional factors.[92]

The Department of Local Authorities within the Ministry of Home Affairs is responsible for overseeing local government, which comprises six provincial councils and three municipal councils. Each council has a central administration and area secretaries to oversee smaller local areas and report back to the secretary-general of the provincial council. Provincial councils use a committee system that makes recommendations to the full council for approval. The Minister of Internal Affairs appoints representatives to the councils from among women, youth, chiefs, and churches of the governed area. Local government is responsible for pre-school and primary education, primary healthcare, regional planning, roads, waste collection and disposal, cemeteries and crematoria, parks and open spaces, and the promotion of tourism.[93]

Environment

Vanuatu is made up of a chain of more than 80 volcanic islands, many of which sit less than 1 meter (m; 3.3 feet) above sea level. The country extends 850 kilometers (km; 530 miles) from north to south. The larger islands are marked by rugged mountains, high plateaus, coastal terraces, and offshore reefs. Although it is regularly hit by tropical cyclones, the country's climate is relatively consistent with a warm wet season and a cool dry season. Vanuatu has extensive natural resources, including forests, uplands, corals, and atolls, which provide habitats for unique biodiversity.

Geography

The country is an archipelago of over 80 islands that cover 12,199 square kilometers (km^2; 4,710 square miles) of land within 860,000 km^2 (332,000 square miles) of ocean territory. Two islands, Espiritu Santo and Malekula, make up almost 50% of the land mass.[94] Figure 2 shows the country, situated northeast of Australia.[95] The Torres Islands are the northernmost group of islands; moving southward, the main islands are Vanua Lava and Santa Maria (Gaua) in the Banks Islands group, Espiritu Santo, Aoba (Ambae), Maewo, Pentecost, Malekula, Ambrym, Epi, Efate, Erromango, Tanna, and Anatom. Some 320 km (200 miles) to the southeast of Anatom are the Hunter and Matthew Islands, both uninhabited and both claimed by Vanuatu and France (as part of New Caledonia).[96]

The terrain varies by island. The larger islands are mountainous with a narrow coastline.[97] Other islands may have high and low plateaus or rolling hills with coastal terraces and offshore coral reefs. The islands are primarily sedimentary and coral limestone and volcanic rock. They experience frequent earthquakes, and there are active submarine volcanoes as well as volcanic peaks on several islands, including Vanua Lava, Ambae, Santa Maria, Ambrym, and Tanna. The highest point is Tabwemasana, 1,879 m (6,165 feet), on Espiritu Santo.[98]

Borders

As an archipelagic state, Vanuatu shares no land borders with any country. It maintains claims of the standard 12 nautical mile contiguous zone and 200 nautical mile exclusive economic zone. Although not all maritime boundaries have been agreed upon or written into treaties, Vanuatu shares maritime boundaries with Fiji and the Solomon Islands as well as France's New Caledonia.[99]

Climate

Vanuatu has two distinct seasons, a warm wet season from November to April, and a cool dry season from May to October. Surface air temperatures on average range 23.5–27.5°C (74-81°F), and the change in temperature is strongly influenced by the temperature of the ocean surface waters surrounding the country.[100] The southeast trade winds prevail, although northerlies during the hot season provide most of the heavy rainfall. Annual precipitation varies from 2,000 millimeters (mm; 80 inches) in the south to 4,000 mm (160 inches) in the northern islands.[101]

The climate is affected by the South Pacific Convergence Zone and El Niño Southern Oscillation. The mountainous regions also play a role in rainfall variation; for example, during the wet season, rainfall is high on the windward sides of mountain ranges on the larger islands while precipitation accumulation is lower on the leeward sides. During El Niño events, drier conditions are seen in Port-Vila and Aneityum, the southernmost island. During La Niña events, rainfall during the wet season can be more voluminous than average.[102]

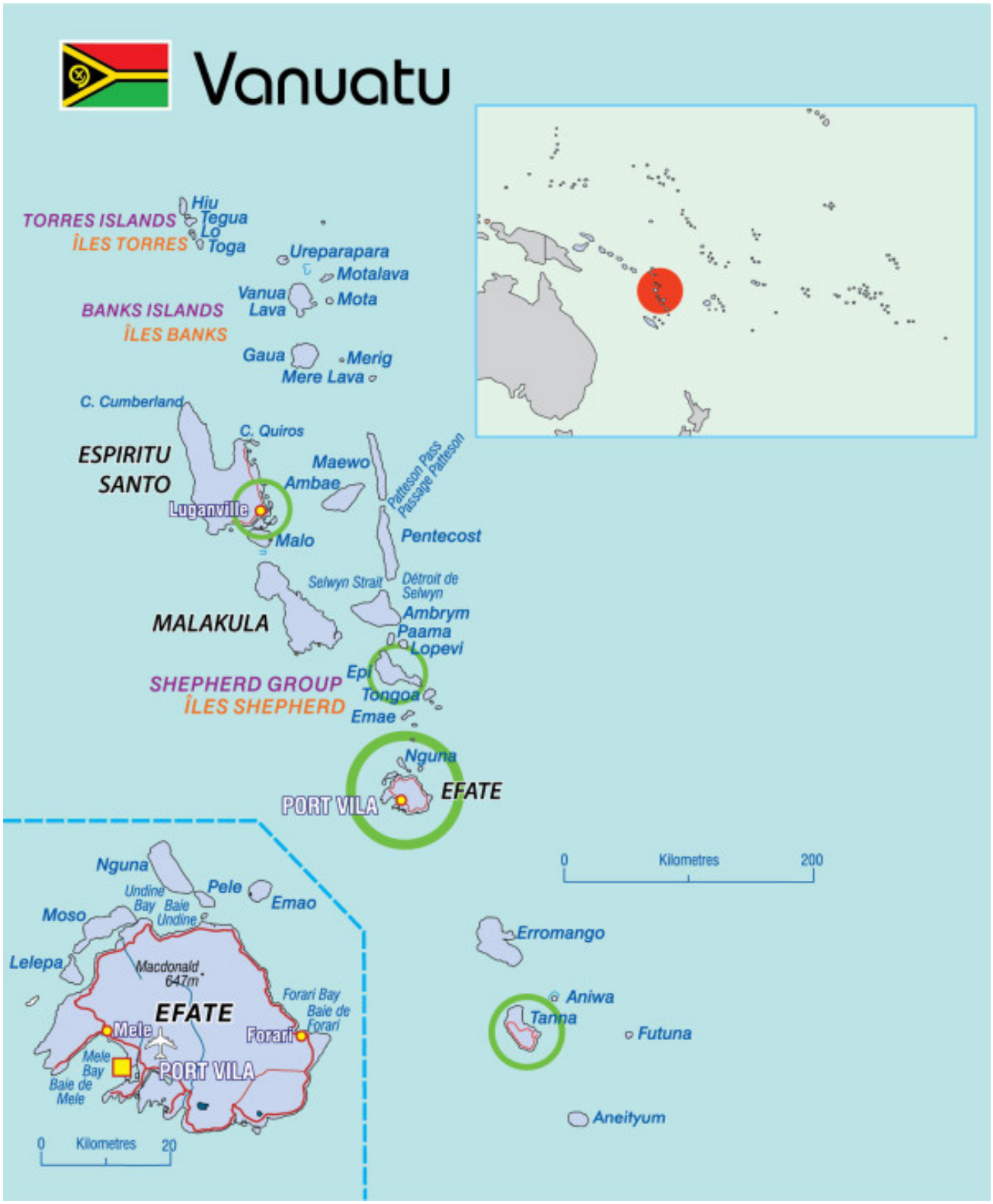


Figure 2: Map of Vanuatu

DISASTER OVERVIEW

Natural hazards that Vanuatu confronts include cyclones, volcanic eruptions, floods, earthquakes, tsunamis, droughts, and sea level rise. The country sits on the Pacific Ring of Fire, at the meeting of two tectonic plates, a location that exposes the islands to frequent earthquakes. An estimated 94% of the population resides along the coastline and is, therefore, exposed to sea level rise, storm surges, and tsunamis.[103] Climate change is expected to increase the frequency of extreme weather events, deplete natural resources, and threaten communities with sea level rise. The sea level has risen by an average of 6 mm (0.24 inches) each year since 1993, well above the global average.[104]

There is a 56.8% likelihood of a disaster occurring every year in the country. These disasters affect some 12% of the population and contribute to an average of 42.8% GDP loss annually. Tropical cyclones have the largest economic impact. Hundreds of earthquakes strike every year, and with earthquakes come volcano eruptions. The 2018 Manaro Voui volcano eruption caused extensive economic damage that elicited a US$3.4 million budget allocation from the government to address displacement and lost livelihoods.[105]

Climate Change

Vanuatu regularly experiences high maximum temperatures, with an average monthly maximum of around 27.2°C (80.96°F) and an average February maximum of 28.8°C (83.84°F). Projected climate changes are expected to push temperatures above 30°C (86°F) on a regular basis. An additional factor will be marine heat waves as the Western Tropical Pacific is a global hotspot where marine heat waves are projected to extend their spatial footprint and to grow in duration and intensity. Meanwhile, meteorological droughts (precipitation deficit) and hydrological droughts (a deficit in surface and subsurface water flow) are expected to increase in frequency while sea level rise and increasingly intense cyclones boost the potential for coastal flooding and flash floods due to heavy precipitation.[106]

Among other tasks, the Ministry of Climate Change and Adaptation, Meteorology and Geo-Hazards, Energy, Environment and National Disaster Management (MOCCA) focuses on strengthening the climate change and disaster networks at national, provincial, and local levels; it mainstreams climate change adaptation (CCA) activities across sectors, policies, plans, and budgets. The Ministry's Department of Climate Change (DOCC) is responsible for coordination and implementation of adaptation, disaster risk management, and mitigation. The National Advisory Board (NAB) on Climate Change and Disaster Risk Reduction is the leading institution responsible for policy development and advice for CCA programs, projects, initiatives, and activities. The NAB is the focal point for information sharing and coordination on climate change; it facilitates and endorses climate change programs, and it manages development of national climate finance processes.[107] The NAB also plays a critical role in governing and allocating funds, and it serves as an important model of a high-level advisory body that coordinates the allocation of climate change and DRR funding.[108]At the subnational level, Provincial Disaster and Climate Change Committees (PDCCC) coordinate DRR and CCA activities, develop plans, and disseminate information to communities. PDCCCs also conduct training and make decisions on the use of resources. Membership includes representatives of the provincial government, local authorities, and NGOs. The NDMO, in partnership with NGOs and the Red Cross, has supported the establishment of Community Disaster and Climate Change Committees (CDCCC) to further support communities to be actively engaged in recognizing, assessing, and mitigating risks. CDCCCs conduct vulnerability

assessments, create community action plans, provide training, and share information with community members, and they assist the community during times of disaster with evacuations, data collection, and early response. Members of CDCCCs are mainly volunteers from the community.

The Vanuatu Climate Change and Disaster Risk Reduction Policy (VCCDRRP) (2016-2030) provides a framework for incorporating climate change into development processes and improving funding for the projects. The VCCDRRP seeks to ensure that adequate resourcing is available for climate change and DRR activities.[109] The National Policy on Climate Change and Disaster-Induced Displacement (2018) guides emergency and development planners to work collaboratively to address the needs of communities affected by displacement. The National Adaptation Programme for Action (2007) developed and funded countrywide high-priority adaptation programs to address current and future effects of climate change. The Enhanced Nationally Determined Contributions for 2020-2030 (updated) presents targets and strategies to support Vanuatu's implementation of the Paris Agreement. It includes mitigation targets for energy, transport, industry, forestry, livestock, and waste sectors.[110]

The Representative Concentration Pathways (RCP) represent four plausible futures, based on the rate of emissions reduction achieved at the global level. RCPs describe possible trajectories for carbon dioxide emissions and the resulting atmospheric concentration. There are four commonly used RCPs (2.6, 4.5, 6.0, and 8.5), developed based on their end-of-century "radiative forcing" – a measure of the combined effect of greenhouse gases, aerosols, and other factors that can influence climate to trap additional heat.[111] RCP2.6 is the most optimistic scenario and indicates a 2.6 watts per meter squared (W/m^2) forcing increase relative to pre-industrial conditions. RCP8.5 is the most pessimistic of the four scenarios and indicates an 8.5 W/m^2 forcing increase.[112] RCP2.6 and RCP8.5, the low and high emissions pathways, are the primary focus of various models of future climate change impacts; RCP2.6 represents a very strong mitigation scenario, whereas RCP8.5 assumes a high-emissions scenario.[113]

Based on modelling using the RCPs, Vanuatu could see a range of impacts.

- Across various RCPs, Vanuatu is expected to experience fewer cyclones overall but more intense storms and, especially, a higher frequency of the most intense (categories 4 and 5) storms.[114]
- Under different emission scenarios, Vanuatu is projected to experience annual average air temperature and sea surface temperature increases although future temperature rise over the islands is forecast to be below the global average, i.e., under the highest emission pathway, it is projected that there will be an increase of 2.8°C (5°F) compared to 3.7°C (6.6°F) globally. This increase in average temperature will result in an increase in the number of hot days and warm nights and a corresponding decrease in the number of cooler weather days.
- Under all emissions scenarios, ocean acidity levels are projected to rise, a factor that will result in worse reef ecosystem health as coral bleaching, storm damage, and fishing pressure contribute.
- Since 1993, there has been a rise in sea level by 6 mm (0.24 inches) per year. Under a high emissions scenario, there could be a rise in sea level of 3-17 centimeters (cm; 1.2-6.7 inches) by 2030. The sea level will continue to rise to a range of 21-34 cm (8.3-13.4 inches) by 2060 and a range of 40-96 cm (15.7-37.8 inches) by the end of the century under all emission scenarios.[115]

Some of the most significant climate change-related impacts may be related to the health of Vanuatu's people as the national health system struggles to cope with changing disease profiles, successive disaster events, and resource shortages. As of 2020, the country struggled to maintain a large enough health workforce. Extreme weather events increase the demand

for emergency health services and can damage health care infrastructure and disrupt the provision of services. Increased risks of climate-sensitive diseases will require greater capacity from already strained health services. While the country has developed an integrated monitoring and early warning system for vector-, food-, and water-borne diseases, the spread of such diseases can be expected to expand under climate change scenarios as access to clean water becomes more difficult and the range of disease vectors broadens to include heretofore inhospitable areas.[116]

Hazards

Vanuatu is highly exposed to cyclones, volcanic eruptions, earthquakes, tsunamis, urban and coastal flooding, and landslides. It is the country ranked most exposed to natural hazards and climate change in the world. International databases indicate that Vanuatu experienced nearly 50 devastating disasters during the period 1940-2020, as illustrated in Figure 3.[117] By 2060, Vanuatu has a 50% chance of experiencing disaster-related losses exceeding US$330 million, and a 10% chance of experiencing disaster-related losses exceeding US$51.8 billion.[118]

Diseases

The lack of functional drainage infrastructure and ineffective waste management practices often lead to health issues such as scabies, skin diseases, and malaria. The increasing frequency and intensity of extreme weather events may threaten existing sanitation facilities and may increase the risk of vector-borne diseases like dengue and other water-related diseases.[119] Multiple studies have found that climate change-induced increased temperatures, drought, and rainfall correlate with increases in reported levels of diarrheal disease as rotavirus and other bacteria that cause diarrhea proliferate in warm marine water and as higher temperatures spoil food more rapidly.[120]

Drought

Two types of droughts affect Vanuatu and are likely to become more frequent under future climate change scenarios; they include meteorological (precipitation deficit) and hydrological (surface and subsurface water flow deficit). Meteorological drought is expected to increase in frequency, with one study suggesting a potential doubling in the frequency of severe and extreme droughts by the 2080s under RCP8.5. This increase represents a major risk as there is very high dependence on rainwater for subsistence.[121] Since 2018, Vanuatu has worked to develop a drought modeling and early warning system that, in part, monitors El Niño events that correlate with drought in Vanuatu.[122]

Earthquake and Tsunami

Studies suggest that every year Vanuatu is generally affected by two earthquakes of at least magnitude-7.0 and with tsunami generating potential. The country feels some 100-300 small earthquakes every month. In a reflection of the level of exposure, the Vanuatu Meteorology and Geohazards Department (VMGD) has upgraded its monitoring network and merged with counterparts in Fiji, New Caledonia (France), Papua New Guinea, Samoa, Solomon Islands, and Tonga, to form the Oceania Regional Seismic

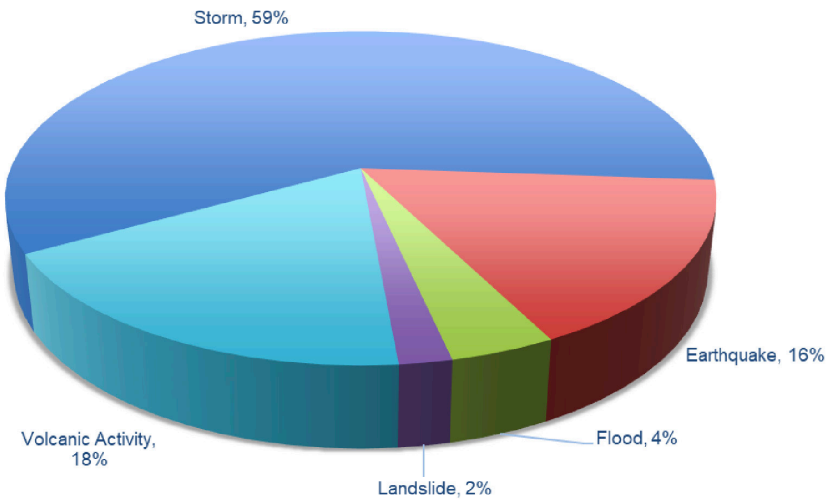


Figure 3: Disaster Occurrence in Vanuatu (1940-2020), by Hazard

Network (ORSNET) to pool resources to detect and assess the damaging potential of seismic events.[123]

The Vanuatu subduction zone (VSZ), extending north-south just west of the islands of Vanuatu, is among the world's fastest moving plate boundaries, and it has a history of producing numerous moderate to strong earthquakes, including 7.8-8.0 magnitude events, most recently in 2013 and 2019. Earthquakes of magnitude-7.0 or larger in the VSZ zone since 1980 have been felt by people in Vanuatu. Given the characteristics of the fault, quakes in the zone are potentially able to trigger tsunamis that travel from west-southwest to east-northeast – i.e., towards Vanuatu. The latest earthquake-generated tsunamis triggered by the VSZ occurred in December 2018 and March 2022; quakes between 6.9 and 7.5 magnitude sent tsunamis as high as 2 m (6.6 feet) to locations on the southern islands of Vanuatu.[124]

There is a more than 20% chance of a potentially damaging earthquake and tsunami occurring in the next 50 years.[125] The last time human deaths were recorded related to an earthquake was in 1999.[126] A total of seven tsunamis were recorded in Port-Vila between 1993 and 2006. In 1999, a magnitude-7.5 earthquake generated a large tsunami with waves measuring 6 m (20 feet) that destroyed the Baie Martelli village, killed 10 people, injured over 100 people, and affected over 23,000 people.[127]

Vanuatu is particularly vulnerable to tsunami because of the "run-up," which occurs when the tsunami waves push a large amount of water above sea level onto the shore. The maximum vertical height above sea level reached by a tsunami onshore is estimated to be 3-4 m (9.8-13.1 feet) for most of Vanuatu's coastal areas at risk; however, it could be higher than 15-20 m (49-65 feet) on the west coasts of Espiritu Santo and Malekula. The effects of tsunami can be greatly amplified if they coincide with high or king tides. According to the IDMC, on average, one person is expected to become displaced per year by tsunami over the return period, but over the next 50 years, there is a 5% probability that a tsunami will displace about 230 people.[128]

Heatwaves

Vanuatu regularly experiences high maximum temperatures. Projected climate changes are expected to push temperatures above 30°C (86°F) on a regular basis. Further research is required to better understand the implications of climate change interaction with the El Niño phenomenon, for its future regime and potential heat waves. Research has identified the Western Tropical Pacific as a global hotspot for larger, longer, and more intense marine heat waves. The consequences may be serious for marine ecosystems in the region (and the livelihoods dependent on them), which have adapted to survive under very stable temperature regimes.[129]

Landslide

The risk of landslides is considered high due to rainfall patterns, terrain, geology, soil, and land cover. The frequency of landslides can be expected to increase because of geophysical hazards such as volcanic activity, earthquakes, and tsunamis as well as climate hazards such as tropical cyclones and heavy rainfall.[130]

Tropical Cyclone

Vanuatu is exposed to 2-3 cyclones in a season, which typically runs November to April. These storms usually result in heavy rainfall, flash flooding, coastal and riverine flooding, flooding in low-lying areas, storm surge, strong winds, and landslides. Annual variation is large in terms of the number of cyclones that affect Vanuatu. The average annual storm occurrence for 1980-2020 stood at 20. Future disaster and climate risk projections show that there will most likely be a decrease in the number of tropical cyclones by the end of the century. However, the storms that do occur are projected to have a greater average maximum wind speed by 2-11% and a 20% increase in rainfall intensity in areas within 100 km (62 miles) of the cyclone.[131] Figure 4 illustrates the storm tracks of all categories of tropical storms and cyclones that passed through Vanuatu's waters during cyclone

season (November-April) in El Niño years during the period 2000-2020.[132]

Trends emerging from the scientific literature on tropical cyclone genesis and tracks in the Pacific Ocean point towards a climate change-driven westward shift in the genesis location of cyclones. One study has suggested that under future climates, cyclone generation will become more frequent during El Niño events, but less frequent during La Niña events.[133]

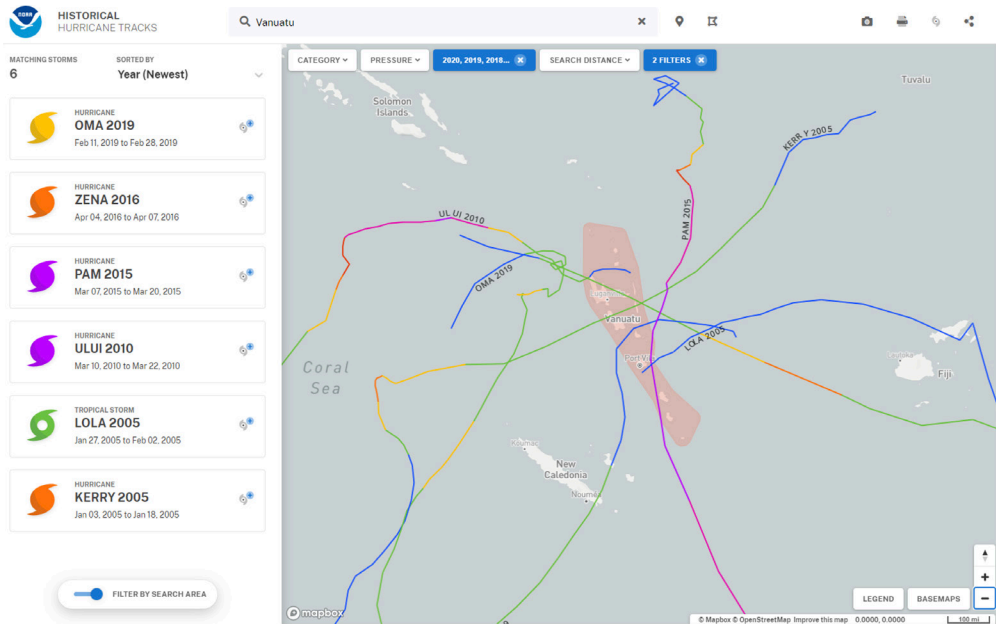


Figure 4: NOAA Database Map of Cyclones in Vanuatu (2000-2020)

Climate change is expected to interact with cyclone hazard in complex ways. Known risks include the action of sea level rise to enhance the damage caused by cyclone-induced storm surges, and the possibility of increased wind speed and precipitation intensity. Storm surges represent Vanuatu's highest displacement risk. On average 1,125 people can be expected to be displaced per year by storm surge considering all the storm events that could occur over the return period. Additional storm-related displacement due to cyclonic winds could average of 2,133 people per year.[134] Vanuatu already has a significant population and asset base exposed to flooding of different types. Over 10,000 people and several thousand infrastructure assets are exposed to riverine flooding and several hundred people and infrastructure assets are exposed to storm surge. This exposure is expected to increase as climate change causes the sea level to rise.[135]

Volcanic Eruption

The volcanoes of Vanuatu pose various risks depending on their type and the character of areas surrounding them. Threats can include "volcanic bombs" or fragments of lava thrown many kilometers from erupting vents; lahars or "mudflows" made up of volcanic ash, stone, rock, and water that can cause severe injury and destroy buildings and vegetation; pyroclastic or hot ash flows that result when a debris column collapses into an expanding flood of hot, solid ejecta and gases that hurtle downhill; volcanic gases in hazardous concentrations; "ashfall" or fine glass, rock, and crystal particles that can be carried downwind and rain out into ash deposits; lava flows; and tsunamis. Many of these hazards are extremely localized to the immediate vicinity of the volcano, but ashfall can occur thousands of kilometers from its source.[136]

The VMGD monitors six active volcanoes. They are:

- Suretamatai on Vanua Lava (13.80°S 167.47°E) – a stratovolcano with no summit caldera; it erupted in 1937, 1965, 1991, and 2009; past eruptions have included ash plumes and phreatic (superheated steam) eruptions
- Garet on Gaua (14° 16' 53.80" S 167° 30' 50.19" E) – a stratovolcano sitting in a 6-9-km (3.7-5.6-mile) wide caldera and surrounding Lake Letas; the most recent eruption was November 2009 - December 2010 when it shot up an ash column and explosions erupted from main active vents;

earlier recorded eruptions have been minor with ash columns

- Manaro Voui on Ambae (14° 23' 24.18" S 167° 49' 48.56" E) – a shield volcano with two concentric calderas, the largest of which is 6 km (3.7 miles) in diameter and the smaller includes three Lakes (Manaro-Ngoru, Manaro-Lakwa, and Manaro-Voui); the most recent eruption was September 2017 – September 2018 and produced ash fall and acid rain; previous eruptions also have included steam plumes, phreatic eruptions within the crater lakes, and de-gassing
- Benbow and Marum on Ambrym (16° 15' 54.26" S 168° 7' 17.50" E) – a shield volcano with a 12-km (7.5-mile) wide caldera; cones within the caldera are the main active vents, with a lava lake inside; eruptions have occurred almost yearly; the most recent eruption was in December 2018, but it was focused at the summit caldera, while a February 2015 eruption generated lava fountains and flows, formation of scoria cones, and explosive activity with ash columns; earlier eruptions have included ash and dust-charged steam as well as explosive activity, lava flows, and lahars
- Lopevi on Lopevi (16° 30' 23.30" S 169° 20' 18.25" E) – a conical volcano; the most recent eruption was in January 2017; the eruption was short-lived and let off a steam and gas column; a June 2003 eruption was Plinian with lava flows from fissures; earlier eruptions have included violent explosives, debris flows, pyroclastic flows, and intermittent explosions
- Yasur on Tanna (19° 31 '44.10" S 169° 22' 52.55" E) – a scoria cone with a nearly circular, 400-m (0.25-mile) wide summit crater; in near-continuous eruption for over 350 years, the most recent explosive phase was June 2011 – July 2012 when intermittent explosions ejected lava bombs and degassing; similar explosive phases occurred in 1994 and 2004[137]

VMGD's Geohazards Division is tasked with monitoring volcanoes and earthquakes, and it delivers notification to various agencies when an alert level changes. Monitoring systems include seismic sensors, visual and camera surveys, and satellite imagery from the U.S. National Oceanic and Atmospheric Administration (NOAA) Satellite Picture and Information (Ozone Monitoring Instrument) for near-real-time thermal monitoring.[138]

History of Natural Disasters

The following is a list of natural disasters in Vanuatu in the last ten years.

Tropical Cyclones and Earthquakes – March 2023

TC Judy and TC Kevin (both Category 4 storms) made landfall over Vanuatu on 1 and 3 March, respectively. They were joined by twin earthquakes of 6.6 and 5.4 magnitudes on 3 March. On 2 March, national authorities declared a state of emergency in Mera Lava, Penama, Ambrym, Paama, Shefa, and Tafea; the declaration was then extended to cover the entire country on 5 March[139] after most parts of Port-Vila were reported to be without power. Winds of 150 km per hour (93 miles per hour), with peak gusts up to 220 km per hour (137 miles per hour), affected the central and southern islands. Gale force winds of 63-87 km per hour (39-54 miles per hour) were experienced in Penama, Malampa, Shefa, and Tafea.[140] The earthquakes occurred off Espiritu Santo, but no major impact was reported. There were dozens of injuries reported but no deaths linked to the cyclones.

The Pacific Humanitarian Team (PHT) worked closely with the NDMO and partners on the ground to distribute emergency relief supplies. The national cluster system was activated to coordinate the response, and in addition to the PHT and other agencies, substantial support was delivered by Australia, New Zealand, and France, all of which seconded staff to the NDMO to assist in processing assessment data and who utilized military assets based on the FRANZ Arrangement among the three countries. The U.S., European Union,

United Kingdom, and Japan all participated via their humanitarian and development agencies.[141]

Immediately after the events, the NDMO reported that the Port-Vila area and Tanna Island were badly affected with the cost of damage estimated at US$50 million as 30,000 households were affected.[142] Days later, assessments found that more than 251,000 people – 80% of the country's population – were impacted by the series of events. Ahead of the storms, the World Food Programme (WFP) supported the Government of Vanuatu's preparedness and response activities by dispatching two Mobile Storage Units – temporary warehouses used to store critical humanitarian assistance. Afterward, the WFP-operated Pacific Humanitarian Air Service transported 15 metric tons of relief items to Port-Vila. Two planeloads of cargo comprised medical supplies and food rations, which were requested by the NDMO.[143]

By late March, evacuation centers were closing as fewer than 2,000 people remained displaced; an estimated one-half of the displaced were staying with host families rather than in central evacuation centers. Beyond displacement, concerns had risen over an increase in leptospirosis cases linked to using contaminated water sources. The country reported 19 new cases and three deaths during the month of March with a majority of cases in Espiritu Santo and Efate islands. The Vanuatu Red Cross (VRCS) was working with authorities with health awareness campaigns in communities across the country. Meanwhile, in the hard-hit provinces of Shefa and Tafea, 90% of homes were damaged, and upwards of 123,000 people (almost 25,000 households) were affected. Communities in these areas faced water-borne diseases, gastroenteritis, and ringworm, due to a lack of safe drinking water, fresh food, and adequate sanitation. Education remained disrupted, and Save the Children reported 100 classrooms in need of reconstruction.[144]

Yasur Volcanic Activity – October 2021

There was an increase in the level of eruption at Yasur volcano, 200 km (124 miles) south of Port-Vila, on the island of Tanna, on 22 October. The VMGD confirmed "major unrest" as of 1 November as the volcano continued to emit plumes of volcanic gas and ash. Authorities established a danger zone of 1 km (0.62 miles) around the volcanic cone, and some 1,600 people in nearby villages struggled with ashfall that destroyed gardens and contaminated water sources. Reports from the Provincial Disaster Office indicated that people had no access to clean water due to the acid rain and ashfall, and VRCS was delivering water, sanitation, and hygiene (WASH), health, and shelter interventions to 755 households (3,586 people) through November 2021.[145]

COVID-19 and Tropical Cyclone Harold – March 2020-May 2023

The Government of Vanuatu dealt with the COVID-19 pandemic as part of a compound disaster in conjunction with TC Harold. The economic and social impacts of the two disasters cannot be teased apart easily nor, under Vanuatu's integrated DRR and CCA model of disaster management, could they be addressed separately by responding agencies. On 26 March 2020, the President signed a Declaration for a state of emergency over the whole of Vanuatu for a two-week period for the purpose of strengthening prevention and containment measures in response to the declaration of the global pandemic. The emergency was extended multiple times for the dual purposes of continuing COVID-19 prevention and containment measures and responding to TC Harold.

Due to pandemic restrictions, there were no tourists in the country, and most economic activity had been limited when TC Harold struck. Between 6 and 7 April 2020, the cyclone struck the northern and central islands with sustained winds up to 270 km per hour (168 miles per hour). The Category 5 storm brought torrential rains, flash flooding, and landslides. It was the strongest cyclone to ever make landfall on the island of Espiritu Santo. The first of the storm's impacts were felt in Sanma Province with some

impacts in northern Malekula and Ambrym in Malampa Province. It then moved on to Central and South Pentecost, in Penama Province. It largely remained north of Port-Vila but left major destruction in other parts of the country. Estimates indicated that 129,000 people (42% of the population) were affected either directly or by crop and livestock damage, which compromised food security and economic well-being. Across the worst affected provinces – Sanma, Malampa, and Penama – an estimated 21,000 (or 80% of) houses were damaged or destroyed. A total of 448 schools were affected with schools on the western sides of Espiritu Santo and Malo and on southeastern Pentecost demolished. Damage was also reported at 96 health facilities across six provinces, further disrupting care that had been destabilized by COVID-19 movement restrictions.

The Vanuatu TC Harold and COVID-19 Post Disaster Needs Assessment (PDNA) found that the monetary value of the disaster impacts, which included physical damage and economic losses, stood at VUV 68 billion (US$617 million), approximately 61% of GDP in 2020. The total cost of recovery and reconstruction activities was estimated at VUV 39.5 billion (US$358 million).

The National Emergency Operation Centre (NEOC) was activated prior to TC Harold's landfall; it worked jointly with the National Health Emergency Operation Centre (NHEOC) to strengthen COVID-19 containment measures. The Government then sourced personnel and expertise from within senior government ranks, in-country NGO partners, and volunteers to carry out the humanitarian response through the government-led cluster system. In Sanma, Penama, and Malampa, Provincial Emergency Operation Centres (PEOC) were activated with a controller and senior government officers planning the coordination of response within each.[146] The CDCCCs and the Malvatumauri (National Council of Chiefs) supported increased participation in logistics, sourcing of local experts, and provision of more appropriate locally sourced food rations.[147]

A TC Harold Lessons Learned Workshop found that the global pandemic and border closures led to complex procedures that slowed the import of humanitarian relief supplies and delayed their distribution once they were in-country. Coordination between members of the same cluster, across clusters, and between NGOs and the Government was disrupted. COVID-19 reduced the level of attention TC Harold was given by the media, and this lack of attention led to challenges with global resource mobilization. Traditional humanitarian assistance networks and partners found it impossible to deploy surge teams or increase the level of technical assistance on the ground. Development partners had to roll out emergency response efforts by relying on local resources and development partners already housed in the country.[148]

As of 10 May 2023, Vanuatu had reported a total of 12,016 confirmed cases of COVID-19 to the World Health Organization (WHO); there had been 14 deaths.[149] Because of border closures, the country evaded most of the health impacts of COVID-19 even as it struggled with the economic impacts. As illustrated in Figure 5,[150] the country did not record cases linked to community spread of the disease until 4 March 2022, and over 10,000 cases (nearly the whole of the country's confirmed caseload as of the writing of this handbook) had been recorded by 8 June 2022, three months later.[151] Vaccination awareness campaigns began in the country in April 2021 with meetings with religious and cultural leaders from each island community in hopes of ensuring that misinformation and hesitation did not disrupt the roll-out once doses arrived.[152] Vanuatu was among the countries that accessed internationally-developed vaccines via the COVAX Facility, a partnership between Coalition for Epidemic Preparedness Innovations (CEPI), Gavi – the Vaccine Alliance, the United Nations Children's Fund (UNICEF), and WHO. The Ministry of Health then planned and facilitated the roll-out, starting on 2 June 2021 with 24,000 doses of the Oxford-AstraZeneca shot;[153] the country had administered 355,430 vaccine doses by May 2023.[154]

Dengue Outbreak – April 2019

Between January and April 2019, Vanuatu



Figure 5: Vanuatu's Daily COVID-19 Incidence (March 2020 - May 2023)

reported 198 suspected dengue cases and 18 confirmed cases. The Ministry of Health reported that 66% of cases were among people aged 5-24 years, and 66% of persons infected were men. There were no severe cases or deaths. Sanma and Shefa were the areas most impacted with Port-Vila and Luganville each topping more than 100 suspected cases during the four months of the reporting period. The Ministry had undertaken community awareness and prevention measures, including outdoor mosquito spraying and enhanced surveillance measures such as contact tracing.[155]

Manaro Voui Volcanic Eruption – September 2017-September 2018

Increased activity at the Manaro Voui volcano on Ambae led to two compulsory evacuations of the island's entire population, first in September 2017 and again in July 2018. During these periods, the danger zone ranged 2-3 km (1.2-1.9 miles) from the center of the caldera. On 23 September 2017, VMGD increased the activity alert for Monaro to Level 4, a moderate eruption state, which indicates that flying rocks and volcanic gas can affect the zone within a 6.5-km (4-mile) radius around the volcano's crater. Villages outside that zone could expect unusual ashfall and acid rain, both of which can damage crops. As of 25 September, provincial authorities had evacuated 6,800 people from high-risk areas to evacuation centers, and thousands more evacuated later. By early October, the danger zone had been reduced and, on 20 October, the government decided to repatriate 11,000 evacuees.[156]

The second escalation to evacuation began on 18 March 2018 when the government raised the alert level. In mid-April, the volcano resumed emissions of ash and smoke. After approximately 750 people lost their homes due to volcanic ash and landslides, the Council of Ministers declared a state of emergency on Ambae and ordered the entire population to evacuate the island on 23 April. Approximately 3,500 people evacuated as the state of emergency was extended through 13 July. Residents in the most ash-affected communities left their homes and evacuated to designated safe zones. On 16 July, much of the east and north of Ambae experienced heavy ashfall after the eruption intensified, and a second state of emergency was declared to run

through 26 September 2018.[157] In a November 2019 survey by NDMO and the International Organization for Migration (IOM), some 5,400 people who had evacuated during the 2017-2018 eruptions had returned while more than 2,200 had remained displaced and another 4,000 could not be located by the survey.[158]

Tropic Cyclone Donna – May 2017

On 3 May, a tropical disturbance formed north of Vanuatu. The disturbance developed into TC Donna and would eventually intensify into a Category 3 system 175 km (108 miles) west of Torres and 300 km (186 miles) west-northwest of Gaua (Torba). The Government raised alert levels across northern provinces by issuing warnings over radio and via mass text messages. A 6 May rapid assessment of Torba, the most affected area, included Community Disaster Committees on Loh, Hiu, Tegua, and Toga islands and found that a significant number of houses were either destroyed or damaged. Almost all residents of Loh had moved to an evacuation center. The NDMO gave the "all clear" on 9 May as national clusters continued remote assessments, prepared response plans, and gathered information on available resources. The NEOC worked with partners to source needed supplies, including personal hygiene kits, tarpaulins, shelter kits, teacher tents, water kits, jerry cans, and planting materials, all of which were transported to Hiu, Metoma, Tegua, Loh, and Toga by the Vanuatu Patrol Boat RVS Tukoro, supported by the Australian Government. A Provincial Disaster Office vessel from Sola delivered relief items to Torres. On 14 May, Hiu Island reported contaminated water and increased cases on diarrhea. In response, the NDMO sourced 200 cartons of water for transport to Hiu by the French Navy's La Gloriuese, which departed Port-Vila and delivered the water to Hiu on 16 May.[159]

Dengue Outbreak – November 2016-May 2017

In Vanuatu, from 11 November 2016 through 5 January 2017, there were 4,011 suspected cases of dengue. In the final week of February 2017, over 1,700 cases were reported amidst an escalating outbreak. The majority of suspected cases were in Port-Vila with cases also reported in Luganville, Lenakel, and Norsup. As of 4 May, the outbreak had slowed, and there had been 147 hospitalizations during the course of the outbreak.[160]

Tropical Cyclone Zena – April 2016

On the night of 5 April, TC Zena brought heavy rains and high winds to Torba, Sanma, Penama, and Malampa, and residents reported flooding, damaged crops, and destroyed houses. In Luganville, the winds and rain also caused power cuts. Local leaders in Sanma said they had received no national warning on the cyclone even though it was strong enough to uproot trees. In fact, VMGD had posted an information bulletin on social media in the afternoon before the storm arrived; it read, "the System does not pose any threat to any island of Vanuatu at this time." A later warning was issued, but there was little coverage, including via national radio. After the storm had passed, swollen rivers in Espiritu Santo cut off some communities, while reports of damaged houses and fallen trees came in from North Pentecost. Minor injuries were reported but no other casualties.[161]

Drought – 2015-2016

In late August 2015, VMGD's Climate Division confirmed an El Niño event expected to last through the first quarter of 2016. The main risk Vanuatu faced from the El Niño event was low wet season rainfall. The Division called on the country to prepare for low rainfall to continue after precipitation had been below normal across most of Vanuatu from June 2015 onward. People were advised to collect and save rainwater in water tanks and drums and to continue to plant drought-resilient crops.[162] As the drought took hold, surveys found that most water tanks were empty or had only small amounts of heavily contaminated water at their bottoms. A reported 20% of households had members who walked for more than 30 minutes for washing and showering and to collect water for cooking and

drinking. Households with money paid about US$12 per trip to hire a truck to fetch water for drinking and cooking. Primary schools were operational for half-day classes because students walked in the afternoon to bathe in the sea due to water shortages. Coming on the heels of TC Pam, which destroyed vegetation, the impacts of the drought were magnified by a lack of foliage to protect soils and crops, and overall food security was reduced. In fact, a survey after the drought found that all yams and taro died. Food shortages were particularly severe in the southern part of Vanuatu, especially Tanna, where lack of food contributed to at least one death.[163]

Tropical Cyclone Pam – March 2015

TC Pam struck 22 of Vanuatu's islands on 13 March as a Category 5 storm with wind speeds of 250 km per hour (155 miles per hour) and gusts of over 320 km per hour (199 miles per hour). The storm's eye passed close to Efate, where Port-Vila is located. A total of 166,600 people were estimated to have been affected. Shefa and Tafea were the hardest hit provinces. In Tanna, 50% of shelters were destroyed, and in Erromango, up to 90% of shelters were wiped out.[164] Photo 2 shows buildings destroyed in Ipota village, Erromango, after TC Pam.[165]

TC Pam destroyed over 90% of food crops and left 75,000 people homeless. Eleven fatalities were confirmed, all in Tafea and Shefa. Approximately 17,000 buildings were damaged or destroyed; they included houses, schools, clinics, and other medical facilities. The total economic value of the effects caused by TC Pam was estimated at approximately VUV 48.6 billion (US$449.4 million) or more than 64.1% of GDP. The cyclone also seriously harmed the livelihoods of over 40,000 households, severely limiting their capacities to generate income. Among all agricultural households in disaster-affected provinces, 50% lost all or part of their crops. Women feature prominently in the labor of subsistence farming, and the level of destruction meant that the ability of women to generate income to provide food, nutrition, and other basic needs for their families was significantly undermined.



Photo 2: Ipota Village after Cyclone Pam (2015)

On 15 March, the Government declared a state of emergency for Shefa. On the same day, the President appealed for international support to respond. The Government led response efforts with the support of the PHT and the Vanuatu Humanitarian Team. Humanitarian partners, including the UN, the European Union, international and national NGOs, international governments, donors, civil society, and other partners, delivered support to the Government-led response. An Initial Rapid Needs Assessment indicated an urgent need for food, water, medical supplies, hygiene kits, kitchen kits, tents, and bedding.[166] By July, the Vanuatu Food Security and Agriculture Cluster had overseen mass handouts of food aid that reached 211,000 people on 80 islands.[167]

Tropical Cyclone Lusi – March 2014

On 11 March, TC Lusi was 30 km (18 miles) west-northwest of Ambrym and 70 km (43 miles) southeast of Malekula. The cyclone strengthened to a Category 2 system with sustained winds of 95 km per hour (59 miles per hour) and momentary gusts of 140 km per hour (87 miles per hour). Cyclone warnings

were in place for Penama, Malampa, and Shefa. By 12 March, the cyclone had intensified to a Category 3 system but was moving away from Vanuatu. Overall, 10 deaths were confirmed, and 20,000 people had been affected. There were many reports of damage to houses. Many coastal and low-lying communities were flooded, and there were concerns groundwater sources had been contaminated due to damaged water infrastructure.[168]

The NDMO activated the NEOC on 10 March, and PEOCs activated in Sanma, Penama, and Malampa. On 14 March, an aerial assessment by NDMO, Vanuatu Police, VRCS, and other partners led to the 23 March – 5 April deployment of additional assessment teams who reported back on needs. Their findings included significant need in South Santo's Puarante village where needs included non-food items, shelter, water, and food as well as livelihoods support, repairs to water and sanitation systems, repair to schools, and protection for displaced communities. Damage to agriculture was extensive due to the high winds, particularly in Western Ambrym, Pentecost, Maewo, Gaua, Vanua Lava, and East and Southeast Ambae. FRANZ partners provided assistance for aerial assessments, emergency logistics, and an engineering assessment to assess further risks to the Puarante village zone in Espiritu Santo. From 16 April, the country began operating on the Humanitarian Action Plans for each cluster.[169]

Country Risk

Risk calculation takes into account exposure to hazards, vulnerability, and coping capacity. Addressing all of these elements is important in reducing and mitigating disaster risk. Various indices emphasize structural or institutional risk while others emphasize hazards or losses (human and economic). Regardless of emphasis, disaster risk calculations use some form of the equation:

$$\textit{Disaster Risk} = (\textit{Hazard} \times \textit{Vulnerability}) / \textit{Capacity}$$[170]

Taken from the UN Office for Disaster Risk Reduction (UNDRR) glossary, definitions will help clarify this formula:

- Capacity - The combination of strengths, attributes, and resources available within an organization, community, or society to manage and reduce disaster risks and strengthen resilience.
- Disaster risk - The potential loss of life, injury, or destroyed or damaged assets, which could occur to a system, society, or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability, and capacity.
- Hazard - A process, phenomenon, or human activity that may cause loss of life, injury, or other health impacts, property damage, social and economic disruption, or environmental degradation.
- Vulnerability - The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of an individual, a community, assets, or systems to the impacts of hazards.[171]

In general, the goal of indexing risk is to inform decision makers and DRR and CCA practitioners of the level of risk to and underlying capacity of the target community. The various risk calculation models support proactive crisis management frameworks and are helpful for prioritizing allocation of resources and for coordinating actions focused on anticipating, mitigating, and preparing for humanitarian emergencies.

INFORM Risk Profile

INFORM is a collaboration of the Inter-Agency Standing Committee (IASC) Reference Group on Risk, Early Warning, and Preparedness with the European Commission. It is a multi-stakeholder forum for developing shared, quantitative analysis relevant to humanitarian crises and disasters. The Joint Research Center of the European Commission is the scientific lead. There are three operational dashboards – i.e.,

INFORM Risk, INFORM Severity, and INFORM Climate Change.

- INFORM Risk is an open-source risk assessment for humanitarian crises and disasters. It can support decisions about prevention, preparedness, and response.
- INFORM Severity is a way to measure and compare the severity of humanitarian crises and disasters globally. It can help develop a shared understanding of crisis severity and ensure all those affected get the help they need.
- INFORM Climate Change is an upgraded INFORM Risk Index that includes climate and socio-economic projections with results intended to inform policy choices across climate mitigation, climate adaptation, disaster risk reduction, sustainable development, and humanitarian assistance.[172]

The **INFORM Risk** Index measures the risk of humanitarian crises and disasters in 191 countries. The INFORM model is based on the standard dimensions of risk: Hazards and Exposure, Vulnerability, and Lack of Coping Capacity. The first dimension measures the natural and human hazards that pose the risk. The second and third dimensions cover population factors that can mitigate against or exacerbate the risk. The Vulnerability dimension considers the strength of individuals and households relative to a crisis while the Lack of Coping Capacity dimension considers factors of institutional strength.[173]

The INFORM model is split into different levels to provide a quick overview of the underlying factors leading to humanitarian risk. INFORM gives each country a risk score of 1-10 (1 being the lowest and 10 the highest) for each of the dimensions, categories, and components of risk, as well as an overall risk score.[174] The higher the score the more at risk a country is. In the 2023 INFORM Risk Index, Vanuatu had an overall risk score of 4.2/10, which INFORM categorizes as the "Medium" risk class and lands Vanuatu as the 68th most at-risk country in the Index. The Hazards and Exposure dimension score takes into account a combination of both natural and human hazards, and Vanuatu rated 3.3/10 or 72nd of 191 countries. The Vulnerability dimension score was 4.0/10 or 79th of 191, and the Lack of Coping Capacity dimension score was 5.6/10 or 52nd of 191. Physical exposure to tsunami at 8.5/10 and volcanic eruption at 7.7/10, respectively, were the greatest threats in the Hazards and Exposure dimension, with Aid Dependency measuring at a 7.9/10 for the Vulnerability dimension and Access to Health Care rated 6.0/10 in the Lack of Coping Capacity dimension.[175] Figure 6 shows the INFORM Risk dashboard for Vanuatu for 2023.[176]

World Risk Report

The World Risk Report by Bündnis Entwicklung Hilft strives to raise awareness of disaster risk among the global public and political decision-makers and to provide practitioners with data to promote faster orientation to complex situations – i.e., societies experiencing disasters. This effort stems from the perception that disaster risks are not solely determined by the occurrence, intensity, or duration of extreme events. Social factors, political conditions, and economic structures play an important role in turning these events into crises. Thus, this index is based on the assumption that every society can take precautions – e.g., effective disaster preparedness and management – to reduce the impact of extreme events and lower the risk of disasters.

The World Risk Report calculates the level of risk a country faces based on a formula of exposure to hazards and vulnerability. It provides an assessment of the risk that countries will confront disasters but does not indicate probabilities for the emergence of disasters, nor does it forecast the timing of future disasters. This index uses 100 indicators that include risk, hazard exposure, vulnerability, and coping capacity (as defined above), and adds two others:

- Susceptibility - The disposition to suffer damage in the event of extreme natural events. Susceptibility relates to structural



Figure 6: INFORM Risk Index, Vanuatu (2023)

characteristics and frameworks of societies.

- Adaptation - A long-term process that also includes structural changes and comprises measures and strategies that address and try to deal with future negative impacts of natural hazards and climate change. Analogous to "lack of coping capacity," the lack of adaptive capacities is included in the Index.

In the 2022 World Risk Report, Vanuatu ranked 49 of 192 countries wherein the lower the rank, the greater risk the country faces. Vanuatu's total Index score was 10.64 (on a scale of 0-100 wherein the lower the number the less risk a country faces), putting it in the "High" risk class.

The component scores were:

- Exposure: 4.25 (High)
- Vulnerability: 26.72 (High)
- Susceptibility: 22.57 (High)
- Lack of Coping Capacity: 14.23 (High)
- Lack of Adaptive Capacity: 59.40 (Very High)

For comparison, Vanuatu's score puts it above the regional (Oceania) median of 4.15 but below the sub-regional (Melanesia) median of 12.63. Melanesia is the second most at-risk region in the index. In terms of Exposure, Vanuatu is above the median for Oceania (1.23) and below that for Melanesia (7.71) in a reflection of Vanuatu's exposure to cyclones, drought, earthquake, flooding, sea level rise, and tsunami. In the

Vulnerability dimension, the country is above the median for Oceania (13.20) and Melanesia (20.88) in a reflection of its rankings across the Vulnerability sub-dimensions:

- In Susceptibility, Vanuatu is above the median for Oceania (9.85) and Melanesia (18.44) due, in part, to high poverty rates and frequent disasters
- In the Lack of Coping Capacity dimension, Vanuatu is also above the medians for Oceania (10.90) and Melanesia (11.82) due to successive disasters that erode resilience
- Finally, on the Lack of Adaptive Capacity score, Vanuatu sits above the medians for Oceania (33.39) and Melanesia (43.74) in a reflection of the costs of rebuilding schools, health care facilities, and other infrastructure after regular disaster events.[177]

Global Climate Risk

The Global Climate Risk Index (CRI) developed by Germanwatch analyzes impacts of extreme weather in terms of both fatalities and economic loss. The index is based on the Munich Re (a re-insurance company) NatCatSERVICE databases, among the most complete databases in the world in these categories of loss. The CRI examines disaster impacts in both absolute terms (e.g., number of fatalities) and in comparative, relative terms that allow analysts to set events and their impacts alongside each other to assess how a given country or community used its strengths or struggled due to its weaknesses in the face of an extreme event. The countries ranking highest on the CRI experience either frequent smaller-scale weather events or rare but extraordinary events. In sum, the CRI allows DRR and disaster management practitioners to consider how exposures and vulnerabilities will be impacted by climate change. The two different CRI measures – most impacted countries in a single year and most impacted countries over 20 years – offer analysts an opportunity to tease apart the effects of rare but major events versus frequent, cumulative events.

The major events examined by the CRI are tropical cyclones (typhoons). The key takeaway is that countries with high exposure to such storms – either frequent small ones or rare massive ones – will be preparing for less predictable, potentially less frequent, but probably more powerful typhoons under climate change scenarios. The CRI cites various DRR and CCA efforts in countries exposed to hydrometeorological hazards, and it points to initiatives like the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI), a regional risk pool for disaster risk management (DRM) and financing solutions for Pacific Island countries. PCRAFI provides insurance against typhoons, earthquakes, and tsunamis in parallel to Pacific Resilience Program initiatives to bolster early warning and recovery capacity. Germanwatch also points to the CRI findings as a clear reason to improve global climate change financing programs to ensure that the most affected countries – many of which are also least developed states – do not experience worsening development outcomes because of disaster losses. The CRI cites outcomes from the COVID-19 pandemic as examples of how simultaneous or consecutive disasters can erode resiliency in the absence of international solidarity funding.

In the 2021 CRI, based on single-year (2019) data, Vanuatu ranks 75th or in about the middle ranks of countries in this index. It experienced minimal losses or damage from storms in that year. To the contrary, in the 20-year data table, Vanuatu ranks 37th of 180 countries; it experienced significant human and material losses per 100,000 people and per unit of GDP although it experienced fewer losses in absolute terms over the period because of its smaller relative size. These losses earned it ranks of 130 and 133 in absolute deaths and losses (in terms of GDP) per year, respectively. The country experiences human and economic loss from extreme weather on an almost annual basis and, therefore, is unable to rebuild resources and suffers from lessened resilience.[178]

ORGANIZATIONAL STRUCTURE FOR DISASTER MANAGEMENT

Vanuatu has undertaken disaster management reforms to deliver stronger risk mitigation and prevention actions, and it has shifted its focus from disaster response and emergency management to a greater emphasis on risk reduction, climate adaptation, and longer-term recovery.[179]

Lead Government Agencies in Disaster Response

The National Disaster Committee (NDC) is chaired by the Director General of the Ministry of Climate Change and Adaptation, Meteorology and Geo-Hazards, Energy, Environment and National Disaster Management (MOCCA) and has responsibility for the development of strategies and polices for disaster preparedness and response. The NDC is overseen by the Council of Ministers, which is chaired by the Prime Minister.

The National Disaster Management Office (NDMO) is the government agency responsible for coordination of preparation for and responses to emergencies and disasters across Vanuatu. The NDMO was designated a focal point agency in Vanuatu's Disaster Risk Management Law, Act 23 of 2019. It falls under MOCCA. The NDMO national office is located in Port-Vila, while provincial offices are located in Luganville, Sola, Lolowai, Lakatoro, and Lenakel. The NDMO is the operational arm that leads the response at the national level through the activation of the National Emergency Operations Centre (NEOC). The NDMO is responsible for ensuring the drafting and implementation of response plans.[180]

Vanuatu's national coordination structure is depicted in Figure 7.[181]

The NDMO vision is to ensure resilient communities by integrating the coordination of DRR and CCA into sectoral plans, policies, and budgeting. NDMO works to achieve its vision by being "The National emergency and disaster coordination agency to improve its coordination mechanism and building strong capability through establishment of solid partnership with other line emergency responders in country to continue to save life and property of all citizens."

NDMO wants to achieve this vision through effective coordination of responses to emergencies and disasters; strengthening the disaster and climate change network at national, provincial, and community levels; mainstreaming DRR and CCA programs and activities into other sector plans, policies, and budgets; informing communities and partners at all layers on hazards and risks for safer development planning programs; improving effective and reliable communication networks and linkages amongst all partners at the national, provincial, and community levels; and facilitating capacity building on DRR and CCA at all levels.

NDMO focuses its work on disaster preparedness and response. The office works closely with local and international NGOs to help communities to be disaster resilient in the development and strengthening of DRR and disaster management plans, including mitigation, response, relief, and recovery. NDMO also works with the private sector on telecommunications, transportation, and houses during emergencies. NDMO also collaborates with municipal councils to address issues related to particular areas.[182]

The NDMO is responsible for establishing and maintaining the NEOC for effective use when required. The NDMO Operations Manager is the NEOC Controller or, depending on the severity of the disaster, the NDMO Director can appoint the NEOC Controller. The NEOC brings together technical personnel from NDMO and other line ministries and the humanitarian sector, guided by the NEOC Controller. Disasters that impact several provinces will require the

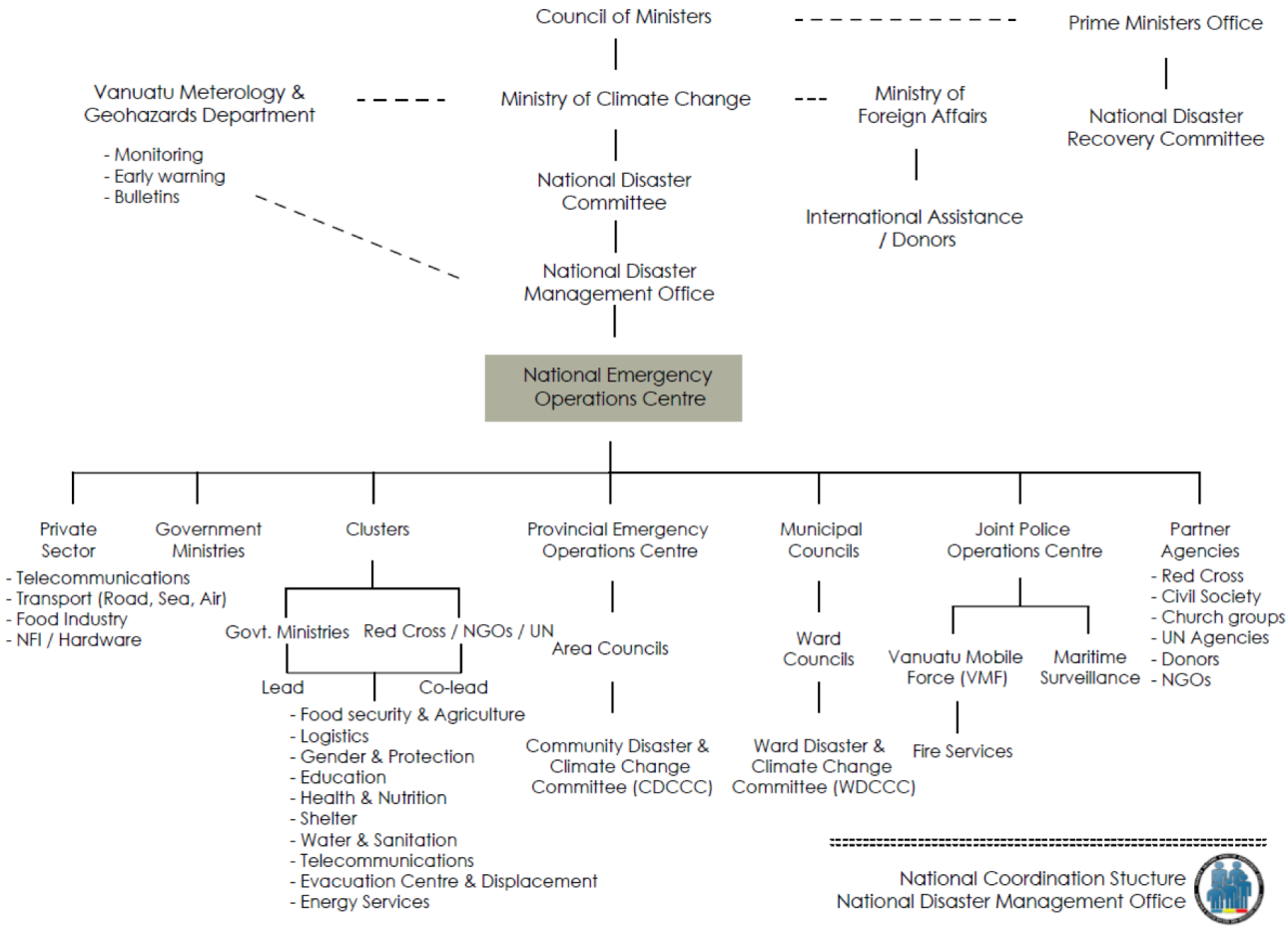


Figure 7: Vanuatu's National Coordination Structure for Disaster Management

NEOC to manage and coordinate response operations. Multi-agency coordination groups, like clusters or working groups, are required to assist and support the NEOC to manage the situation. The NDMO is responsible for ensuring that appropriate NEOC standard operating procedures (SOP) are in place and are reviewed after each disaster and annually before the cyclone season.

Disaster Relief and Emergency Response

After Tropical Cyclone Pam struck in 2015, the Vanuatu Government decided to implement a standing national cluster system to better enable humanitarian agencies and government to develop and implement disaster preparedness activities.[183] The 2019 National Disaster Risk Management Act further outlined national structures for responding to disasters. In May 2020, the NDC activated two new clusters to support the work of the NDMO in disaster responses; they are the Displacement and Evacuation Centre Management Cluster and the National Energy Services Cluster.[184]

A government ministry serves as cluster lead, with the role of cluster co-lead often filled by a humanitarian NGO or UN agency. However, cluster members can also include community groups and the private sector. The Inter-Cluster is the coordinating mechanism for the ten technical clusters, all of which are depicted in Figure 8.[185]

The cluster system was adopted in Vanuatu to support the national government in both preparedness and response. Each cluster is led by a national government ministry, usually at the Director General level. In each of the six provinces, there are provincial disaster

National Coordination Structure

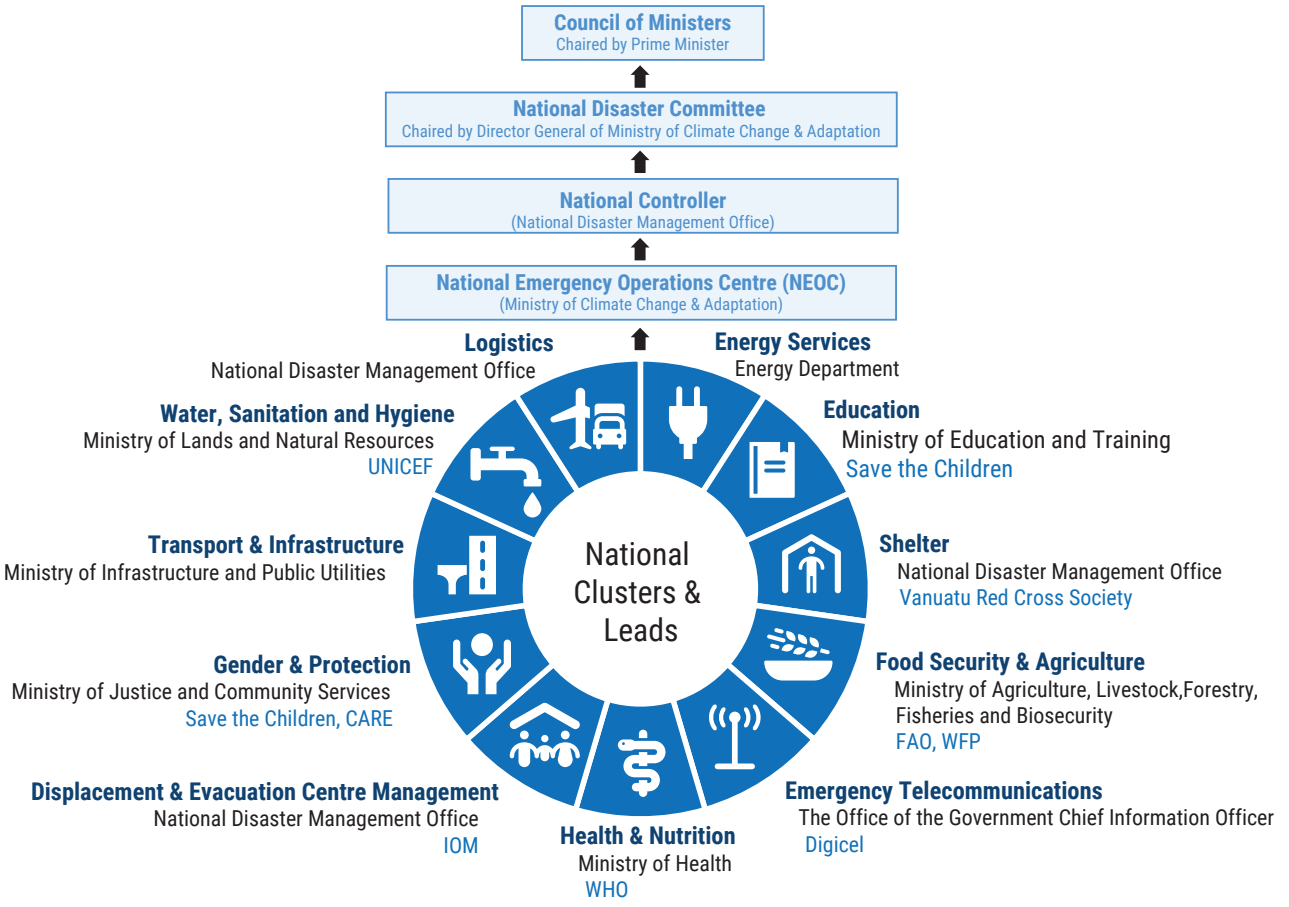


Figure 8: Vanuatu's National Coordination Structure with Clusters and Leads for Disaster Response

management structures that are supported by the national structure. At the provincial level, a cluster is referred to as a "working group." Inter-cluster meetings include all the cluster leads and co-leads and allow each to provide work updates on who is doing what and where. These meetings facilitate cross-sector coordination, strategic and operational planning, coordination implementation, progress monitoring, and familiarity with the standards and guidelines of each cluster.[186] Inter-cluster meetings are chaired by the Director of the NDMO and supported by the Vanuatu Humanitarian Team. Each National Cluster must have a representative stationed at the NEOC for the duration of disaster response operations.

Armed Forces Role in Disaster Relief

Vanuatu does not have a standing military.

The Vanuatu Police Force (VPF) has a Joint Police Operations Centre (JPOC) and a maritime section. There is also a paramilitary wing of the police, the Vanuatu Mobile Force (VMF). The VMF have fire and rescue services and can provide emergency services, engineering, and security support during a disaster response.[187]

After TC Pam struck Vanuatu in 2015, the VPF provided general assistance to national authorities throughout Port-Vila. They also conducted control and cordon operations to prevent looting. Police were recalled from leave to ensure adequate staffing to support the national effort on disaster relief operations if needed.[188]

Vanuatu police recruit training is funded by the Australian Government through the Vanuatu Australia Police Project.[189]

Disaster Management Partners

Vanuatu Humanitarian Team (VHT) – The Vanuatu Humanitarian Team is a network of non-government humanitarian actors, the International Red Cross and Red Crescent Movement, and UN agencies. It is committed to effective humanitarian coordination, disaster preparedness, and humanitarian response. The VHT is convened by Oxfam. It includes the Vanuatu Red Cross Society (VRCS), French Red Cross, Vanuatu Association of NGOs (VANGO), UNICEF, Oxfam, CARE International, Save the Children Australia, the Adventist Development and Relief Agency (ADRA), the WHO, the U.S. Peace Corps, World Vision, Act for Peace, IOM, and the UN Office for the Coordination of Humanitarian Affairs (OCHA).

The VHT was established in 2011 to address disaster management challenges in Vanuatu at that time. These challenges included:

- Emergency responses were slow and less coordinated
- Women were not included in disaster assessment and aid distribution processes
- The agencies operating in Vanuatu had different mandates but no common forum to meet or jointly plan
- The global cluster concept was designed based on a large UN presence in country
- There was no common approach to DRR and emergency response standards, SOPs, or communication link to the NDMO at national and provincial levels.[190]

The VHT is recognized as a key coordination mechanism in Vanuatu and is also included in Government plans.[191]

Pacific Humanitarian Team (PHT) - The UN and other international and regional agencies established a regional Pacific Humanitarian Team that can be deployed in support of national responses to major emergencies. It can be requested through the UN OCHA office in Suva, Fiji. OCHA acts as the Secretariat of the PHT. PHT holds an annual meeting, the Pacific Humanitarian Partnership, that allows stakeholders to build and strengthen partnerships and collaboration. Key support activities that PHT can undertake include:

- Contributing to the rapid assessment and sharing of information to the government through NDC and among active donors in Vanuatu and the region
- Facilitating coordination with and mobilization of appropriate resources from donors who might not be operational in the region but are interested in assisting
- Providing additional expertise surge capacity and to increase the accountability and credibility of assessments, reports, and appeals presented to the donor community
- Strengthening national capacity by providing sectoral support and assessment expertise that might be required
- Assisting in the on-site management of the relief operation and distribution during the emergency relief response operation phase
- Providing advice on planning for medium term relief, transition to rehabilitation, and future mitigation strategies.[192]

United Nations Agencies

UN agencies that have worked as partners of the Vanuatu NDMO or other government agencies include IOM, WHO, OCHA,[193] UNICEF, the UN Development Programme (UNDP), UN Women, and WFP.

Non-Governmental Organizations

NGOs that have worked as disaster management partners with the government of Vanuatu include Save the Children, CARE, ADRA, World Vision, ActionAid, Live & Learn Environmental Education, Caritas, Act for Peace, and Oxfam.[194]

World Bank

The World Bank has provided funding for risk management, including US$10 million to strengthen Vanuatu's resilience to disasters, support climate adaption, and help manage the country's debt.[195]

The International Red Cross and Red Crescent Movement

International Committee of the Red Cross

The International Committee of the Red Cross (ICRC) is a private, independent humanitarian organization, headquartered in Geneva, Switzerland. The ICRC bases its activities on the provisions of International Humanitarian Law, and it is neutral in politics, religion, and ideology. The ICRC assists with the protection of civilian victims of armed conflict and internal strife and their direct results. Within these roles, it may take any humanitarian initiative as a neutral and independent intermediary.[196]

International Federation of Red Cross and Red Crescent Societies

The International Federation of Red Cross and Red Crescent Societies (IFRC) is a humanitarian organization that provides assistance and promotes humanitarian activities carried out by the National Societies, with a view to preventing and alleviating human suffering. IFRC was founded in 1919 and includes 191 National Societies. The IFRC carries out relief operations to assist victims of disasters and combines this with development work to strengthen the capacities of its member National Societies.[197] In its 2023 multi-country plan for 10 Pacific Islands countries, including Vanuatu, IFRC's Pacific Country Cluster Delegation plans to support the National Societies across five programs: climate and environment, disasters and crises, health and well-being, migration and displacement, and values, power, and inclusion. VRCS is part of IFRC's Global Climate Resilience Programme to foster locally-led, climate-smart DRR and adaptation efforts.[198]

Vanuatu Red Cross Society

The VRCS was founded on 11 October 1982 pursuant to Vanuatu Red Cross Society Act Number 23. It is an independent humanitarian organization, auxiliary to the Vanuatu government. It adopts a community-based approach in working with volunteers in disaster preparedness, disaster assessment, emergency response, humanitarian law and fundamental principles, first aid, and health. Areas of work broadly involve disaster management, CCA, health, WASH, and humanitarian law. The VRCS has a total of six provincial branches with its headquarters located in Port-Vila, Shefa Province. Membership is open to everyone, with three forms of membership comprising active volunteers, fee-paying subscribers, and honorary members.[199] Vanuatu Red Cross has approximately 650 volunteers.[200]

Other National Red Cross Societies that have worked as disaster management partners with Vanuatu include the Australian Red Cross and Croix-Rouge Française (French Red Cross).

U.S. Government Agencies in Vanuatu

The United States Agency for International Development (USAID) partners with 12 Pacific Island nations to bolster their ability to lead their countries to stable, prosperous futures. USAID focuses on strengthening disaster preparedness and responding to climate change, health, and democratic governance.[201]

USAID Contact Information

Ryan Washburn, Mission Director
Annex 2 Building, U.S. Embassy, 1201
Roxas Boulevard, Ermita
Manila 1000
Philippines
Phone: +63 (2) 5301-6000
Fax: +63 (2) 5301-6213
Email: *infoph@usaid.gov*

Sarah Mentrup, Desk Officer, Pacific Islands
U.S. Agency for International Development
1300 Pennsylvania Avenue NW
Washington, DC 20523
U.S.A.
Phone: +1 (571) 217-0270
Email: *smentrup@usaid.gov*

U.S. Embassy to Papua New Guinea, Solomon Islands, and Vanuatu[202]

Joe Zadrozny, Chargé d'Affaires, a.i., to Papua New Guinea and Vanuatu
Harbour City Road
Port Moresby, NCD
Papua New Guinea
Phone: +675-308-9100

Laws, Policies, and Plans on Disaster Management

Disaster Risk Management Act – Vanuatu's Disaster Risk Management Act, Act No. 23 of 2019, outlines the lead government agencies and national structures for disaster response. The act is built around preparing for and responding to disasters on the national, provincial, and local levels.[203] The 2019 act was the result of reviewing the 2000 National Disaster Act (also known as National Disaster Risk Management Act) after TC Pam struck in 2015. The new act defined what a disaster is and established the NDMO, NDC, Provincial Disaster and Climate Change Committees, and Municipal Disaster and Climate Change Committees.[204]

National Land Subdivision Policy – The National Land Subdivision Policy takes a more comprehensive approach to risk reduction and climate adaptation for land development across Vanuatu. This approach is critical for key urban areas, including Port-Vila and Luganville, where growth has led to larger concentrations of people living in hazardous areas, particularly alongside rivers, steep slopes, and in coastal areas, which can be at high risk during times of disaster.

Debt Management Strategy – Vanuatu's new Debt Management Strategy will strengthen its debt management, which relates to Vanuatu's ability to respond to future disasters, particularly given the very high economic losses borne in recent disasters. TC Pam struck Vanuatu in 2015 as a category five cyclone and one of the largest cyclones ever recorded in the South Pacific. The storm caused damage and losses of around 64% of GDP and led to a substantial increase in public debt. Debt management is critical to ensure Vanuatu has the capacity to respond to future natural disasters and economic shocks.[205]

National Sustainable Development Plan (NSDP) 2016-2030 ("Vanuatu 2030: The People's Plan") – Enhanced resilience to disasters and adaptation to climate change are featured throughout Vanuatu's NSDP.[206] Vanuatu's goals for resilient development are given under three pillars of sustainability — society, environment, and economy. "This plan represents our overarching policy framework for building a stable, sustainable, and prosperous Vanuatu by 2030," stated Antony Garae, Director of Vanuatu's Department of Energy. "Our aspirations include maintaining a vibrant cultural identity and a pristine natural environment while enhancing our resilience to climate change and natural disasters."[207]

Vanuatu Climate Change and Disaster Risk Reduction Policy, 2016 -2030 – The VCCDRRP proclaims a vision that "Vanuatu is a resilient community, environment and economy." The policy provides a "framework through which risks can be identified, assessed, reduced and managed." Vanuatu's strategic goal for climate change and DRR is "resilient development," which includes activities that enable and strengthen capacities to absorb and quickly bounce back from climate or disaster shocks and stresses. The policy cites six principles – i.e., accountability, sustainability, equity, community focus, collaboration, and innovation. Strategic priorities include governance, finance, and knowledge and information systems; and CCA and DRR, low carbon development, and response and recovery themes.[208] The VCCDRRP was developed in the context of international and regional policies, such as the Sendai Framework for Disaster Risk Reduction 2015–2030, the

Paris Agreement of 2015, the UN Sustainable Development Goals (SDG) 2015–2030, and the Framework for Resilient Development in the Pacific (FRDP) 2017–2030.[209] Implementation involves the mainstreaming of CCA and DRR into all sector policies, plans, and strategies.

National Policy on Climate Change and Disaster-Induced Displacement (2018) – This policy states a vision of "an inclusive and equitable nation in which no one is left behind, and all Ni-Vanuatu people, including all populations affected by displacement (populations at-risk of displacement, displaced populations, internal migrants and host communities) are resilient and have equal opportunities to share in the country's growing security, wealth and prosperity." The policy looks at drivers of displacement, displacement context in Vanuatu, policy, and governance contexts. Strategic areas and objectives include:

- Strategic Area 1: Institutions and governance
  - Objective: Strengthen institutional and governance arrangements to address displacement
- Strategic Area 2: Evidence, information, and monitoring
  - Objective: Promote evidence-based approaches to displacement through multi-hazards mapping and improved data collection and monitoring processes on displacement and internal migration
- Strategic Area 3: Safeguard and protections
  - Objective: Develop safeguards, guidelines, and SOPs to ensure common standards for protection of all people affected by displacement
- Strategic Area 4: Capacity-building, training, and resources
  - Objective: Invest in capacity-building and training for all stakeholders to promote understanding of the policy and increase sensitivity to displacement issues
- Strategic Area 5: Safety and security
  - Objective: Ensure the safety and security of all people affected by displacement, including internal migrants and host communities
- Strategic Area 6: Land, housing, planning, and environment
  - Objective: Incorporate displacement and migration considerations into land management, housing, and environmental planning
- Strategic Area 7: Health, nutrition, and psycho-social well-being
  - Objective: Ensure all people affected by displacement have equal access to health and medical care, nutrition advice and, where possible, psycho-social or spiritual assistance
- Strategic Area 8: Education
  - Objective: Ensure access to education for all people affected by displacement, including internal migrants and host communities
- Strategic Area 9: Infrastructure and connectivity
  - Objective: Ensure all people affected by displacement are included in infrastructure planning and have equal access to WASH services, energy supplies, transportation, telecommunications, and information and communications technology (ICT)
- Strategic Area 10: Agriculture, food security, and livelihoods
  - Objective: Mainstream displacement and migration considerations into national agricultural, fisheries, livestock, and employment policies and technical and vocational education and training (TVET) initiatives
- Strategic Area 11: Traditional knowledge, culture, and documentation
  - Objective: To protect the cultural identity and spiritual resources of communities
- Strategic Area 12: Access to justice and public participation
  - Objective: Strengthen access to justice and public participation mechanisms for people affected by displacement, especially in the context of evictions[210]

National Cyclone Support Plan 2020-2021 – As required by the Disaster Risk Management Act 2019, the National Cyclone Support Plan aims to "detail the preparedness, response and early recovery processes in the event of a cyclone impacting the Republic of Vanuatu." The plan delineates roles and responsibilities of government entities and mechanisms. It also reviews processes for warnings, alerts, evacuation centers, damage assessments, and humanitarian response. It is reviewed annually in October in preparation for the cyclone season.[211]

National Disaster Management Office (NDMO) Strategic Plan 2016-2020 – The NDMO Strategic Plan set out the following objectives:

1. Strengthen the NDMO governance framework through reporting/monitoring and evaluation, planning, budgeting, resourcing, legislation, policy and procedures, and advocacy for DRM and climate change mainstreaming
   i. Contribute to reporting on activities undertaken by NDMO
   ii. Undertake planning for a well-resourced, responsive NDMO
   iii. Budgeting
   iv. Resourcing
   v. Equipment
   vi. Review legislation to provide a legal framework for NDMO
   vii. Develop policy to provide a policy framework for NDMO
   viii. Review SOPs for NDMO operations
   ix. Advocacy for mainstreaming DRM and climate change issues and initiatives

2. Improve DRM coordination arrangements with all stakeholders at regional, national, provincial, and community levels
   i. Improve information management at regional level
   ii. Improve information management at national level
   iii. Improve information management at provincial level
   iv. Improve information management at community level
   v. Improve communications at regional level
   vi. Improve communications at national level
   vii. Improve communications at provincial level
   viii. Improve communications at community level
   ix. Improve coordination at a regional level
   x. Improve coordination at a national level
   xi. Improve coordination at provincial level
   xii. Improve coordination at community level

3. Strengthen DRM operations in preparedness, response, and recovery for a safer, secure, and resilient Vanuatu
   i. Improve DRM operational preparedness
   ii. Improve response systems
   iii. Improve information flows
   iv. Improve recovery processes and procedures

4. Facilitate harmonization and mainstreaming to promote coherence between DRM including climate change approaches, systems, programs, and stakeholders involved in development (preparedness, response, and recovery)
   i. Advocate that all CCA and DRR projects or initiatives gain approval from the NAB prior to implementation
   ii. Ensure that CCA and DRR projects and programs funded through various donors complement each other and consistently meet government set priorities
   iii. Provide reporting on CCA and DRR initiatives to provide regular reporting and engage with coordination fora at provincial and national levels in support of coordination
   iv. Utilize vulnerability assessment tools that integrate CCA and DRR considerations/ approaches
   v. Utilize Sendai Framework and UN Framework Convention on Climate Change (UNFCCC) to inform legislative and SOP reviews to ensure compliance and responsibilities

vi. Continue advocacy for mainstreaming of DRM/CCA into other sector policies, structures, budgets, and legislations
vii. Strengthen disaster statistics collection and management to support DRM and CCA integration approaches
viii. Strengthen communication linkages between community and DRM stakeholders
ix. Enhance multisector and integrated DRM/CCA research[212]

Provincial-level plans

There are several sub-national disaster plans. These include the Torba Provincial Disaster and Climate Response Plan of 2016, Tafea Provincial Disaster Response and Climate Change Management Plan of 2017, and the Sanma Provincial Disaster and Climate Change Response Plan.[213] Vanuatu also has a community-based disaster risk reduction (CBDRR) handbook, which provides templates for community assessment, response, and action plans.

Framework for Resilient Development in the Pacific (FRDP) – As part of the Pacific Islands Forum, Vanuatu signed onto this first-of-its-kind regional framework. The FRDP puts forth three goals for the Pacific: 1) Strengthened Integrated Adaptation and Risk Reduction to Enhance Resilience to Climate Change and Disasters; 2) Low Carbon Development; and 3) Strengthened Disaster Preparedness, Response, and Recovery.[214]

Disaster Management Communications

The NDMO established the Communications and Community Engagement (CCE) Sub-Cluster in 2019, with the NDMO serving as cluster lead and the VRCS as co-lead. The primary mandate is to strengthen communication and community engagement in disasters and promote an understanding of the importance of and commitment to timely and effective communication with disaster-affected communities.[215] The CCE Sub-Cluster, comprised of more than 15 civil society organizations and government bodies, works to strengthen two-way communication and collaboration between national decision makers and communities in preparation for, during, and after disasters. The intent is for disaster-affected people in Vanuatu to have the information and resources they need to better prepare, survive, influence decisions, and be involved in the response and recovery of their own communities. An important area of the CCE Sub-Cluster's work is creating a systematic feedback mechanism to ensure that the needs, opinions, and responses of disaster-affected community members, including vulnerable groups, are captured and inform the national decision-making process. This work involved developing guidelines with approval processes and timeframes for key communication channels, including surveys and community meetings, and creating a set of standardized questions for all disaster responders to use to collect comparable data to inform decision making.[216]

Under the Vanuatu-Australia Defence Cooperation Program, the VPF and the Australian Defence Force delivered the Vanuatu Government National Emergency Radio Network. The emergency network connects police posts across Vanuatu's six provinces, enabling inter-island communication with police headquarters and the NDMO during emergencies. The network connects communities, enhances disaster resilience, and supports an increased police presence. It extends emergency dispatch services, with coverage on Tanna and Malekula joining existing systems on Espiritu Santo and Efate. If communications channels are disrupted during natural disasters, the upgrades would allow the VPF to still respond to calls for help and communicate with their command and the NDMO. Vanuatu's Commissioner of Police Robson Iavro spoke of the importance of the upgraded radio network. "I recall difficulty accessing the digital networks during these disasters," he said. "If this critical

infrastructure was in place during that time, we would have been able to communicate critical issues during the time of emergency." VPF and Australian Army personnel delivered the infrastructure upgrades starting October 2020. The VPF was also trained on Very High Frequency and High Frequency (HF) systems, including portable HF radios that allow emergency response teams to establish communications via the emergency network, regardless of their location in Vanuatu.[217]

Early Warning Systems

Early warning systems play a critical role in disaster preparation. On average, Vanuatu is affected annually by 1-3 cyclones and up to two magnitude-7.0 earthquakes with tsunami-triggering potential, as well as between 100 and 300 earthquakes per month. The country is also home to six active volcanoes, which erupt at least once every two years.[218]

Vanuatu Meteorological Services issues information bulletins, advisories, and warnings for tropical cyclones anticipated within 72 hours, 36 hours, and 24 hours, respectively. The NDMO introduced a color-coded alert system for tropical cyclones to facilitate identifying the phase and required action among government agencies. Blue alert is the first alert stage when a cyclone may affect part of Vanuatu within 48 hours, yellow alert is the second alert stage when a cyclone is expected within 36 hours, and red alert is the third and last alert stage when the cyclone is expected within 24 hours.[219]

Nine Port-Vila tsunami sirens were launched in August 2017 by the Minister of Climate Change. The tsunami warning sirens were the culmination of the 3-year Mainstreaming Disaster Risk Reduction (MDDR) project, funded by the government of Japan through the World Bank. The MDDR project was intended to identify urban hazard areas in Vanuatu and strengthen resources to increase preparedness toward tsunami events. In addition to the nine tsunami sirens, the project also established over 100 tsunami evacuation signs, 52 tsunami information boards, and 74 evacuation maps.[220]

The Vanuatu Klaemet Infomesen blong Redy, Adapt mo Protekt (VanKIRAP, or Climate Information Services for Resilient Development) project and the national broadcaster, Vanuatu Broadcasting and Television Corporation (VBTC), reportedly signed a partnership agreement in May 2023 to use VBTC's radio, television, and social media channels to deliver climate and weather information to the nation. The partnership extends the reach of the Vanuatu Meteorology and Geohazards Department (VMGD) climate and weather information services to the whole of the Vanuatu archipelago. It also seeks to embed VMGD's meteorology and climatology expertise within the national broadcaster so that science-based information is included in all VBTC news reporting on climate, climate change, and extreme weather events. Vanuatu will have for the first time a dedicated climate and meteorology team presenting daily weather and climate reports on Television Blong Vanuatu (TBV), Radio Vanuatu, and on VBTC's Facebook page, which is the most popular page in the country with 120,000 followers.[221]

Expanding the traditional concept of disaster early warning system, Vanuatu officially launched its first Ocean Climate Monitoring Network in May 2023 to combat climate change effects as well as develop and enhance its multi-hazard early warning systems. Deployed by VanKIRAP, the Vanuatu Ocean Monitoring Network is a chain of six ocean climate monitoring buoys across the archipelago; they monitor how climate change is affecting the ocean around the country and provide early warning to communities and key agencies of impending climate-related events. The buoys measure sea surface temperature, wave direction, wave height, wave period and spread, and wind speed at each location – Port-Vila on Efate; Million Dollar Point and Lonnoc Beach on Espiritu Santo; Port Resolution on Tanna; Inyeug Island in Aneityum; and Tomman Island in Malekula. In addition to providing near real-time data about the impacts of climate-related events like cyclones and marine heatwaves, the data also allow the VMGD and the Department of

Fisheries to issue early warnings to communities for coastal inundation and erosion. During the twin severe tropical cyclones Judy and Kevin, which struck Vanuatu within 48 hours of each other in March 2023, buoys already deployed recorded wave heights of 5 m (16.4 feet) at Port Resolution and 4.5 m (14.8 feet) at Aneityum. The Ocean Climate Monitoring Network was a partnership among the VMGD, Vanuatu Fisheries Department, the Secretariat of the Pacific Regional Environment Programme (SPREP), and Australia's Commonwealth Scientific Industrial Research Organisation (CSIRO), with funding support provided by the Green Climate Fund (GCF) through the 5-year VanKIRAP project.[222]

Vanuatu played a key role in the 2013 establishment of the Oceania Regional Seismic Network (ORSNET).[223] As the VMGD upgraded its volcano and seismic monitoring network to more quickly detect earthquakes and tsunami, the VMGD merged with the Institute of Research for Development in Noumea, New Caledonia. This enabled the institutions to pool resources and create a monitoring network that would benefit both countries, which share similarities in geographical location. The data sharing between Vanuatu and New Caledonia was recognized by the Intergovernmental Oceanic Commission for the Pacific Tsunami Warning and Mitigation System (PTWS) as the ideal model of seismic data sharing for tsunami early-warning in the region. The model was expanded to other Pacific Island countries, including Fiji, Papua New Guinea, Samoa, Solomon Islands, and Tonga, resulting in the 2013 establishment of ORSNET.[224]

Information Sharing

Understanding how to overcome the information challenges that civilian and military agencies experience during a typical disaster response mission is important. Sharing information is critical since no single responding entity, NGO, international governmental organization, assisting country government, or the host government can be the source of all the required information.[225] Collaboration, information sharing, and networking have been the backbone of successful disaster response and preparation. Disseminating information not only to those in-country and threatened by disaster, but also to those responding to assist in the emergency has been crucial to timely, efficient, and effective disaster response. There are many resources, stakeholders, and components to consider before, during, and after a natural disaster. This section will discuss country-specific, humanitarian, regional, government, and U.S. DoD information sources.

Vanuatu Information Sources

National Disaster Management Office
The NDMO is the government agency responsible for coordination of preparation and responses to emergencies and disasters across Vanuatu.
Tel: +678 22699 / +678 33366
Mailing Address: NDMO, Private Mail Bag 9107, Port-Vila, Vanuatu
Email: *ndmo@vanuatu.gov.vu*
Website: *https://ndmo.gov.vu/*
Facebook: *https://www.facebook.com/ndmo.gov.vu*
Twitter: @NDMO_Vanuatu

The Republic of Vanuatu Country Preparedness Package was a joint initiative of the NDMO and the PHT. The 42-page document is intended to strengthen preparedness and collaboration between national and international actors in disaster response. It is available at: *https://ndmo.gov.vu/resources/downloads/category/47-country-preparedness-package?download=142:vanuatu-country-preparedness-package*

Vanuatu Meteorology and Geo-Hazards Department
The VMGD is a Department within MOCCA. It plays an important role in monitoring and informing authorities and the public of hazards. The VMGD consists of seven divisions: Administration; Weather Forecasting and

Services; Climate; Climate Change and Disaster Risk Reduction; Geo-Hazards; Observations; and ICT and Engineering.
Website: *http://www.vmgd.gov.vu/vmgd/index.php*
Facebook: *https://www.facebook.com/vmgd.gov.vu*
Twitter: @vmgdvu

Vanuatu Red Cross Society

The VRCS is an independent humanitarian organization, auxiliary to the Vanuatu government and that adopts a community-based approach in working with volunteers in disaster preparedness, disaster assessment, emergency response, humanitarian law and fundamental principles, first aid, and health.[226] It is headquartered in Port-Vila with six provincial branches.[227]
Tel: +678 27418
Address: Rue d'Auvergne, Nambatu area, Port-Vila, Vanuatu
Mailing Address: PO Box 618, Port-Vila, Vanuatu
Website: *https://vanuaturedcross.squarespace.com/*
Email: *redcross@vanuatu.com.vu* (general inquiries); *communication.coordinator@redcrossvanuatu.com* or *dissemination@redcrossvanuatu.com* (media inquiries)
Facebook: *https://www.facebook.com/VanuatuRedCross*
Twitter: @vanuaturedcross

Humanitarian Information Sources

United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Office of the Pacific Islands

Based in Fiji, OCHA's Office of the Pacific Islands mobilizes and coordinates humanitarian action in partnership with national and international actors. Its key objective is to support national efforts to protect the lives, livelihoods, and dignity of people in need. OCHA Office of the Pacific Islands personnel can provide support in information management, reporting, mapping, media and communications, assessments, humanitarian financing, and inter-cluster coordination. OCHA can deploy teams to assist in the coordination of incoming international relief at the earliest stages of an emergency.
Web: *https://www.unocha.org/pacific*
For OCHA situation reports, click on "Subscribe" button on top of page.
Twitter: @UNOCHA_Pacific

ReliefWeb

ReliefWeb is a service of UN OCHA that consolidates information and analysis from organizations, countries, and disasters for the humanitarian community.

A subsection of ReliefWeb is ReliefWeb Response (RW Response), which replaced HumanitarianResponse.info in November 2022. RW Response aggregates operational content from other humanitarian action platforms to provide an authoritative source of information. The goal is to ensure that humanitarians can share, find, and re-use critical information quickly and efficiently.
Website: *https://reliefweb.int/*
RW Response: *https://response.reliefweb.int/*

PreventionWeb

PreventionWeb is provided by UNDRR to consolidate DRR information into an online, easy to understand platform.

Website: *https://www.preventionweb.net/*

International Federation of Red Cross and Red Crescent Societies (IFRC)

IFRC is the world's largest humanitarian organization, comprised of its 191 members, the National Societies, including the Vanuatu Red Cross Society, a secretariat in Geneva, Switzerland, and over 60 delegations around the world. The IFRC carries out relief operations to assist victims of disasters and combines this with development work to strengthen the capacities of its member National Societies.[228]
Web: *https://media.ifrc.org/ifrc and https://go.ifrc.org/*

International Committee of the Red Cross (ICRC)

ICRC is an impartial, neutral, and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. It also works to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles. ICRC, together with IFRC and the 191 Red Cross Red Crescent Societies, make up the Red Cross Red Crescent Movement.[229] The ICRC regional delegation in the Pacific is based in Suva, Fiji, and covers 16 countries, including Vanuatu.
Website: *https://www.icrc.org/en*
Facebook: @ICRC
Twitter: @ICRC

Global Disaster Alert and Coordination System (GDACS)

GDACS is a cooperation framework bringing together the UN, the European Commission, and disaster managers worldwide to improve alerts, information exchange, and coordination in the first phase after major sudden-onset disasters.
Website: *https://www.gdacs.org/alerts/*
The latest alerts can be found here: *https://www.gdacs.org/Alerts/default.aspx*
To subscribe: *https://www.gdacs.org/About/contactus.aspx*

Virtual OSOCC

The Virtual OSOCC is a real-time online coordination tool for disaster response professionals from urban search and rescue teams, national authorities, and regional and international organizations at a global level.
Website: *https://vosocc.unocha.org/*

ThinkHazard!

ThinkHazard! is a website that provides detailed information on a country. Information is provided on Vanuatu regarding hazards, country assessments, projects, early warning systems, and other resources.
Website: *https://thinkhazard.org/en/report/262-vanuatu*

Humanitarian Data Exchange (HDX)

HDX is an open platform for sharing data across crises and organizations. It launched in 2014 with the goal of centralizing humanitarian data for easy access and analysis. HDX is managed by OCHA's Center for Humanitarian Data in The Hague.
Website: *https://data.humdata.org/*

Regional Information Sources

The Pacific Community (SPC)

The Pacific Community is the principal scientific and technical organization in the Pacific region. Formed in 1947, it is an international development organization owned and governed by its 27 country and territory members. The Pacific Community supports sustainable development by applying a people-centered approach to science, research, and technology across all the SDGs. It aims to address the nexus of climate, ocean, land, culture, rights, and good governance through trusted partnerships, investing in Pacific people, and understanding Pacific contexts. Vanuatu has been a member since 1983.[230]
Website: *https://www.spc.int/*

Pacific Disaster Net

Pacific Disaster Net is an online platform for disaster risk management and climate change documents, reports, alerts, data, projects, and professionals for the Pacific region. The platform is an ongoing live service provided by the SPC, UNDP, UNDRR, and IFRC. While climate change is broader than the traditional scope of humanitarian assistance and disaster relief (HADR), many Pacific Island countries and territories approach DRR in tandem with CCA.
Website: *http://www.pacificdisaster.net/main*

Changi Regional HADR Coordination Centre (RHCC)

Changi RHCC was launched in September 2014 by the Singapore Ministry of Defense to support the military of a disaster-affected state in coordinating assistance with assisting foreign

militaries. It aims to provide open, inclusive, and flexible platforms that allow both regional and extra-regional militaries to work together effectively in a multinational disaster response. Changi RHCC manages the OPERA CIS web portal to broadcast the updated situation status of multinational military responses to disasters to minimize duplication and gaps in the provision of foreign military assistance. While Changi RHCC generally focuses on Southeast Asia, its reports include coverage of events in the Pacific, including Vanuatu.
Website: *https://www.changirhcc.org/*
To subscribe to RHCC Weekly and Spot Reports, email: *Changi_RHCC@defence.gov.sg*

U.S. Government Sources

U.S. Agency for International Development (USAID)

USAID is committed to responding to crises around the world to help people and places most in need. They aim to:

- Promote Global Health
- Support Global Stability
- Provide Humanitarian Assistance
- Catalyze Innovation and Partnership
- Empower Women and Girls

USAID produces a monthly "USAID Newsletter," available digitally: *https://www.usaid.gov/news-information/newsletter*. More information and updates from USAID are available on Facebook (@USAID), Instagram (@uasid), Twitter (@usaid), and YouTube (USaidVideo).
Website: *https://www.usaid.gov/*

USAID's Bureau for Humanitarian Assistance (BHA)

USAID/BHA is responsible for leading and coordinating the U.S. Government response to disasters overseas. BHA works with the international population to help countries prepare for, respond to, and recover from humanitarian crises. BHA responds to an average of 75 disasters in 70 countries every year. BHA fulfils its mandate of saving lives, alleviating human suffering, and reducing the social and economic impact of disasters worldwide in partnership with USAID functional and regional bureaus and other U.S. government agencies. The U.S. DoD only responds to international disasters when requested, in support of USAID.

USAID/BHA products include situation reports and maps, which are available via email mailing lists as well as ReliefWeb. Information products (Updates/Fact Sheets, etc.) are also available on USAID.gov (*https://www.usaid.gov/humanitarian-assistance*)

Pacific Disaster Center

Pacific Disaster Center (PDC) has trademarked an early warning and decision support system called DisasterAWARE®. DisasterAWARE® is primarily for disaster management practitioners and senior decision makers. It supports DRR and best practices throughout all phases of disaster management from early warning to multi-hazard monitoring. It has a collection of scientifically verified, geospatial, data and modeling tools to assess hazard risks and impacts. A restricted version of DisasterAWARE is the EMOPS (Emergency Operations) system, which is specifically for the disaster management community, including government agencies and humanitarian assistance organizations serving at local, state, federal, and regional levels.[231]

PDC Global also provides a public version, Disaster Alert, which offers open access to a world map documenting 18 hazard types.[232] Disaster Alert also has a free, early-warning app to receive customizable maps based visual alerts of active hazards. The app offers a global notification system covering natural and man-made hazards. It is available on both iPhone and Android.[233]
The Vanuatu Disaster Risk Profile is available at: *https://www.pdc.org/big-data/vanuatu/*
Website: *https://www.pdc.org/* and *https://www.pdc.org/disasteraware/*
Emergency Operations (EMOPS) system (request account): *https://disasteraware.pdc.org*

All Partners Access Network (APAN)

APAN is the Unclassified Information Sharing Service for the U.S. DoD. APAN provides the DoD and mission partners community space and collaboration tools to leverage information to effectively plan, train, and respond to meet their business requirements and mission objectives. Importantly, APAN's technology team has been supporting HADR operations for over 15 years.[234] APAN has played an integral role in the success of disaster responses, such as the 2015 California Wildfire Response and the 2013 Typhoon Haiyan Response in which they provided organizations and militaries a centralized location to share information, increase situational awareness and decrease response time and duplicated efforts for best practices in HADR services.[235]
Website: *https://www.apan.org/*

Joint Typhoon Warning Center

The Joint Typhoon Warning Center provides advanced warning for U.S. Government agencies and organizations in relevant areas.
Website: *https://www.metoc.navy.mil/jtwc/jtwc.html*

Daniel K. Inouye Asia-Pacific Center for Security Studies (DKI-APCSS)

DKI-APCSS is a U.S. DoD institute that addresses regional and global security issues, inviting military and civilian representatives of the U.S. and Asia-Pacific nations to its program of executive education and workshops.
Website: *https://dkiapcss.edu/*

The Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM)

The CFE-DM is a U.S. DoD organization that was established by the U.S. Congress in 1994 and is a direct reporting unit to U.S. Indo-Pacific Command. CFE-DM provides training and education to help U.S. and foreign military personnel navigate complex issues in disaster management and humanitarian assistance. They produce country focused disaster management reference handbooks, after action reports, best practices, and lessons learned for advancement in response coordination. CFE-DM also works to improve cross-coordination and reduce duplication of efforts and promote U.S. involvement in civil-military consultations and dialogues with relevant HADR parties. CFE-DM provides resources and updates at its website, as well as via their Facebook and Twitter accounts (@cfedmha).
Website: *https://www.cfe-dmha.org/*

Disaster Management Reference Handbooks are available for download at: *https://www.cfe-dmha.org/Publications/Disaster-Management-Reference-Handbooks*

Civil-Military Coordination in Foreign Disaster Relief Missions: Best Practices for Information Sharing is available here: *https://www.cfe-dmha.org/Publications/Best-Practices-Pamphlets* Vanuatu's response to Tropical Cyclone Harold is featured in "Best Practices for Humanitarian Assistance and Disaster Relief (HADR) In Pandemics."

INFRASTRUCTURE

The geography of Vanuatu challenges the country to develop a unified policy for transport, communications, and public utilities infrastructure. Although the central government can set goals and strategies, each island community will encounter different contexts that help dictate the details of projects to promote safe, efficient, and resilient socio-economic development.

The Ministry of Infrastructure and Public Utilities (MIPU) has a vision of a safe and integrated transport infrastructure network, and a mission to provide high-quality infrastructure and services to support the country's economic and social development. MIPU is mandated to maintain transport networks through partnerships, implement safety and security systems, provide leadership and the legal framework to ensure effective infrastructure development, and efficiently utilize resources and assets while adhering to principles of accountability and transparency.[236]

The energy sector falls under MOCCA's Department of Energy, which sets policy, but all electricity is generated by the private sector. Those islands that do have an electricity grid contract with private generators and grid operators through concessions, and the largest concessionaires in the country are UNELCO and VUI.[237] UNELCO is also the concessionaire to produce and distribute drinking water in Port-Vila.[238] For issues of governance of water and sanitation, the Ministry of Health is a policy lead while the Department of Water Resources under the Ministry of Lands and Natural Resources is responsible for most strategy and planning for both drinking water and sanitation.[239]

Transport

Given the dispersed geography of the Pacific, air and sea links are vital for disaster relief and for Vanuatu's economic links with the region and the world. Figure 9 shows the location of the key air and sea ports serving international and domestic traffic.[240]

Airports

Vanuatu has three international airports, which are managed by Airports Vanuatu Limited (AVL). Bauerfield International Airport is the largest airport in Vanuatu, located in Port-Vila, and is the main port of entry for visitors flying in from around the world. In total, Bauerfield and Pekoa International Airport, located on Espiritu Santo Island, accommodate more than 190,000 international passengers and 106,000 domestic passengers annually. Seven airlines operate scheduled flights and connect Vanuatu to other countries in the Southwest Pacific; they are Air Vanuatu, Virgin Australia, Air New Zealand, Solomon Airlines, Fiji Airways, Air New Guinea, and Air Calin.

Bauerfield, Pekoa, and Whitegrass (Tanna Island) airports underwent safety and operational upgrades financed by the World Bank through the US$73.9 million Vanuatu Aviation Investment Project, which closed in December 2019.[241] Bauerfield airport's asphalt pavement was upgraded after the poor state of the runway came to a head in early 2016 when several international airlines, including Air New Zealand and Qantas, cancelled flights to Port-Vila; they cited safety concerns. The rehabilitation of Bauerfield's runway was among Vanuatu's largest infrastructure development work and was led by China Civil Engineering Construction Corporation. Upgrades at Bauerfield included drainage and lighting improvements,[242] as well as a new domestic terminal. For Pacific Island nations like Vanuatu that are dispersed across the world's largest ocean, airports are vital links to the world, jobs, specialized health care, and a connection to markets for many businesses. Speaking of the importance of the airport renovation, Charlot Salway, Prime Minister during the project, said that airports "have a great impact in terms of tourism; they are



Figure 9: Map of Vanuatu's Key Transport Hubs

important for access to markets; and air transport is also important for health care; or if there is a cyclone, air travel can be the only link." The Vanuatu Airport Investment Project was one of six projects delivered under the World Bank-led Pacific Aviation Investment Program.[243]

Table 1 provides airport codes and runway information for Vanuatu's three international airports,[244] which all underwent name changes effective 17 June 2021.[245] There is no refueling capacity at Tanna/Whitegrass Airport.[246]

In addition to the three international airports, Vanuatu has several smaller domestic airports and airfields. Details of these smaller airports are given in Table 2, sorted by province.

Seaports

Vanuatu has two major international ports that are cargo hubs for the country – the Port of Port-Vila on Efate Island in Shefa Province; and the Port of Luganville on Espiritu Santo Island in Sanma Province. There are two additional international ports for the purposes of providing customs and immigration clearances for yachts – Sola on Vanua Lava Island, Torba Province, and Lenekal on Tanna Island, Tafea Province. These international ports may be useful in a large-scale disaster to allow international assistance to be delivered directly to affected regions.

Cruise vessels also moor at anchorage at Mystery Island, which is just south of Aneityum Island, Tafea Province; at Champagne beach, Espiritu Santo Island, Sanma Province, and at Pangi, Pentecost Island, Penama Province. Inter-island shipping occurs primarily from Port-Vila and Luganville to smaller ports across Vanuatu.[247] Vanuatu Terminal Services Limited is the only cargo terminal operator in Vanuatu.[248]

Port-Vila is a medium-sized harbor port, with a maximum draught of 9.8 m (32 feet) and a maximum deadweight of 50,131 tonnage. The maximum length of vessels recorded having

Airport	Province/Island	IATA/ICAO Code	Runway Length	Elevation
Port-Vila International Airport (Port-Vila/Bauerfield prior to 17 June 2021)	Shefa Province/ Efate Island	VLI / NVVV	2,600 x 45 m (8,530 x 148 feet)	22 m (72 feet)
Santo International Airport (Santo/ Pekoa prior to 17 June 2021)	Sanma Province/ Espiritu Santo Island	SON / NVSS	1,988 x 30 m (6,522 x 98 feet)	43 m (141 feet)
Tanna Airport (Tanna/Whitegrass prior to 17 June 2021)	Tafea Province/ Tanna Island	TAH / NVVW	1,230 x 30 m (4,035 x 98 feet)	6 m (19 feet)

Table 1: Vanuatu International Airports

Airport	Province/ Island	Coordinates	Runway Length	Runway Surface
Sola airport	Torba Province/ Vanua Lava Island	S 13 51 18 E 167 31 58	830 x 25 m (2,723 x 82 feet)	Grass on soil
Mota Lava	Torba Province/ Mota Lava Island	S 13 39 58 E 167 31 5	900 x 25 m (2,953 x 82 feet)	Grass on coral
Gaua	Torba Province/ Gaua Island	S 14 14 13 E 167 35 15	980 x 22 m (3,215 x 72 feet)	Grass on soil
Linau	Torba Province/ Loh Island	S 13 1940 E 166 38 16	850 x 25 m (2,789 x 82 feet)	Grass on sand
Longana	Penama Province/ Ambae Island	S 15 18 35 E 167 49 46	735 x 22 m (2,411 x 72 feet)	Grass on soil
Walaha	Penama Province/ Ambae Island	S 15 24 58 E 167 41 02	725 x 35 m (2,379 x 115 feet)	Grass
Norsup	Malampa Province/ Malekula Island	S 16 04 68 E 167 23 34	906 x 15 m (2,972 x 49 feet)	Asphalt
South West Bay	Malampa Province/ Malekula Island	S 16 16 20 09 E 167 26 49	815 x 15 m (2,674 x 49 feet)	Grass on soil
Lamap	Malampa Province/ Malekula Island	S 16 27 54 E 167 49 21	1,190 x 35 m (3,904 x 115 feet)	Grass on soil

Table 2: Vanuatu Domestic Airports

entered this port is 348 m (1,141 feet).[249] This port is the country's main center for trade, handling over one-third of the country's exports and almost 90% of the country's imports. It is located at S 17° 44' 50"/ E 168° 18' 33" and the UN/LOCODE is VUVLI.[250] The Port of Port-Vila includes Main Wharf, previously called International Wharf, and Lapetasi Wharf, previously called Star Wharf. Lapetasi Wharf officially opened in February 2018.[251]

The other major international port is locally called the Port of Luganville and internationally called the Port of Santo. It is a medium-sized port, with a maximum draught of 9.7 m (31.8 feet) and maximum deadweight of 50,131 tonnage. The maximum length of vessels recorded having entered this port is 294 m (964.5 feet). It is located on Espiritu Santo Island at S 15° 30' 53"/ E 167° 11' 18" and the UN/LOCODE is VUSAN.[252]

Local inter-island travel is common by banana boat, but only during calm waters, and it is sometimes limited to certain times of the year. Fuel costs make such boats an expensive option.

Below is a listing of domestic ports, most of which only accommodate anchorage or beach landing; current conditions are not verified.

Torba Province[253]
- Vanua Lava Island – Sola (main port), Vureas Bay, Mosina, Kerebeta, Wasaga, Lion Bay, Ambeck, Vatop, Lalnetak, Port Patterson, Qeso, Merelaen
- Mota Lava Island – Nereniuman/Rah
- Mota Island – Veverau, Gog, Mariu, Lotawan, Tuqetap, Mariu, Lotawan, Tuqetap
- Ureparpara Island – Dives Bay, Lehali
- Gaua Island – Aver, Kaska, Lembal, Ontar, Dolav, Lakona Bay, Bushman Bay, Dorig, Beam, Koro
- Merig Island – Merig main port
- Merelava Island – Tasmat, Lequel, Aota
- Toga Island – Litau/Lietu, Likwal, Black rock
- Loh Island – Loh main port, Luharigi, Rinuha, Linua
- Tegua Island – Lateu
- Metoma Island – Rival
- Hiu Island -- Yakwana

Sanma Province[254]
- Espiritu Santo Island – Luganville Port (major international port, see above), Malao Port (Big Bay area), Wunpuko Port (Northwest Coast), Tasmate Port (Midwest coast), Tasariki (Southwest Coast)
- Malo Island – Parkley, Aore Island, Aore Island resort

Penama Province[255]
- Ambae Island – Lolowai (N), Lone (N), Lolopuepue (NW), Malaloa, Walurigi, Saranamundu, Lone (SW), Nduidui, Walaha, Devils Rock (SW), Redcliff (SE)
- Pentecost Island – Loane, Abwatontora, Loltong, Namaram, Bwatnapne, Melsisi, Waterfall, Waet wota, Panas, Pangi
- Maewo Island – Natogulata, Kilotegwa, Marino, Naone, Nagoro, Kerembei (Central W), Narovorovo, Nasawa, Asetaleva, Asanvwari (S)

Malampa Province[256]
- Malekula Island – Norsup wharf (N), LitzLitz port (NE), Port Sandwich (S), Bushmans Bay (SE), Lambubu (W)
- Ambrym Island – Craigcove (W), Ranon (NW), Baiap (W), Port Vato (SW), Taviak (SE)
- Paama Island – Liro, Tahi, Lehili, Luli (E), Lulep (E)

Shefa Province[257]
- Efate Island and smaller surrounding islands – Port-Vila International Wharf (major international port, see above), Erakor jetty, Iririki jetty, Mele Bay, Lelepa Landing, Gideons landing, Port Havannah (NW), Moso Landing, Emua Landing, Forari Wharf
- Matasso Island – Matasso
- Makira Island – Makira
- Emae Island – Sulua (NW), Worarana (E), Marae
- Buninga Island – Buninga
- Tongariki Island – Tongariki

- Tongoa Island – Panita, Ravenga
- Epi Island – Laman Bay (NW), Alak, Malpasi, Komerana, Rovoliu, Nelsons Bay (SW), Valesdir Port, Metano, Votlo (S), Port Kuimie (S), Tamasina (SE), Maganua, Pril

Tafea Province[258]

- Tanna Island – Lenekel Wharf (SW), Ikamir (SW), Ianameh (S), Khamera (S), Port Resolution (SE), Sulfur Bay (E), Waisisi (E), Lowanpakel (N), Nalpat (N), Lowanatom (NW), Ipak (NW)
- Erromango Island – Dillons Bay, Ponkil Bay, Sulfur Bay, Ipota, Port Narvin
- Aneityum Island – Port Patrick (NE), Anelghowat, Umetch

Roads

The Public Works Department (PWD), within the MIPU, is responsible for the building and maintenance of roads in Vanuatu. The PWD manages 2,036 km (1,265 miles) of roads, which includes 957 km (595 miles) of feeder roads and 825 km (513 miles) of arterial roads. The total road network length is difficult to estimate as there are many local bush roads not maintained by PWD.

The Australian-funded aid project, Roads for Development (R4D), aims to enhance major roads on the more populated islands. Concessional loans from the Chinese government also fund major road improvements;[259] that work is carried out by the contractor China Civil Engineering Construction Corporation.[260]

Railways

There are no railways in Vanuatu.

Waterways

Vanuatu does not generally have large navigable inland rivers. Sarakata River is one of Vanuatu's largest rivers, on the island of Espiritu Santo. The main island of Efate includes Teouma, Rentapao, Epule, and Marona Rivers.[261]

Ferry travel is common among interisland waterways. The main passenger-carrying vessels that operate between three of the more populated islands include Vanuatu Ferry, which travels between Port-Vila and Espiritu Santo, Malekula, and Tanna; Vanuatu Cargo, which is the sister ship of Vanuatu Ferry; and The Big Sista, which serves the more populated islands.[262]

Schools

The Ministry of Education and Training (MoET) manages the country's education sector, supported by church education authorities. Vanuatu's education system is set up for two years of preschool, six years of primary school, four years of lower secondary school, and three years of upper secondary school, plus any post-secondary education. Approximately 98% of primary schools in Vanuatu are public schools or government-assisted church schools, in which church-operators are designated as 'Education Authorities' and operate under an agreement and regulatory framework with MoET to administer schools on behalf of the government. In 2019, a reported 92,600 students were enrolled in a total of 1,453 schools and served by 4,230 teachers. Vanuatu has achieved universal primary education, but enrollment rates in secondary education are relatively low.[263] The Vanuatu Education and Training Sector Strategy 2020-2030 was developed to align with the strategic direction of the National Sustainable Development Plan 2016-2030, to improve education for all efficiently and effectively.[264]

An estimated 88% of people aged 15 years and above are considered literate, per 2018 data. For both men and women aged 15–49 years, 56% of the population have at least completed primary education with another 33% completing secondary education. While women have around the same educational level as men, fewer are employed. Employment does increase with education level, but there is still a gap between men and women. For example, 60% of women and 76% of men with a secondary education have employment and 66% of women and 77% of men with more than a secondary education have employment.[265]

Disaster Risk Reduction in the Education Sector

A 2021 analysis of school curricula in Vanuatu showed that in-depth learning about disasters and climate change did not occur until the end of secondary education, when only 13% of children are still in school. Important issues about climate change and DRR are raised at upper primary level, with useful practical activities for the learners, but the allotted teaching hours over years 4–6 are only about 11% of total social science time and 5% of total science time. Most learning about climate change and DRR takes place in the senior cycle, especially in years 12 and 13. Disaster risk reduction in formal school education is still catching up with the vision of Vanuatu's resilience and sustainable development policies. The implementation of VCCDRRP involves the mainstreaming of CCA and DRR into all sector policies, plans, and strategies, including the Vanuatu National Curriculum Statement (VNCS). Yet the VNCS was published in 2010, before the VCCDRRP, which covers the period 2016-2030. Nonetheless, public education on DRR and CCA has been strengthened, particularly since the establishment of the Ministry of Climate Change in 2013. Incorporating DRR into education has been an effort of the Ministry, along with VMGD, the NDMO, and NGOs and international organizations, including Care International, Save the Children, Oxfam, Red Cross components, World Vision, and the Vanuatu-based Wan Smolbag.[266]

Schools have included disaster drills and exercises. For instance, Kings Cross Primary School on Tanna Island includes volcanic eruptions among the scenarios and staggers emergency drills throughout each month.[267] A more systematic project, "Pikinini I Redi" (Children Ready), got underway in 2018 to train teachers in schools across the country on disaster preparedness and reduction activities. It aimed to equip teachers and students with disaster preparation knowledge, including developing school disaster response plans and risk maps, providing disaster educational kits, and organizing simulation exercises to prepare students for potential disasters. The project manager, Lindah Peter from the VRCS, stated in 2018 that the formal education system in Vanuatu does not train children how to handle disasters despite Vanuatu being the most disaster-prone country in the world. Pikinini I Ready was initiated by VRCS, funded by Japan Red Cross, and was initially piloted in Shefa Province.[268] The project expanded to Tanna Island in 2019.[269] It has other sites in each of Vanuatu's six provinces.

Communications

Vanuatu has a postal service that has developed to provide services across the archipelago. Mobile-cellular phones are widespread, while fixed landline phones are rare. Mobile broadband provides most internet users with access, while fixed broadband subscriptions are considerably more expensive and thus less extensively used for internet access. Mass media is generally considered free, though politicians have on occasion been accused of threatening journalists for critical reporting.

Telephones

Use of fixed landline telephones is very limited whereas mobile-cellular phone use is extremely widespread. Per 2021 data, there is only 1 fixed landline telephone subscription per 100 inhabitants, while there are 78 mobile-cellular subscriptions per 100 inhabitants. Approximately 90% of Vanuatu's population is covered by a mobile-cellular network, 70% is covered by at least a 3G mobile network, and 70% is also covered by at least a 4G mobile network.[270]

Internet Access

Similar to telephones, fixed broadband internet use is quite limited but mobile broadband internet use is very widespread. According to 2021 data, there are only 3,157 fixed broadband subscriptions in the country, or about 1 subscription per 100 inhabitants, while there are 285 active mobile broadband subscriptions per 100 inhabitants. An estimated 66% of the population uses the internet. The

average international bandwidth per internet user is 10 kilobits per second (kbit/s), per 2017 data. The average price of a monthly fixed broadband subscription is 33.5% of gross national income (GNI), while it is 3.8% of GNI for a mobile broadband subscription, and 8.3% of GNI for mobile data and voice subscription.

Mass Media

Vanuatu has one government-owned newspaper, Vanuatu Weekly, and several privately-owned newspapers. Among the latter are Nasara (weekly), Vanuatu Daily Post (Monday-Saturday), L'Hebdo Du Vanuatu (weekly, French-language, from the publisher of Daily Post), The Vanuatu Independent (weekly), Port-Vila Presse (weekly), and Ni-Vanuatu (weekly).

Vanuatu's national television broadcaster is Television Blong Vanuatu, which was the country's first television station, established in 1992. It is operated by state-owned Vanuatu Broadcasting and Television Corporation (VBTC).[271]

VBTC also operates Radio Vanuatu, which runs a shortwave and mediumwave (AM) service, as well as local commercial FM stations. There are also two privately-owned radio stations based in Port-Vila, Capital FM 107 and Laef FM, the latter of which is Christian. International radio services available in Vanuatu on FM include BBC World Service (99 MHz), Radio Australia, Radio France Internationale, and China Radio International.[272]

Vanuatu's mass media is considered generally free, and Vanuatu is considered a free country, though elected officials have sometimes been accused of threatening journalists for critical reporting. A couple of issues contributed to Freedom House in 2022 scoring Vanuatu 2/4 on the question "Are there free and independent media?" In 2019, the government rejected a work-permit renewal request from Canadian journalist Dan McGarry, publisher of the Daily Post newspaper. McGarry claimed the action was in response to the newspaper's coverage of alleged Chinese influence in Vanuatu, allegations denied by the government. The Supreme Court revoked McGarry's travel ban in December of that year.[273] A 2021 amendment placed libel under criminal rather than civil law. While aimed at how people talk on social media platforms, the broad wording could see journalists jailed for three years for content deemed misleading.[274]

Post

Vanuatu Post provides postal and other services across the country. Vanuatu Post Limited was formed in 2000; the corporation is owned by the government and operates as a commercial enterprise. Vanuatu Post has a nationwide network of over 60 post offices and postal outlets, and customers can receive mail through its more than 4,500 Post Office (PO) Boxes.[275] One of its most unusual and high-profile post offices is the world's first underwater post office.[276] It is located under 3 m (10 feet) of water within the Hideaway Island marine sanctuary, where divers and snorkelers are able to post special waterproof postcards. The underwater post office opened in 2003 and strives to highlight the critical role that the ocean plays in Vanuatu life.[277]

Utilities

Approximately two-thirds of the country's population has access to electricity and more than 90% have basic drinking water service. Vanuatu is a carbon-negative country, as it absorbs more emissions than it produces, and the government has additionally committed to phasing out fossil fuels almost entirely and is striving for 100% renewable electricity generation by 2030.[278]

Power

In 2020, approximately 67% of Vanuatu's population had access to electricity, a statistic defined as having an electricity source that can provide very basic lighting and charge a phone or power a radio for four hours per day. This reflects a remarkable increase in access from only 13% of the population having electricity access in 1995. The majority, approximately 70%, of

Vanuatu's electricity is produced by oil, and a small portion is produced by solar and bioenergy. In 2020, the total per person consumption of energy – including electricity, transport, and heating – was 3,140 kilowatt-hours (kWh). Only 7.6% of the population have access to clean fuels for cooking.[279]

The National Green Energy Fund (NGEF) was launched in 2018 and is a national financing vehicle designed to assist the Government to achieve its National Energy Road Map targets through public and private investment in technology and infrastructure across Vanuatu. The NGEF aims to boost households' and public institutions' energy access, and to provide a pathway for local businesses and industries to invest in clean, climate-resilient energy that meets their economic needs, creating transformative opportunities for rural communities.[280] In 2023, NGEF Manager Georgewin Garae stated, "So far, the NGEF has financed a total of 38 solar PV [photovoltaic] systems for primary schools, 16 for secondary schools, 51 for cooperative societies, and 7 for local government offices throughout Vanuatu."[281]

Vanuatu launched the country's first community-run solar power station in September 2020 on Malekula Island. Launched in the communities of Wintua and Lorlow, the micro-grid is a community-run power station that community members own and manage. Wintua and Lorlow set up an energy cooperative in partnership with the Department of Cooperatives, which is responsible for collecting the electricity fee. During the first year, the local energy service company provided free maintenance and trained local community members to operate and maintain the power station. The installed solar PV system is a stand-alone 230/400 VAC 50Hz solar micro-grid combined with 48V batteries operating 24 hours a day, seven days a week. The solar power station provides electricity to 2,814 residents and seven institutions: Wintua Primary School, Wintua Secondary School, the health center, police station, community hall, market area, and airport.[282]

Water and Sanitation

According to 2021 data, 91% of the population has basic drinking water service and 8% has no drinking water service. In rural areas, 88% has basic drinking water service, while 100% of the population in urban areas has at least basic service and 57% has safely managed drinking water service. An estimated 53% of the country's population has basic sanitation service, 16% has limited sanitation service, and 31% has no sanitation service. In rural areas, 49% has basic sanitation service, 12% has limited sanitation service, and 39% has no sanitation service. In urban areas, 65% has basic sanitation service, 27% has limited sanitation service, and 8% has no sanitation service.[283]

UNELCO has been the public service provider for production, treatment, and distribution of water in Port-Vila since 1994. It designs, builds, operates, and maintains water systems and associated equipment, including boreholes, pumping stations, drinking water plants, and storage tanks. It supplies drinking water to about 50,000 people.[284]

Coastal Water Quality Vanuatu started a monitoring program in 2020 in response to community concerns about sewage pollution in the bay, lagoons, and rivers around Port-Vila. Their analysis report covering September 2020 to September 2021 summarized the average rate of enterococci, bacteria found in human intestinal tracts, based on hundreds of samples taken weekly from multiple water locations. Water quality was deemed good around the Port-Vila area, including at Chantilly's, Vodaphone Beach, Nambawan Café, Sea Front Jetty, Iririki Wharf, and Second Lagoon. Water quality was deemed to need improvement in First Lagoon, primarily based on average enterococci levels at the lagoon's Sea Side area, in contrast to the lagoon's Ramada area, which was deemed good.[285]

HEALTH

Three major health challenges hang over Vanuatu: increasing rates of non-communicable diseases (NCD), emerging threats from climate change, and death and illness from communicable diseases. Figure 10 illustrates the diseases and health conditions that cause the most deaths in Vanuatu.[286]

The country made progress in neonatal, infant, and child health between 1990 and 2019 when mortality among children under 5 years of age fell from 36 per 1,000 live births to 24.2 per 1,000 live births, and the rate for children under age 1 year also fell from 27.3 per 1,000 live births to 18.9 per 1,000 live births.[287] By 2023, the under-5 years mortality rate had fallen further to 23 per 1,000 live births.[288] Nonetheless, some observers see the decline in infant and under-five mortality as having plateaued and express concern as undernutrition and stunting among children remain concerns.[289] The country also still struggles with very high rates of acute gastroenteritis among children, often in the wake of storms that disrupt clean water pumping and collection.[290] Neonatal disorders still figure among the top ten causes of all deaths in the country, although the rate fell by more than 15% between 1990 and 2019.[291] Neonatal and maternal health will remain challenges as access to emergency obstetric and neonatal services remains limited.

Increasing urbanization of the two major towns is causing overcrowding and creating environmental conditions that catalyze the emergence of problems such as NCDs, sexually-transmitted infections (STI), unplanned pregnancies, childhood malnutrition, and domestic violence. Scattered populations, geographical isolation, poor infrastructure, and costly transportation and logistics are major challenges, and a lack of adequately skilled staff and limited financial capacity hinder the delivery of quality services.[292]

Health Care System Structure

The Government is the main health care service provider alongside a small private sector that operates mainly in Port-Vila and Luganville. Various NGOs, faith-based

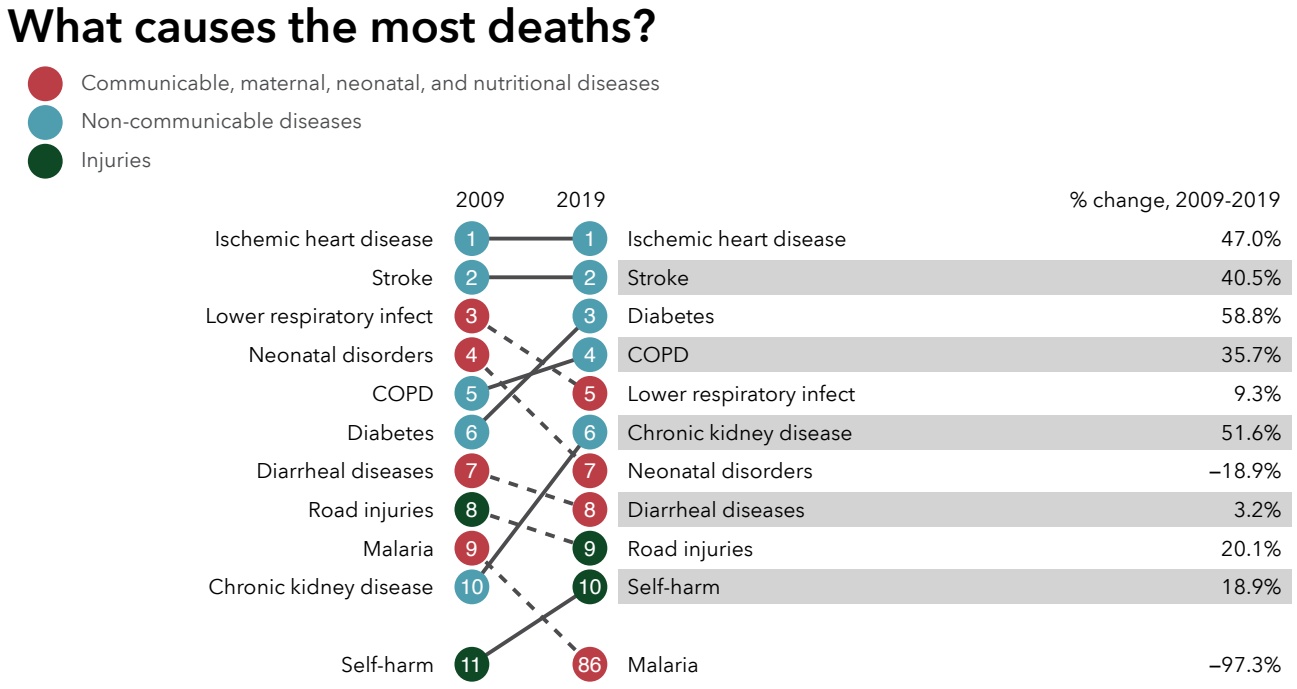


Figure 10: Top 10 Causes of Total Deaths (2019) and Percent Change (2009-2019), Vanuatu

organizations, and community-based groups supplement government services. Funding comes predominantly from the Government and development donors. Patients pay minimal amounts for inpatient care and outpatient services in public facilities.[293]

Health services include central (national), provincial, and community levels. Community care is provided by community health services by Village Health Workers in all provinces; these facilities are not managed by the government, and Village Health Workers are not government employees. Instead, local community committees oversee their community health care services and facilities. Primary health care is also delivered through community health services at Dispensaries and Health Centres; Health Centres are generally run by an NGO or church under a Memorandum of Understanding (MoU) with the Ministry of Health (MOH) while Municipal Dispensaries are government facilities within urban areas. Secondary health care is provided at provincial hospitals in four provinces (Tafea, Penama, Malampa, and Torba); these facilities focus on general clinical services, essential trauma care, child health and nutrition, communicable diseases, sexual and reproductive health, maternal and newborn health, NCDs, and environmental health. Tertiary health care is provided at regional and national referral hospitals in Sanma and Shefa through Northern Provincial Hospital (NPH) and Vila Central Hospital (VCH), respectively.[294]

The MOH's Directorate of Hospitals and Curative Services has direct authority over Medical Superintendents at provincial hospitals. Administrative and other support services are overseen by Corporate Services Units and Provincial Administration teams.[295] The MOH's overall organizational structure is illustrated in Figure 11.[296] The Curative (Hospital) Directorate manages Aid Posts, Dispensaries, Health Centres, and Hospitals, in addition to pharmacy, rehabilitation, mental health, medical laboratory services, and medical imaging. There are six hospitals: 1) a national referral hospital, VCH; 2) a provincial referral hospital, NPH in Luganville; and 3) four provincial hospitals – Lenakel Hospital (Tanna Island, Tafea Province), Lolowai "Godden Memorial" Hospital (Penama Province), Norsup Hospital (Malekula Island, Malampa Province), and Torba Hospital (sometimes called Qaet Vaes or Qatvaes, on Vanua Lava Island).[297] There are also 35 health centers, 91 dispensaries, and 202 aid posts. The majority of facilities (85%) are in rural locations serving dispersed villages and local communities. Some villages are many hours' journey by boat or on foot from the nearest health facility.

The MOH has primary responsibility for declaring and responding to outbreaks of communicable diseases. If activated, the Health Incident Management Team through the National Health Emergency Operations Center (NHEOC) will also support the response. Depending on the situation, a Public Health Emergency may be declared by the Minister of Health under the Public Health Act.[298] As coordinated by the NDMO, the Health Incident Management Team is responsible for coordinating the health response and operates from the NHEOC. The National Health Cluster also facilitates and coordinates support from development partner organizations. As an example of how the health sector would operate in response to a disaster, after TC Harold in 2020, the NHEOC Tropical Cyclone Harold Health Sector Response Plan included the following objectives:

- Activate the Incident Management System and the National and Provincial Health Emergency Operations Centers
- Initiate health facilities and community impact and needs assessments
- Initiate priority response activities. The priority response activities are to:
  - Provide life-saving services and essential medical support
  - Maintain minimum standards for provision and access to health services
  - Minimize the risk of communicable disease outbreaks
  - Minimize risk of NCD-related illnesses, including nutrition and psycho-social issues
- Produce regular Situation Reports[299]

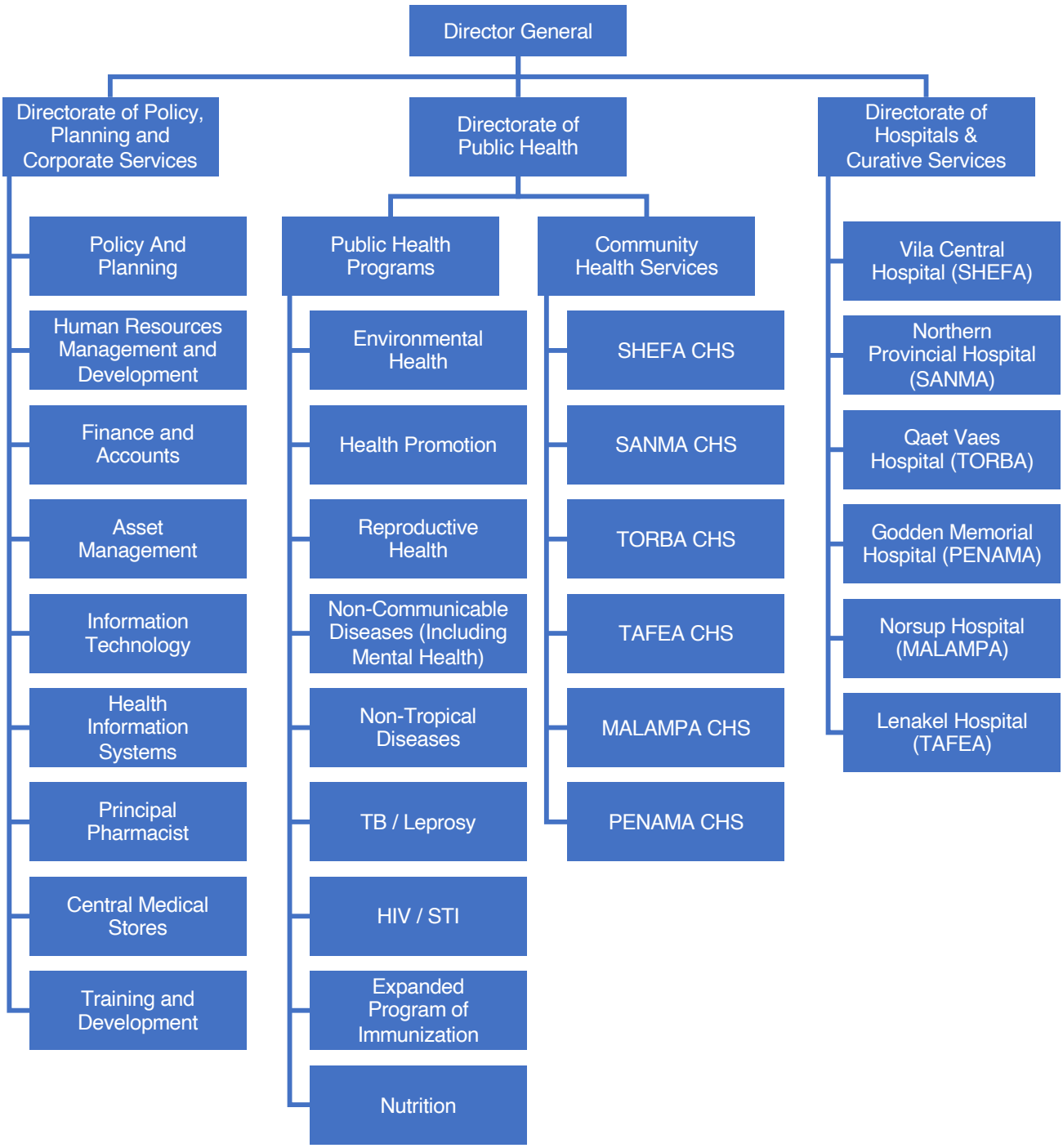


Figure 11: MOH Organizational Structure

Health Strategies and Surveillance

Under the National Sustainable Development Plan 2016–2030, the government recognized the need to develop quality health care services in order to ensure a healthy population with high levels of "physical, mental, spiritual, and social well-being." Under the Plan, the four health policy objectives are:

1. Ensure that the population of Vanuatu has equitable access to affordable, quality health care through the fair distribution of facilities that are suitably resourced and equipped
2. Reduce the incidence of communicable and non-communicable diseases

3. Promote healthy lifestyle choices and health-seeking behavior to improve population health and well-being
4. Build health sector management capacity and systems to ensure the effective and efficient delivery of quality services that are aligned with national directive.[300]

Based on the plan, the Health Sector Strategy 2017–2020 set goals for lowering incidence rates of malaria, tuberculosis (TB), diabetes, maternal mortality, neonatal mortality, childhood stunting, obesity, and high blood pressure; raising the percent of births attended by a skilled birth attendant, of children fully vaccinated against certain diseases, and of children who are breast fed; and raising the density of health workers within the population.[301] Between the elaboration of that Strategy and the present, major shocks hit Vanuatu. The COVID-19 pandemic moved overall health higher up on the government's agenda, and agencies are working to implement the national Recovery Strategy 2020-2024 - Yumi Evriwan Tugeta, which not only addresses the impacts of COVID-19 but also TC Harold, which struck in 2020. The subsequent National Health Sector Strategy (HSS) 2021-2030 is the primary mechanism for implementation of the Recovery Strategy.[302] The HSS 2021-2030 enshrined six objectives to be met to ensure that all Ni-Vanuatu, including vulnerable groups, receive help when they need it and without undue financial hardship. There is a particular focus on strengthening public confidence in the health system and redesigning it to improve resilience to disease outbreaks, disasters, and climate change while improving the prevention, detection, and management of communicable diseases.[303]

The six goals and their objectives within the HSS are:

1. Ensure all people of Vanuatu who need health services receive them, including women, youth, the elderly, and vulnerable groups, without undue financial hardship
    a. Ensure people with disability are recognized and supported by the health system
    b. Ensure inclusive and supportive referral systems, which enable vulnerable groups such as people with disability to access both general and impairment/issue specific health services
    c. Ensure systems to collect, analyze, and report inclusive health data that is disaggregated by age, gender, disability, and identified, vulnerable groups
    d. Strengthen technical skill and capacity in the application of inclusive health strategies
    e. Provide targeted health frameworks, programming, guidelines, and budgets for inclusive health priorities (inclusive of gender equality; sexual and gender-based violence and child protection; sexual orientation, gender identity, and gender expression (SOGIE); disability; mental health; and adolescent health)
    f. Ensure health workplaces are inclusive through establishment of an inclusive leadership framework, inclusive recruitment, and retention strategies
2. Rebuild the public's confidence in the health system by reinforcing public health and clinical service delivery and ensuring equitable access to affordable, quality health care
    a. Build a positive and supportive, sustainable workplace culture that promotes inclusion, honesty, and integrity and enhances health care delivery, staff satisfaction, motivation, and work performance
    b. Ensure staff are kept informed, positive health sector change is highlighted to the community, and dialogue is encouraged through the implementation of a communications strategy
    c. Improve quality maternal and child health service coverage through the filling of staff vacancies in all community care facilities, and the resourcing of facility-based and outreach services
    d. Reduce maternal, under-five children, infant, and neonatal mortality through the establishment and resourcing of

comprehensive facility-based and integrated outreach antenatal and child health services and emergency referral systems

e. Ensure a suitable acute and longer-term health sector response to the prevention and management of sexual and gender-based violence and child protection issues, including systematic protocols and resources for receiving and supporting survivors
f. Increase awareness and uptake of family planning services through targeted, evidence-informed communication approaches, accessible commodities, and skilled personnel
g. Improve immunization coverage through demand creation, the filling of staff vacancies in all community care facilities, and the resourcing of facility-based and outreach services, including the supply of essential medicines and vaccinations, and cold chain management
h. Improve quality, range, and accessibility of targeted health messaging and services for adolescents and young people, with a particular focus on mental, sexual, and reproductive health services
i. Ensure a trained and supported health sector workforce through the establishment of supportive leadership mechanisms and skills, and the systematic roll-out of periodic in-service training for managers and public health personnel
j. Strengthen training processes for doctors, nurse practitioners, midwives, nurses, and allied health workforce, including new clinical and leadership training programs and continuing education

3. Redesign the health system to be more resilient to health shocks caused by disease outbreaks, disasters, and climate change while we better prevent, detect, and manage communicable diseases
   a. Utilize the HSS to establish or reinforce appropriate structures and plan for system responses to disasters and climate change which ensure continuity of essential functions (including public health, clinical, and primary health care services), and protection of long-term investments in health system improvements
   b. Strengthen quality and coverage of disease surveillance and alert systems at all levels to ensure resourcing for preparedness and response to outbreaks
   c. Improve national (and regional) capacity to identify threats to and maintain health security through strengthening oversight and adherence to the International Health Regulations
   d. Maintain progress towards elimination targets for malaria and selected neglected tropical diseases, through continued resourcing, surveillance, and monitoring
   e. Strengthen detection, diagnosis, and management of target communicable diseases, including HIV, STIs, TB, Neglected Tropical Diseases, Vector-Borne Diseases, and viral hepatitis.

4. Optimize real improvements in population health and well-being through promotion and active facilitation of healthy lifestyles and health-seeking behaviors
   a. Reduce the onset of lifestyle diseases through promoting individuals' awareness, confidence, and opportunities to make informed, healthy behavioral choices
   b. Reduce the burden of NCDs through improved quality and coverage of prevention and management interventions
   c. Transform the state of oral health, especially among vulnerable children, through targeted, systematic outreach to schools and urban communities, and the maintenance of active data collection and analysis
   d. Improve health and development outcomes of communities (with an

emphasis on children, adolescents, women of child-bearing age, and the elderly) through improved health security, nutrition awareness and practices, and availability of healthier food options

e. Improve health and development outcomes for communities (with an emphasis on children, women of child-bearing age, and breast-feeding mothers) through improved environmental health (inclusive of hygiene and sanitation awareness, practices, and infrastructure, promotion of hand and face washing, waste disposal, and food preparation and storage)
f. Improve the well-being and productivity of individuals and communities through the promotion of mental health awareness and community dialogue, and the establishment of mental health outreach services (inclusive of assessment, counselling, referral, and treatment)
g. Promote community ownership, leadership, and engagement in community health promotion and disease prevention processes, based on their assessment of health and social needs, and implementation of their plans to address these
h. Strengthen health-related policies and legislation across relevant sectors that address NCDs and associated risk factors (such as the Public Health and Tobacco Acts, or regulations for alcohol, nutrients of concern, and marketing of unhealthy foods) to influence an enabling environment that promotes healthy behaviors and reduces harmful practice
i. Strengthen the MOH's mandate, capacity, and authority to ensure sector-wide compliance with public health legislation, including resourcing and mechanisms to ensure coverage

5. Revitalize health sector management capacity and systems at all levels, including accountability through corporate and clinical governance and leadership with evidence-based policies and plans supported by strong monitoring and information systems

a. Strengthen awareness of and adherence to the HSS at all levels and across all relevant sectors
b. Support effective corporate and clinical governance at national and provincial levels including involving clinical leadership in decision making processes
c. Strengthen MOH capacity at all levels to ensure Corporate Plans, Business Plans, and periodic program and activity reporting reflect HSS priorities
d. Strengthen Primary Health Care through supported, decentralized health system management, which draws on clinical and sub-national experience for service prioritization and resource allocation
e. Ensure a needs-based primary health care structure and resource allocation to reflect the standards at each health service level in accordance with the Role Delineation Policy
f. In line with the Role Delineation Policy, ensure adequate financial resources are available, linked to planning, and equitably managed at national and decentralized levels to support delivery of health services and the HSS
g. Strengthen national referral systems in line with the Role Delineation and National Referral Policies through systematic chains of authority, approval and communication, adequate resourcing, and logistics management
h. Expand the health information system and improve access of managers and clinicians at national and provincial levels to timely and accurate information to support evidence-based decision making for managerial, clinical, and system planning, decision making, and reporting
i. Establish and strengthen systems and oversight mechanisms for the promotion and support of structured, operational,

and clinical research to inform program/service delivery planning and implementation

j. Through implementation of the MOH's Workforce Development Plan, ensure an effective, well managed health sector workforce at national and sub-national levels that is sufficient to meet current and future health needs, and which supports the implementation of the Clinical Services Plan and Role Delineation Policy
k. Form a Health Services Commission tasked with healthcare worker welfare, safety, discipline, and advocacy
l. Improve personnel performance management systems at all levels which draw on and hold personnel to account for delivering against the strategic priorities of the HSS, Role Delineation Policy standards, Corporate Plans, and Business Plans
m. Improve effectiveness and efficiency of the Medical Supply Chain system across all levels of MOH service delivery points including national, provincial, and lower levels
n. Prioritize and strengthen capital projects and procurement to meet projected needs across the health sector to 2030 and beyond
o. Ensure equipment and resourcing meets and supports strategic targets through the establishment of multi-year pipeline procurement and maintenance systems including the supply of essential medicines and operational equipment

6. Redefine collaborative action and expand our partnerships to meet the greater health needs of the people of Vanuatu
   a. Use of the HSS, and key non-health sector strategies, to strengthen MOH's donor, stakeholder, and cross-sectoral engagement and coordination
   b. Strengthen partnerships and innovations through contributing MOH resources and identifying key partners who can contribute to resourcing gaps
   c. Develop and resource partnerships to deliver sustainable inclusive health outcomes for targeted groups[304]

Vanuatu has made progress against many diseases in recent years after concerted awareness, monitoring, control, and cooperation programs. On malaria, the country was on track for nationwide elimination by the end of 2023 after 2021 saw only 322 cases (1.05 per 1,000 population). However, upsurges were noted in 2022 with over 500 confirmed cases in Torba Province, and, in July 2022, the MOH declared malaria outbreaks in some areas of the country. As has been seen in other countries seeking to eliminate diseases, when programs are disrupted – as they were in Vanuatu during the COVID-19 pandemic – those diseases can rebound quickly because there is no immunity in unexposed population, there is no vaccine available or low uptake, health workers are unfamiliar with diseases, treatment may not be available or prescribed appropriately, or there is complacency. In addition to the malaria uptick in the wake of COVID-19, vaccination coverage data in Vanuatu for 2021 showed a significant decrease in routine immunization coverage for all vaccines as resources were diverted to prepare for and respond to the pandemic. The MOH and partners launched large-scale immunization campaigns to avoid future outbreaks of vaccine-preventable diseases.[305]

Communicable Diseases

Vanuatu still struggles with a high burden of communicable diseases. While rates of malaria infection have fallen in recent decades, there remains the risk of outbreaks of dengue, measles, STIs, and TB. Since 2016, the country has succeeded in eliminating lymphatic filariasis and trachoma, both neglected tropical diseases, and the latter of which afflicted some 12% of Vanuatu's children as recently as 2014 and brought a heavy burden of blindness within the country.[306] Various water-borne diseases,

especially leptospirosis, tend to flare in the wake of cyclone events as flood waters originate in contaminated areas.[307]

Dengue

Dengue is an infectious disease caused by the dengue virus of which there are four different sero-groups. The disease is transmitted through the bite of an infected mosquito. The mosquitoes that spread dengue usually breed in urban areas close to human habitation and are most active during daylight hours. Dengue is usually a self-limiting illness. Most people infected with dengue remain symptom-free. Symptomatic illness usually begins abruptly with a high fever, and it is often accompanied by a severe headache, muscle and joint pain, nausea, vomiting, and a rash. Most affected persons recover three to four days after the rash appears. A small number of people develop more severe illness with symptoms, which can include low blood pressure (shock), fluid build-up in the lungs, and severe bleeding. There is no specific drug treatment for severe dengue illness, although hospital admission and careful management of fever, fluids, and pain can help. If left untreated, severe dengue illness can be fatal.[308]

Aedes aegypti is the primary dengue vector in Vanuatu. Primary breeding sites for Aedes aegypti are tires, water drums, and discarded refrigerators used to hold water. The first known cases of dengue in Vanuatu occurred in 1971-1972 when dengue serotype-2 was found. Since then, all four dengue serotypes have been found in the country. A major outbreak of 3,300 cases of dengue occurred in 1989. Since then, the country has developed a control plan to rapidly identify cases and to survey and control the mosquito population.[309] Since major outbreaks in 2016 and 2017, the country has participated in the World Mosquito Program that introduces naturally occurring Wolbachia bacteria to mosquito populations. Once released, these mosquitoes breed with wild mosquitoes and thereby reduce the ability of the country's mosquitoes to transmit viruses to people.[310]

HIV/AIDS

Human immunodeficiency virus (HIV) attacks the body's immune system. If HIV is not treated, it can lead to acquired immunodeficiency syndrome (AIDS). While there is currently no effective cure, with proper medical care, HIV can be controlled. Most people who contract HIV have flu-like symptoms within two to four weeks after infection. Symptoms may last for a few days or several weeks. Some people have no symptoms at all. The only way to confirm HIV infection is to get tested. When people with HIV do not get treatment, they typically progress through three stages. With advances in HIV treatment, progression to Stage 3 (AIDS) is less common. In Stage 1, Acute HIV Infection, people are very contagious and may have flu-like symptoms. Stage 2 is Chronic Infection, also called asymptomatic HIV infection or clinical latency, when HIV is still active and continues to reproduce, and, therefore, people may not have symptoms but can transmit HIV. Without HIV treatment, Stage 2 may last a decade or longer or may progress faster; at the end of this stage, the amount of HIV in the blood (viral load) goes up and the person may move into Stage 3 (AIDS), the most severe stage during which the virus can easily by transmitted to others. People with AIDS can get an increasing number of opportunistic infections or other serious illnesses, and without HIV treatment, people with AIDS typically survive about three years.[311]

On World AIDS Day (1 December) 2022, the MOH said HIV is a public health threat to Vanuatu despite low case rates. As of 2022, there were eight people living with HIV in Vanuatu; all were on antiretroviral treatment, and 90% were virally suppressed. The government, through the MOH, supports clients with medication supplies and travel or transportation to main hospitals for medical review every six months. There remains a push to ensure testing is available across the country to vulnerable communities – high-risk groups and prenatal mothers. Moreover, MOH is concerned that severe disruptions to the overall health care structure that could come with natural disasters could mean disruptions

to management of HIV and, therefore, greater spread.[312]

Leptospirosis

The bacteria that cause leptospirosis spread through the urine of infected animals via which they get into water or soil where they survive for weeks to months. Wild and domestic animals that carry the bacteria include cattle, pigs, horses, dogs, and rodents. Humans can become infected through contact with urine (or other body fluids, except saliva) from infected animals or through contact with water, soil, or food contaminated with the urine of infected animals. The bacteria can enter the body through skin or mucous membranes (eyes, nose, or mouth), especially if the skin is broken from a cut or scratch. Drinking contaminated water can also cause infection. Outbreaks of leptospirosis are usually caused by exposure to contaminated water, such as floodwater. Leptospirosis can cause a wide range of symptoms, including high fever, headache, chills, muscle aches, vomiting, jaundice, red eyes, abdominal pain, diarrhea, and rash. Some infected people have no symptoms at all. The time between exposure and becoming sick is two days to four weeks. Illness usually begins abruptly with fever and other symptoms. Leptospirosis may occur in two phases; after the first phase (with fever, chills, headache, muscle aches, vomiting, or diarrhea) the patient may recover for a time but become ill again. If a second phase occurs, it is more severe; the person may have kidney or liver failure or meningitis. The illness lasts from a few days to three weeks or longer. Without treatment, recovery may take several months.[313]

The first reported cases of human leptospirosis in Vanuatu were identified in patients in Port-Vila in the early 1990s with additional cases identified in the early 2000s.[314] The VRCS Secretary-General says, "It is usually in the aftermath of any cyclone that we see an increase in diseases such as Leptospirosis. Flooded waters have contaminated water sources, animals have been affected, and people who are in contact with these animals and infected water sources, usually get it." In early 2023, after two cyclones struck, 19 cases were reported in storm-stricken areas.[315] By April 2023, case rates were 4.5 times higher than in 2022 when no storms had hit the country.[316]

Malaria

There is a risk of malaria in the whole of Vanuatu. The populations most vulnerable to infection live in close proximity to the coast. The Anopheles farauti mosquito is the vector in the country, and this species exists and breeds almost exclusively within a few kilometers of the coast.[317]

Malaria is a potentially serious parasitic infection transmitted through the bite of an infected mosquito. In humans, the disease is caused by five different species of the Plasmodium parasite. Malaria is preventable and curable if diagnosed and treated promptly. Symptoms of malaria vary but typically include fever, headache, fatigue, and muscle aches. Cough and diarrhea may also occur. Malaria can progress rapidly and cause life-threatening complications if prompt treatment is not given.[318]

In Vanuatu, malaria has historically been a leading cause of illness. However, since the advent of the MOH's National Malaria Programme, in cooperation with the WHO, the UNDP, and other partners, there has been a consistent reduction in malaria prevalence from a peak of more than 70 confirmed new cases per 1,000 people to just 1.7 new cases per 1,000 in 2020. The southern-most province, Tafea, was declared malaria-free in 2017, and there have been no confirmed deaths from malaria throughout the country since 2011. Most cases are now reported in Malampa and Sanma, as well as the island of Epi in Shefa. The National Strategic Plan for Malaria Elimination 2021-2026 includes a combination of both long-lasting insecticidal mosquito nets and indoor residual spraying.[319]

Tuberculosis

TB is a disease caused by bacteria that spread from person to person through the air. TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, the

kidneys, or the spine. A person with TB can die if they do not get treatment. The general symptoms of TB disease include feelings of sickness or weakness, weight loss, fever, and night sweats. The symptoms of TB disease of the lungs also include coughing, chest pain, and coughing up blood. TB bacteria are ejected into the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings. These germs can stay in the air for several hours, depending on the environment. Persons who breathe in the air containing these TB germs can become infected; this is called latent TB infection. TB disease can be treated by taking several drugs for six to twelve months. It is very important that people who have TB disease finish the medicine and take the drugs exactly as prescribed. If they stop taking the drugs too soon, they can become sick again; if they do not take the drugs correctly, the bacteria that are still alive may become resistant to those drugs. TB that is resistant to drugs is harder and more expensive to treat. Persons with latent TB infection but not TB disease may be prescribed a drug to kill the TB germs and prevent TB disease from developing. Some people are more likely than others to develop TB disease once they have TB infection; HIV infection, recent exposure to someone with TB disease, and certain other medical conditions can increase vulnerability.[320]

TB is endemic in Vanuatu. However, between 2000 and 2020, TB cases decreased with fewer than 30 new or relapse cases reported annually after 2010. Most cases were among men, ages 45-65 years although in the younger age groups, new and relapse cases among women were more common than among their male peers. During the same two decades, Vanuatu increased the number of testing sites and, therefore, early detections, and this expansion likely contributed to greater than 85% success rates in clearing infections entirely.[321] Among the programs helping Vanuatu attain these outcomes was a UNDP-supported grant that went to the Vatu Mori Consortium for contact tracing and logistics with the cooperation of MOH to focus on households, people living with HIV, and other high risk groups.[322]

Non-Communicable Diseases

The country is experiencing rising impacts of NCDs, largely influenced by dietary changes, increased alcohol consumption, and rural to urban migration. Premature death and increasing levels of disability – e.g., stroke, amputation, blindness, and mental illness – present challenges for the health system as the costs of managing the NCD crisis are huge. In periods of crisis where health systems may be disrupted by a disaster or public health emergency – as was seen during the COVID-19 pandemic – people who rely on the health system for chronic disease care may have difficulty accessing treatment and may experience worse outcomes. A reduction in the overall NCD burden would, therefore, mean fewer people impacted by disrupted health systems.

In Vanuatu, the mortality rate from NCDs is estimated to account for 74% of all deaths. Diseases of the circulatory system, diabetes, cancers, and chronic respiratory disease are among the most common causes of adult morbidity and premature mortality, defined as death among people ages 30-70 years.[323] High blood sugar levels are very common; treatment for diabetes is often delayed until traditional remedies have failed, and the numbers of diabetes-related amputations are rising. For Vanuatu's women, cervical cancer is a growing concern where the crude incidence rate is 15.4 per 100,000 women. However, as Vanuatu is in the early stages of registering cancers and surveillance is weak, the real incidence is probably higher.[324] Nonetheless, in its National NCD Policy and Strategic Plan for 2021-2030, the government lays out targets for 2030 that include: 90% of girls fully vaccinated against human papillomavirus by the age of 15 years; 70% of women screened using a high-performance test by the age of 35 years and again by the age of 45 years; and 90% of women identified with cervical disease receive treatment. The Policy and Strategic Plan also targeted governance, a health-in-all-policy approach, health system NCD risk factors, and underlying causes and

surveillance to reach Pacific Islands and other multi-lateral health targets for 2025 and 2030. It also targeted community engagement and equity and cross-cutting themes to ensure personal and community ownership of health and outcomes.

For tackling the risk factors that underlie NCDs, the Strategic Plan underscores the importance of coordinated effort. Under the leadership of MOH, the Vanuatu NCD multisectoral taskforce has ensured whole-of-government and system approaches. For the 2021-2030 period, key focus areas for this coordination include introducing and strengthening legislative protection with regards to risk-factor reduction; systematic engagement with stakeholders and partners at all levels and across all fields inclusive of the general public; and adequate finances to support sustainable progress.

Among the most difficult interventions to address risk factors associated with NCD is changing diets. The diet of Vanuatu is traditionally carbohydrate-heavy, and the modern Ni-Vanuatu diet is increasingly supplemented by imported, typically high glycemic index, sources of refined carbohydrates such as sugar, rice, bread, and instant noodles. The overall salt intake of 84.4% of the population is well above WHO targets as a large proportion of imported products with high salt content such as canned corn beef, sauces, and spreads are available in urban areas. Intake of salt and high-fat and trans-fat foods remain a concern. At the same time, mitigation of under-nutrition requires renewed focus. Inadequate childhood or maternal nutrition compromises development and increases the risk of chronic diseases in later life. Any approach to diet solutions will be coupled with promotion of physical activity and other lifestyle interventions.

In addition to the personal and society lifestyle changes considered necessary, the government recognizes the import of improving the availability and efficacy of clinical responses to NCDs. From early detection to management, the Strategic Plan targets the cultivation of an informed health workforce capable of ensuring early detection through screening, delivering evidence-based treatment services, and maintaining sufficient NCD follow-up and rehabilitation capacity at all health facilities. Given the geographic dispersal of Vanuatu, ensuring that these services are available at the community and primary health care level is a matter of equity.

Finally, the neglected areas of mental health and injury or violence are addressed in the strategic plan. Given the presence of road injuries and self-harm among the top ten causes of death in the country, these issues are of considerable import. Stigma and discrimination often greet cases of mental health, and mental health often is correlated with risk factors such as alcohol abuse and diagnoses of chronic disease. In alignment with the Mental Health Policy and Strategic Plan for 2021 – 2030, inclusion of mental health within the NCD strategy seeks to ensure that mental health is mainstreamed within the health sector and within communities more broadly. On issues of injury and violence, MOH is required to work with other stakeholders and the wider community on ending drunk driving, substance abuse, alcohol and drug-fueled violence, domestic violence, and occupational health and safety concerns.[325]

Training for Health Professionals

Vanuatu struggles to maintain its health workforce in normal times and requires external doctors and nurses to help respond to disaster events. There is a shortage of health personnel, and facilities are ill-equipped. Rural facilities are especially short of staff, which, during emergencies, must be recruited and deployed in a complex process. MOH collaborates with NGOs, various Red Cross societies, and UN agencies to fill gaps. Vanuatu's nursing school does offer specialized courses in disaster response in cooperation with NDMO.[326]

The Curative (Hospital) Directorate is also responsible for the Medical Workforce Support Program to develop capacity for clinicians and training support for interns. Indeed, the Directorate places emphasis on training and

continuous professional development via regular integrated medical outreach and a referral system that takes "services to the people." Further support is provided through visiting medical teams and organizations. Yacht-based health services provide support to the MOH for the projection of basic clinical and specialist eye care services to provinces with limited coverage because clinicians are based at provincial hospitals. Additional specialist teams have been hosted at VCH and NDH through provision of volunteer services through the Royal Australian College of Surgeons under the Pacific Islands Project.[327]

The MOH organizational structure has 2,521 approved positions. As of 2018, MOH listed 977 medical staff on payroll. Of this total, 39 doctors, 63 allied health practitioners (diagnostic and laboratory), 408 nurses, 130 nurse aides, and 85 interns were counted. Nurses, including midwives, nurse practitioners, nurse aides, and intern nurses, make up 58% of the health workforce. They are the primary service providers. The Diploma of Nursing is the most common qualification across the nursing staff, and the next most common qualifications are certificates and post-graduate diplomas in midwifery. Based on MOH payroll data in 2018, 26 of 39 doctors were local and employed by the MOH. An expatriate medical workforce of 13 doctors supplemented the local supply. Additional visiting specialist health teams visit Vanuatu regularly to provide services in fields such as diabetes, orthopedics, plastic surgery, ophthalmology, heart care, and ear, nose, and throat. As of 2018, 21 of the 39 doctors were located at VCH.

The capacity of MOH to fill vacancies is limited. Vanuatu College of Nurse Education (VCNE) graduates approximately 40 new nurses annually. There is some hope that more than 300 new Bachelor of Nursing students will be available between 2020 and 2030, a number that falls well short of required staffing levels. There have been plans to bring in nurses from the Solomon Islands to work in hospital and community health. Discussions have also focused on additional nursing and other medical scholarships to be offered.

VCNE is under the MOH Directorate of Corporate Services Policy and Planning. It offers a three-year Diploma in Nursing and an eighteen-month Graduate Diploma of Midwifery. More recently, VCNE launched a Bachelors-level qualification. VCNE also delivers undergraduate and graduate midwifery courses. Doctors are currently trained through programs in the Pacific or occasionally elsewhere with scholarships provided by donors. The Bachelor of Medicine/ Bachelor of Surgery (MBBS) course is generally a six-year program. Vanuatu students participating in health worker training overseas mostly attend Fiji National University with sponsorship from the Australian or New Zealand governments. The University of Papua New Guinea has also trained Ni-Vanuatu health workers, particularly medical doctors, but it only allocates places for international students if these are not required by local students. Scholarships are also offered for study in training institutions in Australia and New Zealand for specializations not available in the Pacific. The majority of graduates complete their internships at VCH, and a small number are interns at NPH. Post-graduate training for doctors is also dependent on donor scholarships, and it takes place outside the country.

Developed by the WHO and Pacific Ministries of Health, Pacific Open Learning Health Net (POLHN) provides online learning opportunities for health workers. WHO established POLHN centers at VCH, Norsup, NPH, Espiritu Santo, Lenakel, and Lolowai hospitals. The courses are free with certificates of completion available on a range of topics.

Village Health Workers are volunteers who operate from community-owned Aid Posts and provide front-line health services including health promotion, disease prevention and treatment, and referral. The MOH outsources the delivery of an extensive 10-week Pre-Service Training program with follow-up refresher In-Service Training every two years.[328]

WOMEN, PEACE, AND SECURITY

In 2000, United Nations Security Council Resolution (UNSCR) 1325 formally acknowledged the changing nature of warfare, in which civilians are increasingly targeted, and women continue to be excluded from participation in peace processes. The resolution specifically addressed how women and girls are disproportionally impacted by violent conflict and war and recognized the critical role that women can and do play in peacebuilding efforts. What followed from 2008 onward became known as the Women, Peace, and Security (WPS) agenda, which includes UNSCRs 1820 (2008), 1888 (2009), 1889 (2009), 1960 (2010), 2106 (2013), 2122 (2013), 2242 (2015), 2467 (2019), and 2493 (2019). Throughout, the emphasis has been two-fold – addressing conflict-related sexual violence and ensuring women's participation in conflict prevention, mediation, and peacebuilding processes. Combined, the resolutions sought to ensure that sexual violence is not used as a tactic of warfare and that victims of such sexual abuse had recourse that included holding perpetrators to account; they also advocated the inclusion of women in peace operations and peace talks.[329] In all, the UNSCRs recognize that gender equality is among the top indicators that a society will experience peace and that including women and civil society in peacemaking and other security matters helps generate ownership and lessen cycles of violence.[330]

More recently, rather than simply examining the impacts of women on peacemaking and the impacts of conflict on women, the WPS agenda has taken a "gendered lens" approach that recognizes that conflict and natural disasters have differential impacts on various gender groups – e.g., adult men, adult women, girls, boys, and non-binary people. Moreover, climate change impacts and associated security risks have important gender dimensions that shape how men and women of different backgrounds experience or contribute to insecurity. Findings indicate that countries with relatively higher values in gender equality tend to have relatively higher capacity to respond to climate change-influenced hazards. Climate change and insecurity reinforce each other; in already fragile contexts, the impacts of climate change can exacerbate conditions that threaten loss of livelihoods or competition over scarce resources even as conflict and insecurity undermine resilience to external shocks and make adapting to the impacts of a changing climate more challenging. Gender norms, roles, responsibilities, behaviors, and power structures determine how different groups of people experience and manage these risks.[331] As one of the world's countries most vulnerable to the impacts of climate change, Vanuatu confronts challenges in including women and girls as well as other vulnerable groups into planning and implementation of DRR and CCA programming.

Vanuatu's traditions place women as "protectors of culture and religious worship" in families and society. What this means in practice is limited by social norms and male dominance of leadership positions. Thus, women have limited ways to join formal economic and political activity. There have been areas where the government has impelled inclusion of women, but results remain uneven.

In 1995, Vanuatu signed and ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Beijing Platform for Action, which committed the country to progress on gender equality. In an effort to make up ground against entrenched sex and gender roles in social, economic, and political processes, the Government introduced a National Gender Equality Policy (NGEP) in 2016. It lapsed in 2019[332] and was finally replaced in 2021 by a

new NGEP (2020-2030) that includes strategic areas in need of work, to include ending violence against women and girls, women's economic empowerment, women's civic participation and leadership, climate and disaster resilience, and gender mainstreaming across sectors to ensure that services are accessible.[333] The National Sustainable Development Plan 2016–2030, under Society Goal 4, also includes a commitment to pursue "an inclusive society . . . where the rights of all Ni-Vanuatu including women . . . are supported, protected and promoted in our legislation and institutions," and it specifies the implementation of gender-responsive planning and budgeting.[334] Among the moves that particularly impact Ni-Vanuatu women's participation in DRR and CCA, MOCCA has appointed a gender focal point, and there are minimum representation numbers for women on CDCCCs, which were formed by the VMGD and NDMO.[335] Finally, from late 2022, the Ministry of Justice and Community Welfare and MOCCA in partnership with UN Women and the Australian Government launched the Women's Resilience to Disaster (WRD) program that advocates for gender-responsive DRR governance including women's meaningful participation and leadership, strengthening early warning systems, and supporting women's livelihoods and economic empowerment.[336]

Although there is some data available to measure women's participation in social, economic, and political structures, UN Women noted in 2020 that less than one-quarter of indicators needed to monitor progress toward the SDGs from a gender perspective were available. Among the data gaps are numbers on unpaid care and domestic work, the gender pay gap, and information and communications technology skills. Closing these gender data gaps can help Vanuatu plan for and achieve gender-related SDG commitments.[337] That said, there are some key data points available.

Importantly, gender-based violence (GBV) remains rampant. Some 60% of women report having experienced some form of physical or sexual violence in their lives, and 68% report some form of psychological violence. One in three girls under 15 years of age has encountered sexual abuse. These rates increase in rural areas in comparison to urban areas, but violence against women is prevalent across all provinces, islands, age groups, education levels, and religions. Moreover, these numbers likely underreport violence as there is still stigma and shame around family violence, which is considered a private issue.[338] In 2021, the NGO Vanuatu Women's Centre (VWC) reported that the number of domestic violence cases surged after the March 2020 border closure imposed by COVID-19 travel restrictions, with reports during the year doubling the average number for 2020. VWC added that there was also violence within families between children and their parents, with more than 10 reported cases every day related to domestic violence, sexual assault, and rape. VWC provided face-to-face counseling and free legal services to provide for the safety of women and children, and it ran a national toll-free helpline number for free counseling, referral, and support services to women and child survivors of domestic violence. During 2021, the helpline received 30-40 calls per day.[339] Vanuatu's experience with upticks in domestic violence mirrored the experiences of other countries during lockdowns and recessions related to the pandemic as such a crisis saw families under greater social and economic stress.

While VWC was founded in 1992 to explicitly confront GBV, Ni-Vanuatu women advocates have begun campaigns not only to address all facets of women's empowerment but also to integrate men into their anti-violence work as the responsibility for achieving gender equality and combatting GBV does not lie solely on the shoulders of women. Yasmine Bjornum, founder of the local organization Sista, says, "When it comes to violence against women and girls, I feel very strongly that this ain't our problem. This is not our issue, it is a man's issue. If we're going to be working in this area, then we are bringing men on board because we are not carrying this anymore." Now part of the We Rise Coalition, Sista is working with other Pacific Island women's organizations to advance women's rights at home and regionally.[340]

In terms of the economy, women's average gross national income is US$1,200 lower than men's average gross national income. This difference stems from the fact that women occupy a smaller share of posts in most types of formal employment; they fill less than 40% of jobs across the private and public sectors. A greater proportion of women than men engage in informal or unpaid work, and this fact means women's incomes are less secure.[341] Related to women's workforce participation and access to equal pay, the law does not prohibit sexual harassment, and reports suggest that such harassment is widespread in the workplace. A May 2021 survey of girls and women in Port-Vila and surrounding areas conducted by Sista and supported by the Fiji Women's Rights Movement and the European Development Fund found that 66% had experienced sexual harassment at their workplace; 79% of such cases were not reported due to "the normalization of sexual harassment" or "unclear strategies on how to report." The survey found many workplaces did not have sexual harassment policies.[342]

Economic inequality is also partly linked to education inequality. Expected years of schooling are slightly lower for girls than boys, and a greater proportion of women than men has never been to school. Although this gap is closing in younger generations, women still have lower rates than men of secondary education attainment (25.3% versus 27.4%) and tertiary education attainment (3.3% versus 4.5%).

Health outcomes also reflect both societal biases and lessened educational and economic opportunity for women as women do not necessarily have the information or resources to access appropriate medical care. Maternal mortality is slightly higher than the average for Pacific Island states, at 72 per 100,000. Although teenage pregnancy rates have fallen significantly in the past 20 years, they remain higher than the global average, at 49 births per 1,000 women aged 15–19 years.

A particular issue for gender equality in Vanuatu is the lack of representation of women in leadership and decision-making forums. A 2009 census found that the proportion of elected officials, senior officials, and managers who were women was less than one-third (29%). Strong traditional cultural norms – kastom – and patriarchal values introduced through Christianity and colonial power structures dictate that leadership roles are the domain of men and that women should fulfill supportive roles.[343] As a consequence, there were no female MPs between 2008 and 2022[344] when the Union of Moderates Parties (UMP) seated Gloria Julia King to represent Efate island in Parliament;[345] she is just the sixth female MP to be seated since independence (1980).[346] Surveys also indicate that women fill approximately one-seventh of director and director-general positions in the Vanuatu Government.[347] At the local level, the law allows municipal governments to reserve council seats for women for each ward in each municipality, and Port-Vila and Luganville have done so. Port-Vila has five (of 14) seats reserved for women on the municipal council, and Luganville has four (of 13) seats reserved for women.[348]

In its 2022 Global Gender Gap Report, the World Economic Forum assessed Vanuatu's gender gap. Figure 12 is a visualization of the country's score.[349] In the index, Vanuatu ranks 111th of 146 countries with a score of 0.670 wherein a 0.000 means total inequality and 1.000 indicates gender parity. This rank marks improvement over the 2021 index based on

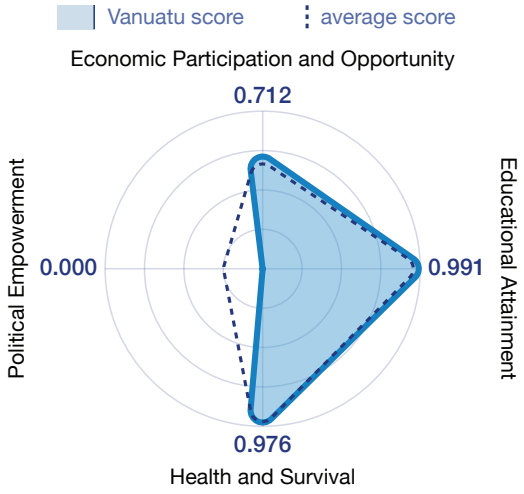


Figure 12: World Economic Forum Global Gender Gap Index, Vanuatu (2022)

improvements in rank across all measures. The index uses four measures, each with their own indicators. On Economic Participation and Opportunity, Vanuatu ranks 59th with a score of 0.712 with indicators for labor force participation and professional and technical workers bringing the score higher than indicators for wage equality, earned income, and top-level employment holding down the score. On Educational Attainment, the country ranks 73rd with a score of 0.991 with high marks across indicators (i.e., literacy rates and enrollment in both primary and secondary education). On Health and Survival, Vanuatu ranks 51st with a score of 0.976 with a high score for sex ratio at birth and its having overshot healthy life expectancy as women now outpace men on this indicator. On Political Empowerment, the country ranks last of all countries with a 0.000 score. It notched 0.000 as its score on all indicators (i.e., women in parliament, women in ministerial positions, and years with a female head of state);[350] although it must be noted that the measurements were taken before 2022 elections that did finally return a woman to parliament after 14 years' absence.

Various NGO partners participate in programming to implement changes in GBV, women's economic participation, women's leadership, and resilience-building. Key local players are VWC and Wan Smolbag along with the Vanuatu Christian Council and Vanuatu National Council for Women (VNCW), the latter of which focuses on women's leadership. The VWC and Wan Smolbag have active programs working to ensure men are aware of the social repercussions of GBV, and VWC advocates an understanding of GBV following disasters.[351]

As important as protection issues related to GBV after disaster events are building women's access to resources and integrating them into DRR and CCA planning. ActionAid Vanuatu and Ni-Vanuatu women established the Woman I TokTok Tugeta (WITTT; Women Talking Together) Network, a forum of 5,000 women from Erromango, Eton, Tanna, Malekula, and Malo, to discuss how to mitigate the impact of natural disasters and strengthen the resilience of women. In addition to providing building materials for homes, the collective is relieving women from their next biggest burden – accessing clean drinking water – by installing water tanks in homes so that women no longer must walk long distances daily to fetch water from springs or underground wells near the coastal area. Much of the ActionAid-WITTT work has occurred since 2020's TC Harold with a focus on "building back better," and the ActionAid Country Programme Manager acknowledged that, "We are leveraging crises as a moment of societal upheaval that creates an opening to drive gender-transformative change over the longer term, leaving no one behind." The partnership has also delivered loans and other financial resources to mothers, widows, single women, young girls, and women with disabilities to reduce vulnerability to violence that can result from financial and familiar stressors in the wake of disasters. Finally, learning from Fiji's femLINKpacific, WITTT facilitates Women Wetem Weta (Women's Weather Watch), a women-led communications platform that provides early disaster warning, health and violence prevention messages, and other practical information through SMS/text messages that reach over 25% of the population, and WITTT has worked with women living with disabilities to establish WITTT Sunshine, which focuses on the unique concerns of women and girls with disabilities and supports their collective efforts to ensure an inclusive humanitarian response.[352]

The Shifting the Power Coalition, a woman-led regional alliance focused on strengthening the collective power, leadership, and influence of Pacific women to respond to disasters and climate change includes members in Vanuatu; they are Action Aid Vanuatu, Vanuatu Young Women for Change, and Vanuatu Disability Promotion and Advocacy Association. One of the activities undertaken is training young women to translate scientific climate and disaster information into plain language and disseminate it to peers and other women's groups.[353]

CONCLUSION

Key elements in Vanuatu's disaster management organization and institutions shifted after TC Pam in 2015. Those shifts were put to the test during the double disaster of COVID-19 and TC Harold, which, together, devastated the country's economy. Even as the country recovered, it was struck again by tropical cyclones and earthquakes in early 2023. This succession of events underscores the challenge confronted by the country. It experiences and will continue to experience intense cyclones on a regular basis, hundreds of earthquakes every year, and frequent volcanic eruptions, and it is vulnerable to drought during the Pacific Ocean's temperature cycles. Moreover, global-scale shocks – economic, public health, etc. – can cause pain in Vanuatu, which relies on the global market for food, tourism revenue, and remittances from overseas workers. Thus, the country is unable to rebuild its strength and stores from one disaster event to the next and is, therefore, struggling to implement CCA because of its constant need to provide emergency assistance.

Reforms in disaster risk management have delivered stronger risk reduction, climate adaptation, and longer-term recovery strategies, plans, and stakeholder networks. NDMO, as the government agency responsible for coordinating preparedness and response, works closely with local and international stakeholders to help communities build resilience. Due to the immensity of this task, Vanuatu has integrated its CCA and DRR planning and activities into its engagements internationally. It cooperates with other Pacific Island states, and NDMO has close links with the VHT, PHT, and bilateral partners to ensure coordinated resource mobilization and response activity.

Regardless of the comprehensive nature of planning and preparedness activities, the country will continue to confront large-scale disasters due to the strength of storms and earthquakes that hit. When these do occur, the NDMO establishes and maintains the NEOC to ensure that all appropriate technical, political, and humanitarian experts have a hub for coordination. Since TC Pam in 2015, the Government has implemented a standing national cluster system that ensures that government, humanitarians, community groups, and the private sector all have a seat at the table to plan and execute disaster response. Each of the national clusters support their respective working group partners in each of the six provinces. NDMO can also call upon the VPF for support, especially in fire and rescue services, engineering, and security. Moreover, VPF is a key player in ensuring disaster communications networks are resilient and functioning ahead of emergencies. Additional hazard monitoring and early warning systems have been and continue to be developed to ensure the longest possible warning and preparation period before a quick-onset hazard strikes. For longer range forecasts for everything from drought to climate change, the country has established partnerships between its mass media and scientific agencies to ensure the most accurate and actionable information reaches the public and allows Ni-Vanuatu to consider ways to adapt, prepare, and act.

While it has developed institutions and plans to address both today's hazards and those of the near future, the scale of the impact of climate change is likely to outstrip Vanuatu's ability to act alone. Already, it regularly experiences high maximum temperatures that will be nudged higher, and marine heat waves in the Western Tropical Pacific will exacerbate heatwave duration and intensity, interacting with meteorological and hydrological droughts, sea level rise, increasingly intense cyclones, and a shifting disease profile that could undermine the already strained health care system. Under the VCCDRRP 2016-2030, the country does provide a framework for incorporating climate change into development processes and improving funding for the projects, both of which are explicitly related to bilateral and multilateral cooperation structures.

APPENDICES

DoD DMHA Engagements in the Past Seven Years (FY 2016-2023)

The list below describes the DMHA engagements that the U.S. has had with Vanuatu in the last seven years.

Pacific Angel 2018

The U.S. and Vanuatu conducted a humanitarian assistance engagement during Pacific Angel (PAC ANGEL) from 16 through 21 July 2018 in Luganville, Espiritu Santo Island. Approximately 65 U.S. military members trained with staff and personnel from Vanuatu, partner nations, and local NGOs, as illustrated in Photo 3. PAC ANGEL is an annual joint and combined exercise, which provides health and engineering programs and exercises HADR capabilities; the 2018 iteration involved the residents of two of Vanuatu's islands, Espiritu Santo and Tanna.[354] In addition to U.S. military personnel, participants included the VMF along with service members from Fiji, Papua New Guinea, and the Philippines.[355]



Photo 3: Pacific Angel 2018

Exercise Equateur 2017

Personnel from Australia, Canada, Fiji, France, Japan, New Zealand, Papua New Guinea, Tonga, the United Kingdom, the U.S., and Vanuatu participated in Exercise Equateur in September 2017. Leaders of the exercise are shown conferring in Photo 4. Members of the U.S. Army Reserve's 9th Mission Support Command collaborated during the exercise with NATO Allies and other partner nations to coordinate responses to a hypothetical natural disaster. Hosted at a French air force base in New Caledonia, this training helped to maintain U.S. relationships in the Pacific with allies and partners in order to learn their techniques and develop points of contacts for a real disaster. These contacts allow the U.S. to respond and assist if needed in case of a real-world disaster.[356]



Photo 4: Exercise Equateur 2017

Pacific Resilience Disaster Response Exercise and Exchange 2016

The Pacific Resilience Disaster Response Exercise and Exchange (DREE) was a civil-military disaster preparedness and response initiative. It included a scenario focused on a cyclone/multi-hazard event, designed to test Vanuatu's NEOC SOPs and to evaluate disaster management laws, procedures, and organizational structures. The DREE included government staff not only from Vanuatu but also from Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, and the U.S. The DREE also tested civil-military coordination and the Government of Vanuatu's ability to coordinate humanitarian assistance arriving from a variety of institutions and countries.[357] Photo 5 depicts Major Davis Ho, 9th

Mission Support Command, U.S. Army Reserve, as he received guidance from Major Arnold Vira, Vanuatu Police Operations Officer, during the group exercise of the DREE in August 2016.[358]



Photo 5: Vanuatu Pacific Disaster Response Exercise and Exchange

International/Foreign Relations

Vanuatu maintains relations with more than 65 countries, including but not limited to China, Cuba, Russia, the U.S., and Vietnam. Australia, France, China, and New Zealand also maintain embassies, high commissions, or missions in Port-Vila, Vanuatu.[359] The U.S. has a strong interest in establishing an Embassy in Vanuatu to deepen relationships with officials and society and to build bilateral cooperation and deliver development assistance, including climate change assistance.[360] In addition, within the context of the U.S.-Pacific Islands Partnership, launched in September 2022, U.S. Peace Corps volunteers were set to return to Vanuatu, and partnerships were being built in cultural and person-to-person links.[361]

Vanuatu is interested in using its international – bilateral and multilateral – ties to build the national economy by expanding enterprises that add value to local primary products and provide employment. The government sets up its own production companies or enters joint ventures with foreign investors who may also be joined by financial assistance from the Asian Development Bank, the World Bank, the International Monetary Fund, and the Agence de Cooperation Culturelle et Technique.

Vanuatu has strong economic and cultural ties to Australia, France, and New Zealand. Australia is Vanuatu's closest security partner, largest aid donor, and dominant trade and investment partner. As of 2021, Australia was investing an estimated AU$102 million (US$70 million) in Vanuatu and bilateral trade stood at nearly AU$150 million (US$103 million) although Australian exports to Vanuatu far outstrip Vanuatu exports to Australia by a ratio of approximately 5-to-1.[362] In addition to trade and direct investment, Australia is Vanuatu's largest bilateral development partner, providing over AU$119.5 million (US$82.1 million) in grant-based Official Development Assistance annually to support the development of effective governance systems and institutions, facilitate economic growth, and enable better-educated, healthier, and resilient Ni-Vanuatu. Australia actively supports Vanuatu's government responses to natural disasters, such as TCs Pam (2015) and Harold (2020). Most recently, Australia provided funding to help Vanuatu respond to COVID-19.

Australia and Vanuatu focus their security partnership on ensuring a safe and secure Pacific region based on the Boe Declaration on regional security. On 13 December 2022, Australia and Vanuatu signed a bilateral Security Agreement, which recognizes that security cooperation continues to adapt, including to address the implications of climate change, to help manage the human security effects of COVID-19, and to meet shared challenges across the full scope of the Boe Declaration in the realms of transnational crime, health, and environmental and cyber security. In 2021, under Australia's Pacific Maritime Security Program, Australia gifted a new Guardian-class patrol boat, RVS Takuare, to Vanuatu, and in December 2022, Australia handed over the newly redeveloped Mala Base Wharf and gifted police boat RVS Mataweli to Vanuatu. Australia also provides organizational and capacity building support to the VPF under the Vanuatu Australia Policing and Justice Program.[363]

The Indo-Pacific region is a hub for U.S.-China competition for global influence, and the U.S. and her allies consider Pacific Island Countries (PIC), like Vanuatu, vulnerable and susceptible to China's influence.[364] Vanuatu is surrounded by a large exclusive economic zone (EEZ), and Vanuatu is aware of the necessity of enforcing fisheries regulations in this EEZ, a task for which the U.S. Coast Guard and Navy are useful partners.[365] In 2016, the U.S. and Vanuatu signed a maritime law enforcement accord including shiprider and shipboarding provisions.[366] This agreement authorized U.S. warships to embark Vanuatuan law enforcement officials to enforce the country's laws within its EEZ. The agreement empowers officials from Vanuatu with limited assets to use allies' capacity to enforce domestic laws.[367]

Australia, Japan, New Zealand, the United Kingdom, and the U.S. launched the informal Partners in the Blue Pacific (PBP) mechanism in June 2022. The initiative is intended to promote "more effective and efficient cooperation in support of Pacific Island priorities," which include building prosperity, resilience, and security. PBP is based on the facts that Australia and New Zealand are already members of the Pacific Islands Forum (PIF), that Japan, the United Kingdom, and the U.S. were founding PIF Dialogue Partners, and that all of these countries maintain close people-to-people ties to and are longstanding development partners with the PICs. The PBP explicitly recognized the importance of principles of sovereignty, transparency, accountability, and being guided by the PICs themselves. The PBP aims to align the five countries' efforts to the PIF's 2050 Strategy for the Blue Pacific Continent, elevate Pacific regionalism, and expand opportunities for cooperation between the Pacific and the world. Based on advice from the Pacific Heads of Mission in Washington, DC, PBP's early emphases were expected to include the climate crisis, connectivity and transportation, maritime security and protection, health, prosperity, and education.[368]

Securing military and security bases in PICs is among China's regional foci, as expressed by Foreign Minister Wang Yi during a 10-nation trip to meet PIC counterparts in 2022. During his stop in Vanuatu, Wang netted the signing of a protocol between Vanuatu and China. The document provides for assistance, such as seabed mapping and surveying around the island country and nearby areas by China's Directorate of Hydrology. Wang also secured Vanuatu's agreement for twice weekly flights between China and Vanuatu.[369]

On the backdrop of great power competition in the broader region, Vanuatu has come to rely more on the PIF as a vehicle for action. PIF brings together 16 small island states along with Australia and New Zealand; there are an additional 21 Forum Dialogue Partners, which are countries outside of the Pacific Islands region but which have significant cooperation and engagement, and political or economic interests in the region. PIF's Dialogue Partner mechanism is intended to facilitate dialogue and build on the Forum leaders' priorities. The U.S. and China are both among Dialogue Partners.[370] Among the key issues Vanuatu has brought to its fellow PIF members is compelling international action on climate change. At the 51st PIF leaders' meeting in July 2022, members unanimously endorsed Vanuatu's initiative to secure an Advisory Opinion from the International Court of Justice on the legal obligations of states in protecting the human rights of current and future generation from the adverse impact of climate change.[371] This backing came even as the COVID-19 pandemic raged and U.S.-China rivalry made headlines. All of these issues are part of PIF's vision for regional development, the 2050 Strategy for the Blue Pacific Continent, which was also agreed upon at the 2022 leaders' meeting to ensure collective consultation and action on scientific research, information technology, e-commerce, education, and other initiatives to build regional resilience. Among the most developed of the 2050 strategy's tenets is the "Blue Economy," a concept for which Vanuatu even rearranged its own domestic bureaucracy by creating a Ministry of Fisheries, Oceans,

and Maritime Affairs. Although the Dialogue Partners meeting that would normally coincide with the leaders' meeting was cancelled in 2022, it was at this time that China's Foreign Minister held his own virtual meeting with 10 Pacific Island counterparts.[372]

Participation in International Organizations

Vanuatu is a member of, participates in, or cooperates with the following international organizations and agreement frameworks either as a government or via a national NGO or other entity:

African, Caribbean, and Pacific States (ACP), Alliance of Small Island States (AOSIS), Asian Development Bank (ADB), Commonwealth, Food and Agriculture Organization of the United Nations (FAO), Group of 77 (G-77), International Bank for Reconstruction and Development (IBRD), International Civil Aviation Organization (ICAO), International Development Association (IDA), International Finance Corporation (IFC), International Federation of Red Cross and Red Crescent Societies (IFRC), International Labour Organization (ILO), International Maritime Organization (IMO), International Mobil Satellite Organization (IMSO), International Monetary Fund (IMF), International Olympic Committee (IOC), International Organization for Migration of the UN (IOM), International Organization of La Francophonie (OIF), International Telecommunications Union (ITU), International Trade Union Confederation (ITUC-NGOs), Institute of Catastrophe Risk Management (ICRM), Multilateral Investment Guarantee Agency (MIGA), Non-Aligned Movement (NAM), Organisation for the Prohibition of Chemical Weapons (OPCW), Organization of American States (OAS, observer), Pacific Community (Secretariat of – SPC), Pacific Islands Forum (PIF), South Pacific Regional Trade and Economic Cooperation Agreement (Sparteca), United Nations (UN), UN Conference on Trade and Development (UNCTAD), UN Educational, Scientific, and Cultural Organization (UNESCO), UN Industrial Development Organization (UNIDO), Universal Postal Union (UPU), World Customs Organization (WCO), The World Federation of Trade Unions (WFTU NGOs), World Health Organization (WHO), World Intellectual Property Organization (WIPO), World Meteorological Organization (WMO), World Tourism Organization (UNWTO), World Trade Organization (WTO).

Force Protection/Pre-Deployment Information

The following information is provided for pre-deployment planning and preparations. Visit *www.travel.state.gov* prior to deployments for further up-to-date information.[373] DoD personnel must review the Foreign Clearance Guide (FCG) for travel to Vanuatu (*www.fcg.pentagon.mil*). All official travel and personal travel for active-duty personnel must be submitted through an APACS request. Contact information for the Defense Attaché Office can be found in the FCG if you have additional questions.

Passport/Visa

To enter Vanuatu, U.S. citizens need a valid passport, onward ticket, and proof of sufficient funds. Tourist visas are not required for stays of up to 30 days. For stays longer than 30 days, visitors may apply for a standard residence permit or for an extension of stay for up to 120 days at the Immigration Office. This application should be made before the initial 30-day period expires. Contact the Principal Immigration Officer, Immigration Department, at +678-22354.

Safety and Security

Civil disorder in Vanuatu is relatively rare; however, visitors should avoid public demonstrations and/or political rallies if they occur. Although violent crime is also relatively

rare, there is always a risk of theft, burglary, sexual harassment, or sexual assault. Visitors should take reasonable precautions to avoid undue risk, especially in tourist areas. Women should avoid going out alone at night or to isolated locations. The U.S. Embassy has received some reports of ATM or credit card number theft after a card was used in Vanuatu. While this does not appear to be widespread, travelers are advised to monitor their accounts after using their ATM or credit cards in Vanuatu for any unauthorized activity.

U.S. citizen victims of sexual assault should contact the U.S. Embassy in Port Moresby, Papua New Guinea, for assistance at +675-308-2100. Report crimes to the local police at 1111 or non-emergency +678-2222 in Port Vila and +678-36222 in Santo, and contact the U.S. Embassy in Port Moresby, Papua New Guinea, at +675-308-2100. Remember that local authorities are responsible for investigating and prosecuting crime.

The U.S. Embassy can:

- Help find appropriate medical care
- Assist in reporting crime to the police
- Contact relatives or friends with victim's written consent
- Provide general information regarding the victim's role during the local investigation and following its conclusion
- Provide a list of attorneys
- Provide our information on victim's compensation programs in the United States
- Provide an emergency loan for repatriation to the United States and/or limited medical support in cases of destitution
- Help find accommodation and arrange flights homes
- Replace a stolen or lost passport.

Tourism: The tourism industry is unevenly regulated, and safety inspections for equipment and facilities do not commonly occur. Hazardous areas/activities are not always identified with appropriate signage, and staff may not be trained or certified either by the host government or by recognized authorities in the field. In the event of an injury, appropriate medical treatment is typically available only in/near major cities. First responders are generally unable to access areas outside of major cities and to provide urgent medical treatment. U.S. citizens are encouraged to purchase medical evacuation insurance. See our webpage for more information on insurance providers for overseas coverage.

Emergency Contact Information

The U.S. does not have an embassy in Vanuatu although it does have diplomatic relations with the Government of Vanuatu. The Charge d'Affaires, ad interim, in Papua New Guinea is accredited to Vanuatu.[374]

U.S. Embassy Port Moresby
Harbour City Road, Konedobu
Port Moresby, NCD, 121
Papua New Guinea
Tel: +675-308-9100
Emergency: +675-7200-9439
Fax: +675-321-1593
Email: *ConsularPortMoresby@state.gov*

Currency Information

Vatu (VT or VUV)
VT1.00 = US$0.0085 or VT117.79 = US$1.00 (as of 8 May 2023)

Travel Health Information

The U.S. Centers for Disease Control and Prevention (CDC) provides guidance that all travelers to Vanuatu should be up to date on routine vaccinations. The following are additional recommendations for travel to Vanuatu. The information in Tables 3 and 4 is taken directly from the CDC website under the Travelers Health Section *(https://wwwnc.cdc.gov/travel/destinations/list/)*.[375]

Health Alerts: At the time of writing this handbook (May 2023), there are no health risk alerts for Vanuatu.

Routine Vaccines	Be up-to-date on all routine vaccines before every trip. Some of these vaccines include: • Chickenpox (Varicella) • Diphtheria-Tetanus-Pertussis • Flu (influenza) • Measles-Mumps-Rubella (MMR) • Polio • Shingles
COVID-19	All eligible travelers should be up to date with their COVID-19 vaccines.
Hepatitis A	Recommended for unvaccinated travelers one year old or older going to Vanuatu. Infants 6-11 months old should also be vaccinated; the dose does not count toward the routine 2-dose series. Travelers allergic to a vaccine component or who are younger than 6 months should receive a single dose of immune globulin, which provides effective protection for up to 2 months depending on dosage given. Unvaccinated travelers who are over 40 years old, immunocompromised, or have chronic medical conditions and who are planning to depart to a risk area in less than 2 weeks should get the initial dose of vaccine and at the same appointment receive immune globulin.
Hepatitis B	Recommended for unvaccinated travelers of all ages traveling to Vanuatu.
Malaria	Malaria is present throughout Vanuatu; the strain present in the country is chloroquine resistant. Travelers going to Vanuatu should take prescription medicine to prevent malaria. Depending on the medicine, travelers may need to start taking this medicine multiple days before departure, as well as during and after the trip.
Measles	Infants 6 to 11 months old traveling internationally should get 1 dose of measles-mumps-rubella (MMR) vaccine before travel. This dose does not count as part of the routine childhood vaccination series.
Typhoid	Recommended for most travelers, especially those staying with friends or relatives or visiting smaller cities or rural areas.

Table 3: Advice for Vaccine-Preventable Diseases in Vanuatu

Dengue	Dengue is transmitted by the bite of a mosquito; to avoid exposure, avoid bug bites.
Hantavirus	Hanta is transmitted when one breathes in air or accidentally eats food contaminated with the urine, droppings, or saliva of infected rodents, by the bite of an infected rodent, or, less commonly, by being around someone sick with hantavirus. To avoid exposure, avoid rodents and areas where they live, and avoid sick people.
Leptospirosis	A person can contract leptospirosis by touching urine or other body fluids from an animal infected with leptospirosis, by swimming or wading in urine-contaminated fresh water, by contact with urine-contaminated mud, or by drinking water or eating food contaminated with animal urine. To avoid exposure, avoid contaminated water or soil.
Tuberculosis (TB)	TB can be contracted by breathing in TB bacteria that is in the air from an infected and contagious person coughing, speaking, or singing. To avoid exposure, avoid sick people.
Zika	Zika is spread by the bite of a carrier mosquito. An infected pregnant woman may also spread it to her unborn baby. To avoid exposure, avoid bug bites.

Table 4: Advice for Non-Vaccine-Preventable Diseases in Vanuatu

The following actions you can take to stay healthy and safe on your trip include:

Eat and Drink Safely

Unclean food and water can cause travelers' diarrhea and other diseases. Reduce your risk by sticking to safe food and water habits.

Eat

- Food that is cooked and served hot
- Hard-cooked eggs
- Fruits and vegetables, you have washed in clean water or peeled yourself
- Pasteurized dairy products

Don't Eat

- Food served at room temperature
- Food from street vendors
- Raw or soft-cooked (runny) eggs
- Raw or undercooked (rare) meat or fish
- Unwashed or unpeeled raw fruits and vegetables

- Unpasteurized dairy products
- "Bushmeat" (monkeys, bats, or other wild game)

Drink
- Bottled water that is sealed
- Water that has been disinfected
- Ice made with bottled or disinfected water
- Carbonated drinks
- Hot coffee or tea
- Pasteurized milk

Don't Drink
- Tap or well water
- Ice made with tap or well water
- Drinks made with tap or well water (such as reconstituted juice)
- Unpasteurized milk

Take Medicine

Talk with your doctor about taking prescription or over-the-counter drugs with you on your trip in case you get sick. If you are going to a high-risk area, fill your malaria prescription before you leave, and take enough with you for the entire length of your trip. Follow your doctor's instructions for taking the pills; some need to be started before you leave.

Prevent Bug Bites

Bugs (like mosquitoes, ticks, and fleas) can spread a number of diseases in Vanuatu. Many of these diseases cannot be prevented with a vaccine or medicine. You can reduce your risk by taking steps to prevent bug bites.

To prevent bug bites:
- Cover exposed skin by wearing long-sleeved shirts, long pants, and hats.
- Use an appropriate insect repellent (see below).
- Use permethrin-treated clothing and gear (such as boots, pants, socks, and tents). Do not use permethrin directly on skin.
- Stay and sleep in air-conditioned or screened rooms.
- Use a bed net if the area where you are sleeping is exposed to the outdoors.

For protection against ticks and mosquitoes:

Use a repellent that contains 20 percent or more DEET for protection that lasts up to several hours.

For protection against mosquitoes only:

Products with one of the following active ingredients can also help prevent mosquito bites. Higher percentages of active ingredient provide longer protection.
- DEET
- Picaridin (also known as KBR 3023, Bayrepel, and Icaridin)
- Oil of lemon eucalyptus (OLE) or para-Menthane-3,8-diol (PMD)
- IR3535
- 2-undecanone

If you are bitten by bugs:
- Avoid scratching bug bites and apply hydrocortisone cream or calamine lotion to reduce the itching.
- Check your entire body for ticks after outdoor activity. Be sure to remove ticks properly.

Sendai Framework

The Sendai Framework for Disaster Risk Reduction 2015-2030 is the global blueprint and 15-year plan to build the world's resilience to natural disasters.[376] The Sendai Framework is the successor instrument to the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.[377] Adopted at the Third United Nations World Conference on Disaster Risk Reduction in Sendai, Japan, in 2015, the Framework aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries over the next 15 years.[378]

The Framework outlines seven targets and four priorities for action to prevent new and reduce existing disaster risks.

The Seven Global Targets include:

- Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality rates in the decade 2020-2030 compared to the period 2005-2015.
- Substantially reduce the number of affected people globally by 2030, aiming to lower average global figure per 100,000 in the decade 2020 -2030 compared to the period 2005-2015.
- Reduce direct disaster economic loss in relation to global GDP by 2030.
- Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.
- Substantially increase the number of countries with national and local DRR strategies by 2020.
- Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework by 2030.
- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.[379]

The Four Priorities of Action include:

- Understanding disaster risk
- Strengthening disaster risk governance to manage disaster risk
- Investing in disaster reduction for resilience; and
- Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation, and reconstruction.

Figure 13 shows the Sendai DRR Framework.[380]

Based on as assessment by the UNDRR with support from the Asian Disaster Preparedness Center (ADPC) in 2022, Vanuatu has made the following advances toward Sendai Framework priorities.

Priority 1. Understanding Disaster Risk. Vanuatu has long worked with various agencies, from the private sector to NGOs, to collect data to support monitoring and analyzing risk. The country has been keeping average temperature records for Efate since 1949 and for Luganville since 1973; these temperature records show a gradual increase in temperature in the country's south alongside a decrease in overall rainfall. It has also conducted assessments for key sectors - e.g., agriculture and health. Other assessments to help understand disaster risk include one by the Pacific Islands Renewable Energy Programme (PIREP), which looked at key energy issues and barriers to the development of renewable energy. The Pacific Islands Energy Policies and Strategic Action Planning (PIEPSAP) Project also supported the development of energy policies and an action plan to implement these new policies.

Priority 2. Strengthening Disaster Risk Governance to Manage Disaster Risk. The National Disaster Act (also known as the National Disaster Risk Management Act) was published in 2000 and established the NDMO,

National Disaster Committee (NDC), Provincial Disaster and Climate Change Committee, and Municipal Disaster and Climate Change Committee. The Act was reviewed in 2016, and that review was published in 2019. The Vanuatu Climate Change and Disaster Risk Reduction Policy (2016- 2030) provides a framework for CCA and DRR implementation by laying out clear priorities for action, and it promotes the engagement of all groups in society and stakeholders. The People's Plan (also known as the National Sustainable Development Plan 2016-2030) is the highest-level policy framework developed to provide an overarching policy framework for achieving sustainability.

Priority 3. Investing in Disaster Risk Reduction for Resilience. The Government has emphasized implementing economic, fiscal, and financial policies that help achieve priority outcomes. Improving infrastructure is expected to receive 20% of the budget to address the challenges posed by the fact that 90% of infrastructure, measured in economic terms, is located 500 m (550 yards) from the coastline. Actions will include improving access to energy and electricity in rural areas and continuing support of the National Green Energy Fund to promote solar, hydropower, and other renewable energy sources. Vanuatu has also funded disaster risk management through Provincial Council Expenditure and Donor funding. In 2016, Vanuatu received a US$23 million grant from the Green Climate Fund to strengthen Climate Information Services (CIS) in the tourism, agriculture, infrastructure, water, and fisheries sectors. The grant aims to build technical capacity to help manage climate data and develop the CIS tool and resources with the MOCCA taking the lead in the implementation (2018-2022). The World Bank invested around US$10 million through the Disaster Risk Management Development Policy Grant with a Catastrophe Deferred Drawdown Option in 2019. The fund's primary goal is to support Vanuatu in enhancing the framework and institutional capacity to manage and become resilient to disasters and climate change and help manage the public debt. Another example is US$1.2 million in funding from the Global Facility for Disaster Reduction and Recovery for the Global Programme for Safer Schools to promote investments in safety and resilience in new and current school infrastructure at risk from disasters.

Priority 4. Enhancing disaster preparedness for effective response to "build back better" in recovery, rehabilitation, and reconstruction. Following TC Pam and the volcanic eruption on Ambae, farmers were supported by a new provincial breeding center where resilient animals could breed quickly and produce multiple offspring. These new animals could be sold much quicker at a reduced rate in the community. The Department of Fisheries created a fish nursery that provided tilapia to inland communities who lacked access. Furthermore, farmers received seedlings from the Department of Forestry who employed women and individuals with disabilities to collect the hardwood seeds to help improve the economic development and employment opportunities. These seeds were flown to a nursery in Port-Vila, planted, and distributed to other communities for reconstruction of forests. Additional "Building Back Better" themes after TC Pam included renovations to the Market House in Luganville in 2019 to improve its resilience to the impacts of natural hazards and climate change events; the renovation included a cyclone-resistant roof, more durable flooring, and a new water drainage system. The Governments of Vanuatu and New Zealand also collaborated to strengthen the seafront of Port-Vila after TC Pam.[381]

Chart of the Sendai Framework for Disaster Risk Reduction
2015-2030

Scope and Purpose
The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological, and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors
Expected Outcome
The substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries
Goal
Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political, and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

Targets						
Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality during 2020-2030 compared to 2005-2015	Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 during 2020-2030 compared to 2005-2015	Reduce direct disaster economic loss in relation to global GDP by 2030	Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030	Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020	Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030	Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030

Priorities for Action			
There is a need for focused action within and across sectors by States at local, national, regional, and global levels in the following four priority areas.			
Priority 1 Understanding disaster risk	**Priority 2** Strengthening disaster risk governance to manage disaster risk	**Priority 3** Investing in disaster risk reduction for resilience	**Priority 4** Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation, and reconstruction
Disaster risk management needs to be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics, and the environment	Disaster risk governance at the national, regional, and global levels is vital to the management of disaster risk reduction in all sectors and ensuring the coherence of national and local frameworks of laws, regulations, and public policies that, by defining roles and responsibilities, guide, encourage, and incentivize the public and private sectors to take action and address disaster risk	Public and private investment in disaster risk prevention and reduction through structural is non-structural measures are essential to enhance the economic, social, health, and cultural resilience of persons, communities, countries, and their assets, as well as the environment. These can be drivers of innovation, growth, and job creation. Such measures are cost-effective and instrumental to save lives, prevent and reduce losses, and ensure effective recovery and rehabilitation	Experience indicates that disaster preparedness needs to be strengthened for more effective response and to ensure capacities are in place for effective recovery. Disasters have also demonstrated that the recovery, rehabilitation, and reconstruction phase, which needs to be prepared ahead of the disaster, is an opportunity to "Build Back Better" through integrating disaster risk reduction measures. Women and persons with disabilities should publicly lead and promote gender-equitable and universally accessible approaches during the response and reconstruction phases

Figure 13: UN Sendai Framework for Disaster Risk Reduction 2015-2030

Country Profile

The information in the Country Profile section is sourced directly from the CIA World Factbook entry for Vanuatu. Additional numbers on country comparison to the world can be found by going directly to the CIA website (https:/www.cia.gov). It discusses topics including geography, people and society, government, economy, energy, communications, military and security, transportation, terrorism, and transnational issues.[382]

Background

Vanuatu was first settled around 2000 B.C. by Austronesian speakers from Solomon Islands. By around 1000, localized chieftain systems began to develop on the islands. In the mid-1400s, the Kuwae Volcano erupted, causing frequent conflict and internal strife amid declining food availability, especially on Efate Island. Around 1600, Chief ROI MATA united Efate under his rule. In 1606, Portuguese explorer Pedro Fernandes de QUEIROS was the first European to see the Banks Islands and Espiritu Santo, setting up a short-lived settlement on the latter. The next European explorers arrived in the 1760s, and in 1774, British navigator James COOK named the islands the New Hebrides. The islands were frequented by whalers in the 1800s and interest in harvesting the islands' sandalwood trees caused conflict between Europeans and local Ni-Vanuatu. Catholic and Protestant missionaries arrived in the 1840s but faced difficulties converting the locals. In the 1860s, European planters in Australia, Fiji, New Caledonia, and Samoa needed labor and kidnapped almost half the adult males of the islands and forced them to work as indentured servants.

With growing and overlapping interests in the islands, France and the UK agreed that the New Hebrides would be neutral in 1878 and established a joint naval commission in 1887. In 1906, the two countries created the British-French Condominium to jointly administer the islands and they established separate laws, police forces, currencies, and education and health systems. The condominium arrangement was dysfunctional, and the UK used France's defeat to Germany in World War II to assert greater control over the islands. As Japan pushed into Melanesia, the US stationed up to 50,000 soldiers in Vanuatu to prevent further advances. In 1945, US troops withdrew and sold their equipment, leading to the rise of political and religious cargo cults, such as the John Frum movement.
The France-UK condominium was reestablished after World War II. The UK was interested in moving the condominium toward independence in the 1960s, but France was hesitant and political parties agitating independence began to form, largely divided along linguistic lines. France eventually relented and elections were held in 1974 with independence granted in 1980 as Vanuatu under English-speaking Prime Minister Walter LINI. At independence, the Nagriamel Movement, with support from French-speaking landowners, declared Espiritu Santo independent, but the short-lived state was dissolved 12 weeks later. Linguistic divisions have lessened over time, but highly fractious political parties have led to weak coalition governments that require support from both Anglophone and Francophone parties. Since 2008, prime ministers have been ousted through no-confidence motions or temporary procedural issues 10 times.

Geography

Location

Oceania, group of islands in the South Pacific Ocean, about three-quarters of the way from Hawaii to Australia

Geographic coordinates

16 00 S, 167 00 E

Area
total: 12,189 sq km
land: 12,189 sq km
water: 0 sq km
note: includes more than 80 islands, about 65 of which are inhabited
country comparison to the world: 162

Area - comparative
slightly larger than Connecticut

Land boundaries
total: 0 km

Coastline
2,528 km

Maritime claims
territorial sea: 12 nm
contiguous zone: 24 nm
exclusive economic zone: 200 nm
continental shelf: 200 nm or to the edge of the continental margin
measured from claimed archipelagic baselines

Climate
tropical; moderated by southeast trade winds from May to October; moderate rainfall from November to April; may be affected by cyclones from December to April

Terrain
mostly mountainous islands of volcanic origin; narrow coastal plains

Elevation
highest point: Tabwemasana 1,877 m
lowest point: Pacific Ocean 0 m

Natural resources
manganese, hardwood forests, fish

Land use
agricultural land: 15.3% (2018 est.)
arable land: 1.6% (2018 est.)
permanent crops: 10.3% (2018 est.)
permanent pasture: 3.4% (2018 est.)
forest: 36.1% (2018 est.)
other: 48.6% (2018 est.)

Irrigated land
0 sq km (2022)

Population distribution
three-quarters of the population lives in rural areas; the urban populace lives primarily in two cities, Port-Vila and Lugenville; three largest islands - Espiritu Santo, Malakula, and Efate - accommodate over half of the populace

Natural hazards
tropical cyclones (January to April); volcanic eruption on Aoba (Ambae) island began on 27 November 2005, volcanism also causes minor earthquakes; tsunamis
volcanism: significant volcanic activity with multiple eruptions in recent years; Yasur (361 m), one of the world's most active volcanoes, has experienced continuous activity in recent centuries; other historically active volcanoes include Aoba, Ambrym, Epi, Gaua, Kuwae, Lopevi, Suretamatai, and Traitor's Head
Geography – note: a Y-shaped chain of four main islands and 80 smaller islands; several of the islands have active volcanoes and there are several underwater volcanoes

People and Society

Population
313,046 (2023 est.)
country comparison to the world: 179

Nationality
noun: Ni-Vanuatu (singular and plural)
adjective: Ni-Vanuatu

Ethnic groups
Melanesian 99.2%, non-Melanesian 0.8% (2016 est.)

Languages
local languages (more than 100) 63.2%, Bislama (official; creole) 33.7%, English (official) 2%, French (official) 0.6%, other 0.5% (2009 est.)

Religions
Protestant 70% (includes Presbyterian 27.9%, Anglican 15.1%, Seventh Day Adventist 12.5%, Assemblies of God 4.7%, Church of Christ 4.5%, Neil Thomas Ministry 3.1%, and Apostolic 2.2%), Roman Catholic 12.4%, customary beliefs 3.7% (including Jon Frum cargo cult), other 12.6%, none 1.1%, unspecified 0.2% (2009 est.)

Age structure
0-14 years: 31.73% (male 50,721/female 48,607)
15-64 years: 63.41% (male 97,376/female 101,135)
65 years and over: 4.86% (2023 est.) (male 7,486/female 7,721)
Figure 14 shows the population pyramid for Vanuatu. A population pyramid illustrates the age and sex ratios of the country's population.[383]

Dependency ratios
total dependency ratio: 76.5
youth dependency ratio: 69.9
elderly dependency ratio: 12.3
potential support ratio: 15.2 (2021 est.)

Median age
total: 23 years
male: 22.6 years
female: 23.5 years (2020 est.)
country comparison to the world: 179

Population growth rate
1.59% (2023 est.)
country comparison to the world: 58

Birth rate
21.19 births/1,000 population (2023 est.)
country comparison to the world: 61

Death rate
3.99 deaths/1,000 population (2023 est.)
country comparison to the world: 214

Net migration rate
-1.28 migrant(s)/1,000 population (2023 est.)
country comparison to the world: 153

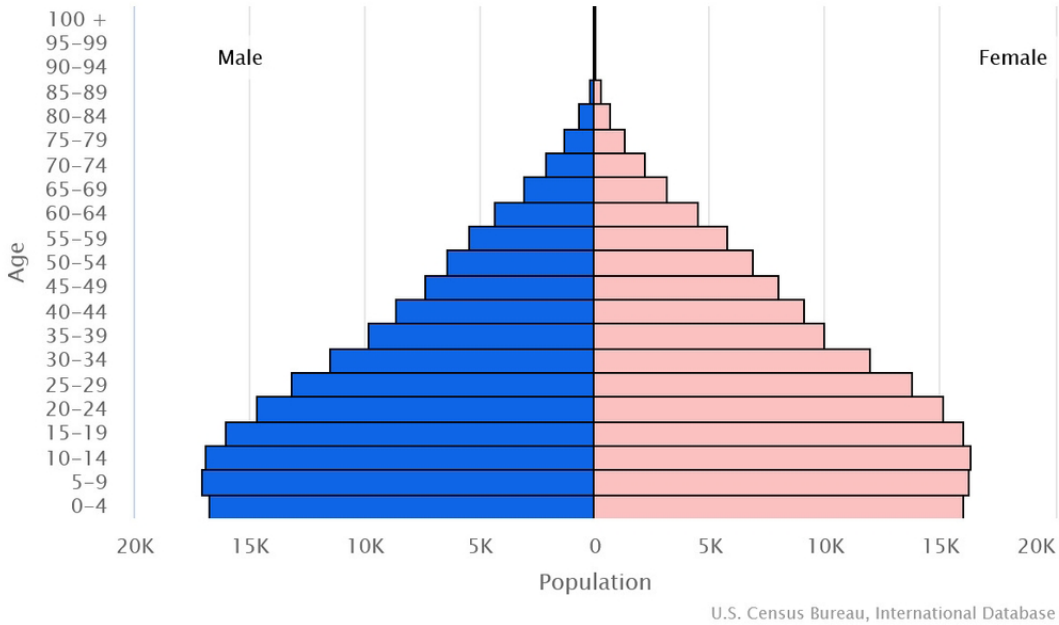


Figure 14: Population Pyramid, Vanuatu (2023)

Population distribution
three-quarters of the population lives in rural areas; the urban populace lives primarily in two cities, Port-Vila and Lugenville; three largest islands - Espiritu Santo, Malakula, and Efate - accommodate over half of the populace

Urbanization
urban population: 26% of total population (2023)
rate of urbanization: 2.55% annual rate of change (2020-25 est.)
total population growth rate v. urban population growth rate, 2000-2030

Major urban areas - population
53,000 PORT-VILA (capital) (2018)

Sex ratio
at birth: 1.05 male(s)/female
0-14 years: 1.04 male(s)/female
15-64 years: 0.96 male(s)/female
65 years and over: 0.97 male(s)/female
total population: 0.99 male(s)/female (2023 est.)

Maternal mortality ratio
94 deaths/100,000 live births (2020 est.)
country comparison to the world: 72

Infant mortality rate
total: 14 deaths/1,000 live births
male: 15.38 deaths/1,000 live births
female: 12.56 deaths/1,000 live births (2023 est.)
country comparison to the world: 105

Life expectancy at birth
total population: 75.4 years
male: 73.72 years
female: 77.17 years (2023 est.)
country comparison to the world: 129

Total fertility rate
2.59 children born/woman (2023 est.)
country comparison to the world: 63

Gross reproduction rate
1.26 (2023 est.)

Contraceptive prevalence rate
49% (2013)

Drinking water source
improved: urban: 100% of population
rural: 89.7% of population
total: 92.3% of population
unimproved: urban: 0% of population
rural: 10.3% of population
total: 7.7% of population (2020 est.)

Current health expenditure
4% of GDP (2020)

Physicians density
0.17 physicians/1,000 population (2016)

Sanitation facility access
improved: urban: 91.1% of population
rural: 60.4% of population
total: 68.2% of population
unimproved: urban: 8.9% of population
rural: 39.6% of population
total: 31.8% of population (2020 est.)

HIV/AIDS - adult prevalence rate
NA

Obesity - adult prevalence rate
25.2% (2016)
country comparison to the world: 52

Alcohol consumption per capita
total: 1.6 liters of pure alcohol (2019 est.)
beer: 0.34 liters of pure alcohol (2019 est.)
wine: 0.39 liters of pure alcohol (2019 est.)
spirits: 0.87 liters of pure alcohol (2019 est.)
other alcohols: 0 liters of pure alcohol (2019 est.)
country comparison to the world: 136

Tobacco use
total: 17.8% (2020 est.)
male: 33% (2020 est.)
female: 2.6% (2020 est.)
country comparison to the world: 94

Children under the age of 5 years underweight
11.7% (2013)
country comparison to the world: 51

Currently married women (ages 15-49)
69.2% (2023 est.)

Education expenditures
2.2% of GDP (2020 est.)
country comparison to the world: 183

Literacy
definition: age 15 and over can read and write
total population: 89.1%
male: 89.8%
female: 88.4% (2021)

Youth unemployment rate (ages 15-24)
total: 5.4%
male: 5.2%
female: 5.6% (2021 est.)

Environment

Environment - current issues
population growth; water pollution, most of the population does not have access to a reliable supply of potable water; inadequate sanitation; deforestation

Environment - international agreements
party to: Antarctic-Marine Living Resources, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Climate Change-Paris Agreement, Comprehensive Nuclear Test Ban, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping-London Convention, Marine Dumping-London Protocol, Ozone Layer Protection, Ship Pollution, Wetlands
signed, but not ratified: none of the selected agreements

Air pollutants
particulate matter emissions: 10.31 micrograms per cubic meter (2016 est.)
carbon dioxide emissions: 0.15 megatons (2016 est.)
methane emissions: 0.5 megatons (2020 est.)

Climate
tropical; moderated by southeast trade winds from May to October; moderate rainfall from November to April; may be affected by cyclones from December to April

Land use
agricultural land: 15.3% (2018 est.)
arable land: 1.6% (2018 est.)
permanent crops: 10.3% (2018 est.)
permanent pasture: 3.4% (2018 est.)
forest: 36.1% (2018 est.)
other: 48.6% (2018 est.)

Urbanization
urban population: 26% of total population (2023)
rate of urbanization: 2.55% annual rate of change (2020-25 est.)
total population growth rate v. urban population growth rate, 2000-2030

Revenue from forest resources
0.54% of GDP (2018 est.)
country comparison to the world: 64

Revenue from coal
0% of GDP (2018 est.)
country comparison to the world: 185

Waste and recycling
municipal solid waste generated annually: 70,225 tons (2012 est.)
municipal solid waste recycled annually: 25,983 tons (2013 est.)
percent of municipal solid waste recycled: 37% (2013 est.)

Total renewable water resources
10 billion cubic meters (2019 est.)

Government

Country name
conventional long form: Republic of Vanuatu
conventional short form: Vanuatu
local long form: Ripablik blong Vanuatu
local short form: Vanuatu
former: New Hebrides
etymology: derived from the words "vanua" (home or land) and "tu" (stand) that occur in several of the Austronesian languages spoken on the islands and which provide a meaning of "the land remains" but which also convey a sense of "independence" or "our land"

Government type
parliamentary republic

Capital
name: Port-Vila (on Efate)
geographic coordinates: 17 44 S, 168 19 E
time difference: UTC+11 (16 hours ahead of Washington, DC, during Standard Time)
etymology: there are two possibilities for the origin of the name: early European settlers were Portuguese and "vila" means "village or town" in Portuguese, hence "Port-Vila" would mean "Port Town"; alternatively, the site of the capital is referred to as "Efil" or "Ifira" in native languages, "Vila" is a likely corruption of these names

Administrative divisions
6 provinces; Malampa, Penama, Sanma, Shefa, Tafea, Torba

Independence
30 July 1980 (from France and the UK)

National holiday
Independence Day, 30 July (1980)

Constitution
history: draft completed August 1979, finalized by constitution conference 19 September 1979, ratified by French and British Governments 23 October 1979, effective 30 July 1980 at independence
amendments: proposed by the prime minister or by the Parliament membership; passage requires at least two-thirds majority vote by Parliament in special session with at least three fourths of the membership; passage of amendments affecting the national and official languages, or the electoral and parliamentary system also requires approval in a referendum; amended several times, last in 2013

Legal system
mixed legal system of English common law, French law, and customary law

International law organization participation
has not submitted an ICJ jurisdiction declaration; accepts ICCt jurisdiction

Citizenship
citizenship by birth: no
citizenship by descent only: both parents must be citizens of Vanuatu; in the case of only one parent, it must be the father who is a citizen
dual citizenship recognized: no
residency requirement for naturalization: 10 years

Suffrage
18 years of age; universal

Executive branch
chief of state: President Nikenike VUROBARAVU (since 23 July 2022)
head of government: Prime Minister Ishmael KALSAKAU (since 4 November 2022)
cabinet: Council of Ministers appointed by the prime minister, responsible to Parliament
elections/appointments: president indirectly elected by an electoral college consisting of Parliament and presidents of the 6 provinces; Vanuatu president serves a 5-year term; election last held on 23 July 2022 (next to be held in 2027); following legislative elections, the leader of the majority party or majority coalition usually elected prime minister by Parliament from among its members; election for prime minister last held on 20 April 2020 (next to be held

following general elections in 2024)
election results: Nikenike VUROBARAVU elected president in the eighth round on 23 July 2022 with 48 votes; Ishmael KALSAKAU (UMP) elected prime minister on 4 November 2022 with 50 votes

Legislative branch
description: unicameral Parliament (52 seats; members directly elected in 8 single-seat and 9 multi-seat constituencies by single non-transferable vote to serve 4-year terms (candidates in multi-seat constituencies can be elected with only 4% of the vote)
elections: last held on 13 October 2022 (next to be held in 2026)
election results: percent of vote by party - NA; seats by party - UMP 7, VP 7, LPV 5, RMC 5, GJP 4, NUP 4, RDP 4, IG 3, PPP 2, VNDP 2, NAG 1, VLM 1, other 6, independent 1; composition - men 51, women 1; percent of women 2%; note - political party associations are fluid
note: the National Council of Chiefs advises on matters of culture and language

Judicial branch
highest court(s): Court of Appeal (consists of 2 or more judges of the Supreme Court designated by the chief justice); Supreme Court (consists of the chief justice and 6 puisne judges - 3 local and 3 expatriate)
judge selection and term of office: Supreme Court chief justice appointed by the president after consultation with the prime minister and the leader of the opposition; other judges appointed by the president on the advice of the Judicial Service Commission, a 4-member advisory body; judges serve until the age of retirement
subordinate courts: Magistrates Courts; Island Courts

Political parties and leaders
Green Confederation or GC [Moana CARCASSES Kalosil]
Iauko Group or IG [Tony NARI]
Land and Justice Party (Graon mo Jastis Pati) or GJP [Ralph REGENVANU]
Melanesian Progressive Party or MPP [Barak SOPE]
Nagriamel Movement or NAG [Frankie STEVENS]
Natatok Indigenous People's Democratic Party or NATATOK or NIPDP [Alfred Roland CARLOT]
National United Party or NUP [Ham LINI]
People's Progressive Party or PPP [Sato KILMAN]
People's Service Party or PSP [Don KEN]
Reunification of Movement for Change or RMC [Charlot SALWAI]
Rural Development Party or RDP [Jay NGWELE, spokesman]
Union of Moderate Parties or UMP [Alatoi Ishmael KALSAKAU]
Vanua'aku Pati (Our Land Party) or VP [Bob LOUGHMAN]
Vanuatu Democratic Party [Maxime Carlot KORMAN]
Vanuatu First or Vanuatu [Russel NARI]
Vanuatu Liberal Democratic Party or VLDP [Tapangararua WILLIE]
Vanuatu Liberal Movement or VLM [Gaetan PIKIOUNE]
Vanuatu National Development Party or VNDP [Robert Bohn SIKOL]
Vanuatu National Party or VNP [Issac HAMARILIU]
Vanuatu Republican Party or VRP [Marcellino PIPITE]

International organization participation
ACP, ADB, AOSIS, C, FAO, G-77, IBRD, ICAO, ICRM, IDA, IFC, IFRCS, ILO, IMF, IMO, IMSO, IOC, IOM, ITU, ITUC (NGOs), MIGA, NAM, OAS (observer), OIF, OPCW, PIF, Sparteca, SPC, UN, UNCTAD, UNESCO, UNIDO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO

Diplomatic representation in the US
chief of mission: Ambassador Odo TEVI (since 8 September 2014)
note - also Permanent Representative to the UN
Tel +1-212-661-4303
Fax: +1-212-422-3427
Email: *vanunmis@aol.com*
Web: *https://www.un.int/vanuatu/*
embassy: 800 Second Avenue, Suite 400B, New York, NY 10017
note - the Vanuatu Permanent Mission to the UN serves as the embassy

Diplomatic representation from the US
embassy: the US does not have an embassy in Vanuatu; the US Ambassador to Papua New Guinea is accredited to Vanuatu

Flag description
two equal horizontal bands of red (top) and green with a black isosceles triangle (based on the hoist side) all separated by a black-edged yellow stripe in the shape of a horizontal Y (the two points of the Y face the hoist side and enclose the triangle); centered in the triangle is a boar's tusk encircling two crossed namele fern fronds, all in yellow; red represents the blood of boars and men, as well as unity, green the richness of the islands, and black the ni-Vanuatu people; the yellow Y-shape - which reflects the pattern of the islands in the Pacific Ocean - symbolizes the light of the Gospel spreading through the islands; the boar's tusk is a symbol of prosperity frequently worn as a pendant on the islands; the fern fronds represent peace

National symbol(s)
boar's tusk with crossed fern fronds; national colors: red, black, green, yellow

National anthem
name: "Yumi, Yumi, Yumi" (We, We, We)
lyrics/music: Francois Vincent AYSSAV
note: adopted 1980; the anthem is written in Bislama, a Creole language that mixes Pidgin English and French

National heritage
total World Heritage Sites: 1 (cultural)
selected World Heritage Site locales: Chief Roi Mata's Domain

Economy

Economic overview
Pacific island agriculture- and tourism-based economy; environmentally vulnerable to cyclones; poor property rights administration; corruption-prone; subsidizing loss-prone state enterprises in agriculture, banking, and airports

Real GDP (purchasing power parity)
$888.165 million (2021 est.)
$884.192 million (2020 est.)
$934.627 million (2019 est.)
note: data are in 2017 dollars
country comparison to the world: 208

Real GDP growth rate
0.45% (2021 est.)
-5.4% (2020 est.)
3.24% (2019 est.)
country comparison to the world: 187

Real GDP per capita
$2,800 (2021 est.)
$2,800 (2020 est.)
$3,100 (2019 est.)
note: data are in 2017 dollars
country comparison to the world: 199

GDP (official exchange rate)
$870 million (2017 est.)

Inflation rate (consumer prices)
2.34% (2021 est.)
5.33% (2020 est.)
2.76% (2019 est.)
country comparison to the world: 85

GDP - composition, by sector of origin
agriculture: 27.3% (2017 est.)
industry: 11.8% (2017 est.)
services: 60.8% (2017 est.)

GDP - composition, by end use
household consumption: 59.9% (2017 est.)
government consumption: 17.4% (2017 est.)
investment in fixed capital: 28.7% (2017 est.)
investment in inventories: 0% (2017 est.)
exports of goods and services: 42.5% (2017 est.)
imports of goods and services: -48.5% (2017 est.)

Agricultural products
coconuts, roots/tubers nes, bananas, vegetables, pork, fruit, milk, beef, groundnuts, cocoa

Industries
food and fish freezing, wood processing, meat canning

Industrial production growth rate
4.92% (2018 est.)
country comparison to the world: 93

Labor force
132,700 (2021 est.)
country comparison to the world: 180

Labor force - by occupation
agriculture: 65%
industry: 5%
services: 30% (2000 est.)

Unemployment rate
2.18% (2021 est.)
2.12% (2020 est.)
1.8% (2019 est.)
country comparison to the world: 21

Youth unemployment rate (ages 15-24)
total: 5.4%
male: 5.2%
female: 5.6% (2021 est.)
country comparison to the world: 186

Population below poverty line
NA

Gini Index coefficient - distribution of family income
32.3 (2019 est.)
country comparison to the world: 134

Household income or consumption by percentage share
lowest 10%: NA
highest 10%: NA

Budget
revenues: $398 million (2019 est.)
expenditures: $355 million (2019 est.)

Budget surplus (+) or deficit (-)
-0.9% (of GDP) (2017 est.)
country comparison to the world: 73

Public debt
48.4% of GDP (2017 est.)
46.1% of GDP (2016 est.)
country comparison to the world: 113

Taxes and other revenues
14.24% (of GDP) (2020 est.)
country comparison to the world: 155

Fiscal year
calendar year

Current account balance
$1.893 million (2021 est.)
$60.619 million (2020 est.)
$215.521 million (2019 est.)
country comparison to the world: 75

Exports
$88.805 million (2021 est.)
$141.534 million (2020 est.)
$372.711 million (2019 est.)
note: data are in current year dollars
country comparison to the world: 208

Exports - partners
Japan 33%, Thailand 13%, Mauritania 13%, South Korea 11%, China 9%, Fiji 7% (2019)

Exports - commodities
fish and fish products, tug boats, perfume plants, mollusks, cocoa beans (2019)

Imports
$495.858 million (2021 est.)
$429.601 million (2020 est.)
$488.795 million (2019 est.)
note: data are in current year dollars
country comparison to the world: 200

Imports - partners
China 29%, Australia 18%, New Zealand 11%, Fiji 11%, Taiwan 5%, Thailand 5% (2019)

Imports - commodities
refined petroleum, fishing ships, delivery trucks, poultry meats, broadcasting equipment (2019)

Reserves of foreign exchange and gold
$664.751 million (31 December 2021 est.)
$613.637 million (31 December 2020 est.)
$511.546 million (31 December 2019 est.)
country comparison to the world: 161

Debt - external
$200.5 million (31 December 2017 est.)
$182.5 million (31 December 2016 est.)
country comparison to the world: 188

Exchange rates
vatu (VUV) per US dollar -
109.453 (2021 est.)
115.38 (2020 est.)
114.733 (2019 est.)
110.165 (2018 est.)
107.821 (2017 est.)

Energy

Electricity access
electrification - total population: 61.8% (2018)
electrification - urban areas: 93.7% (2018)
electrification - rural areas: 51.1% (2018)

Electricity
installed generating capacity: 35,000 kW (2020 est.)
consumption: 62.926 million kWh (2019 est.)
exports: 0 kWh (2020 est.)
imports: 0 kWh (2020 est.)
transmission/distribution losses: 5 million kWh (2019 est.)

Electricity generation sources
fossil fuels: 84.5% of total installed capacity (2020 est.)
nuclear: 0% of total installed capacity (2020 est.)
solar: 8.2% of total installed capacity (2020 est.)
wind: 7.4% of total installed capacity (2020 est.)
hydroelectricity: 0% of total installed capacity (2020 est.)
tide and wave: 0% of total installed capacity (2020 est.)
geothermal: 0% of total installed capacity (2020 est.)
biomass and waste: 0% of total installed capacity (2020 est.)

Coal
production: 0 metric tons (2020 est.)
consumption: 0 metric tons (2020 est.)
exports: 0 metric tons (2020 est.)
imports: 0 metric tons (2020 est.)
proven reserves: 0 metric tons (2019 est.)

Petroleum
total petroleum production: 0 bbl/day (2021 est.)
refined petroleum consumption: 1,500 bbl/day (2019 est.)
crude oil and lease condensate exports: 0 bbl/day (2018 est.)
crude oil and lease condensate imports: 0 bbl/day (2018 est.)
crude oil estimated reserves: 0 barrels (2021 est.)

Refined petroleum products - production
0 bbl/day (2015 est.)
country comparison to the world: 213

Refined petroleum products - exports
0 bbl/day (2015 est.)
country comparison to the world: 215

Refined petroleum products - imports
1,073 bbl/day (2015 est.)
country comparison to the world: 200

Natural gas
production: 0 cubic meters (2021 est.)
consumption: 0 cubic meters (2021 est.)
exports: 0 cubic meters (2021 est.)
imports: 0 cubic meters (2021 est.)
proven reserves: 0 cubic meters (2021 est.)

Carbon dioxide emissions
225,000 metric tonnes of CO2 (2019 est.)
from coal and metallurgical coke: 0 metric tonnes of CO2 (2019 est.)
from petroleum and other liquids: 225,000 metric tonnes of CO2 (2019 est.)
from consumed natural gas: 0 metric tonnes of CO2 (2019 est.)
country comparison to the world: 201

Energy consumption per capita
10.878 million Btu/person (2019 est.)
country comparison to the world: 153

Communications

Telephones - fixed lines
total subscriptions: 3,600 (2021 est.)
subscriptions per 100 inhabitants: 1 (2021 est.)
country comparison to the world: 210

Telephones - mobile cellular
total subscriptions: 250,000 (2021 est.)
subscriptions per 100 inhabitants: 78 (2021 est.)
country comparison to the world: 182

Telecommunication systems
general assessment: for many years, 2G Global System for Mobile Communications was the primary mobile technology for Vanuatu's 300,000 people; recent infrastructure projects have improved access technologies, with a transition to 3G and, to a limited degree, to LTE; Vanuatu has also benefited from the ICN1 submarine cable and the launch of the Kacific-1 satellite, both of which have considerably improved access to telecom services in recent years; Vanuatu's telecom sector is liberalized, with the two prominent mobile operators; while fixed broadband penetration remains low, the incumbent operator is slowly exchanging copper fixed-lines for fiber; a number of ongoing submarine cable developments will also assist in increasing data rates and reduce internet pricing in coming years (2021)
domestic: fixed-line teledensity is 1 per 100 and mobile-cellular 78 per 100 (2021)
international: country code - 678; landing points for the ICN1 & ICN2 submarine cables providing connectivity to the Solomon Islands and Fiji; cables helped end-users with Internet bandwidth; satellite earth station - 1 Intelsat (Pacific Ocean) (2020)

Broadcast media
1 state-owned TV station; multi-channel pay TV is available; state-owned Radio Vanuatu operates 2 radio stations; 2 privately owned radio broadcasters; programming from multiple international broadcasters is available

Internet country code
.vu

Internet users
total: 211,200 (2021 est.)
percent of population: 66% (2021 est.)
country comparison to the world: 181

Broadband - fixed subscriptions
total: 2,785 (2020 est.)
subscriptions per 100 inhabitants: 1 (2020 est.)
country comparison to the world: 194

Transportation

National air transport system
number of registered air carriers: 1 (2020)
inventory of registered aircraft operated by air carriers: 8
annual passenger traffic on registered air carriers: 374,603 (2018)
annual freight traffic on registered air carriers: 1.66 million (2018) mt-km

Civil aircraft registration country code prefix
YJ

Airports
31 (2021)
country comparison to the world: 113

Airports - with paved runways
total: 3
2,438 to 3,047 m: 1
1,524 to 2,437 m: 1
914 to 1,523 m: 1 (2021)

Airports - with unpaved runways
total: 28
914 to 1,523 m: 7
under 914 m: 21 (2021)

Roadways
total: 1,070 km (2000)
paved: 256 km (2000)
unpaved: 814 km (2000)
country comparison to the world: 184

Merchant marine
total: 331
by type: bulk carrier 16, container ship 4, general cargo 87, oil tanker 2, other 222 (2022)
country comparison to the world: 51

Ports and terminals
major seaport(s): Forari Bay, Luganville (Santo, Espiritu Santo), Port-Vila

Military and Security

Military and security forces
no regular military forces; Ministry of Internal Affairs: Vanuatu Police Force (VPF) (2023)
Military – notes: the VPF includes the Vanuatu Mobile Force (VMF) and Police Maritime Wing (VPMW); the paramilitary VMF also has external security responsibilities
Military – notes: the separate British and French police forces were unified in 1980 under Ni-Vanuatu officers as the New Hebrides Constabulary; the force retained some British and French officers as advisors; the Constabulary was subsequently renamed the Vanuatu Police Force later in 1980; the Vanuatu Mobile Force has received training and other support from Australia, China, France, New Zealand, and the US

Military – notes: Vanuatu has a "shiprider" agreement with the US, which allows local maritime law enforcement officers to embark on US Coast Guard (USCG) and US Navy (USN) vessels, including to board and search vessels suspected of violating laws or regulations within Vanuatu's designated exclusive economic zone (EEZ) or on the high seas; "shiprider" agreements also enable USCG personnel and USN vessels with embarked USCG law enforcement personnel to work with host nations to protect critical regional resources (2023)

Transnational Issues

Disputes - international
Vanuatu-France: Matthew and Hunter Islands, two uninhabited islands east of New Caledonia, claimed by Vanuatu and France; in January 2019, a French naval mission landed officers on the islands to reinforce France's sovereignty; in November 2021, French vessels fishing near the islands raised tensions

Acronyms and Abbreviations

°	Degree(s) – of temperature (C = Celsius; F = Fahrenheit) or of latitude and longitude (N, S, E, W – North, South, East, and West)
$	Dollar(s) – Australian or U.S.
AIDS	acquired immunodeficiency syndrome
ADRA	Adventist Development and Relief Agency
APAN	All Partners Access Network
AVL	Airports Vanuatu Limited
BCE	Before Common Era (formerly BC/Before Christ)
BHA	Bureau for Humanitarian Assistance (of USAID)
CBDRR	community-based disaster risk reduction
CCA	climate change adaptation
CCE	Communications and Community Engagement
CDCCC	Community Disaster and Climate Change Committee
CE	Common Era (formerly AD/Anno Domini)
CEDAW	Convention to Elimination All Forms of Discrimination against Women
CEPI	Coalition for Epidemic Preparedness Innovations
CFE-DM	Center for Excellence in Disaster Management and Humanitarian Assistance
cm	centimeter(s)
COVID-19	Coronavirus Disease 2019
CRI	Climate Risk Index
CRPD	Convention on the Rights of Persons with Disabilities
CSIRO	Commonwealth Scientific Industrial Research Organisation (of Australia)
DMHA	Disaster Management and Humanitarian Assistance
DOCC	Department of Climate Change (of Vanuatu's MOCCA)
DoD	Department of Defense (of the U.S.)
DREE	Disaster Response Exercise and Exchange
DRR	disaster risk reduction
EEZ	exclusive economic zone
FRANZ	France, Australia, New Zealand Arrangement
FRDP	Framework for Resilient Development in the Pacific
GBV	gender-based violence
GCF	Green Climate Fund
GDP	Gross Domestic Product
GNI	gross national income
HADR	humanitarian assistance and disaster relief
HF	High Frequency
HIV	human immunodeficiency virus
HSS	Health Sector Strategy

IASC	Inter-Agency Standing Committee
ICRC	International Committee of the Red Cross
ICT	information and communications technology
IDMC	Internal Displacement Monitoring Centre
IDP	internally displaced person
IFRC	International Federation of Red Cross and Red Crescent Societies
IOM	International Organization for Migration
JPOC	Joint Police Operations Centre
kbit/s	kilobits per second
km / km^2	kilometer(s)/square kilometer(s)
kWh	kilowatt-hours
LGBTQI+	lesbian, gay, bisexual, transgender, queer, intersex, and other diverse genders and sexualities
m / m^2	meter(s)/square meter(s)
MBBS	Bachelor of Medicine/Bachelor of Surgery
MDDR	Mainstreaming Disaster Risk Reduction
MIPU	Ministry of Infrastructure and Public Utilities
mm	millimeter(s)
MOCCA	Ministry of Climate Change Adaptation, Meteorology and Geohazards, Environment, Energy, and Disaster Management
MoET	Ministry of Education and Training
MOH	Ministry of Health
MoU	Memorandum of Understanding
MP	Member of Parliament
NAB	National Advisory Board (of MOCCA)
NCD	noncommunicable diseases
NDC	National Disaster Committee
NDMO	National Disaster Management Office
NEOC	National Emergency Operation Centre
NGEF	National Green Energy Fund
NGEP	National Gender Equality Policy
NGO	non-government organization
NHEOC	National Health Emergency Operation Centre
NHNP	New Hebrides National Party
NOAA	National Oceanic and Atmospheric Administration (of the U.S.)
NPH	Northern Provincial Hospital
NSDP	National Sustainable Development Plan
NUP	National United Party
OCHA	Office for the Coordination of Humanitarian Affairs (of the UN)
ORSNET	Oceania Regional Seismic Network
PBP	Partners in the Blue Pacific

PCRAFI	Pacific Catastrophe Risk Assessment and Financing Initiative
PDC	Pacific Disaster Center
PDCCC	Provincial Disaster and Climate Change Committee
PDNA	Post Disaster Needs Assessment
PEOC	Provincial Emergency Operation Centre
PHT	Pacific Humanitarian Team
PIC	Pacific Island Country
PIF	Pacific Islands Forum
PM	Prime Minister
POLHN	Pacific Open Learning Health Net
PTWS	Pacific Tsunami Warning and Mitigation System
PV	photovoltaic
PWD	Public Works Department
R4D	Roads for Development
RCP	Representative Concentration Pathway
RHCC	Changi Regional HADR Coordination Centre
SDG	Sustainable Development Goal
SOGI(E)	sexual orientation and gender identity (and gender expression)
SOP	standard operating procedure
SPC	Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
STI	sexually-transmitted infection
TB	tuberculosis
TBV	Television Blong Vanuatu
TC	Tropical Cyclone
TVET	technical and vocational education and training
U.S.	United States
UMP	Union of Moderate Parties
UN	United Nations
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNSCR	United Nations Security Council Resolution
USAID	United States Agency for International Development
VANGO	Vanuatu Association of NGOs
VanKIRAP	Vanuatu Klaemet Infomesen blong Redy, Adapt mo Protekt (Climate Information Services for Resilient Development)
VBTC	Vanuatu Broadcasting and Television Corporation

VCCDRRP	Vanuatu Climate Change and Disaster Risk Reduction Policy
VCH	Vila Central Hospital
VCNE	Vanuatu College of Nurse Education
VDPA	Vanuatu Disability Promotion and Advocacy Association
VFHA	Vanuatu Family Health Association
VMF	Vanuatu Mobile Force
VHT	Vanuatu Humanitarian Team
VMGD	Vanuatu Meteorology and Geohazards Department
VNCS	Vanuatu National Curriculum Statement
VNCW	Vanuatu National Council for Women
VP	Vanuaaku Party
VPF	Vanuatu Police Force
VRCS	Vanuatu Red Cross Society
VSZ	Vanuatu subduction zone
VUV	Vanuatu Vatu
VWC	Vanuatu Women's Centre
W/m^2	watts per meter squared
WASH	water, sanitation, and hygiene
WFP	World Food Programme
WHO	World Health Organization
WITTT	Woman I TokTok Tugeta (Women Talking Together)
WPS	Women, Peace, and Security
WRD	Women's Resilience to Disaster

Endnotes

1 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

2 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

3 Bedford, Stuart; Spriggs, Matthew; and Regenvanu, Ralph. The Teouma Lapita Site and the Early Human Settlement of the Pacific Islands. Antiquity. 2015. 80. 812-828. 10.1017/S0003598X00094448.

4 Spriggs, Matthew. Where Did We Come From? The Origins Of The Ni-Vanuatu. Daily Post. 17 October 2020. https://www.dailypost.vu/news/where-did-we-come-from-the-origins-of-the-ni-vanuatu/article_5cf69c84-1192-11eb-a1fb-0b2e615fdb4d.html

5 Parliament of Vanuatu. A Brief History of the Vanuatu Parliament. Section 1, Parliamentary Handbook. https://parliament.gov.vu/images/pdf/about_us/history.pdf

6 Adams, Ron; Foster, Sophia; et al. History of Vanuatu. Encyclopedia Britannica. Accessed 8 May 2023. https://www.britannica.com/place/Vanuatu/History

7 Vanuatu Travel. History. Accessed 8 May 2023. https://www.vanuatu.travel/en/local-knowledge/local-knowledge-history

8 Adams, Ron; Foster, Sophia; et al. History of Vanuatu. Encyclopedia Britannica. Accessed 8 May 2023. https://www.britannica.com/place/Vanuatu/History

9 Vanuatu Travel. History. Accessed 8 May 2023. https://www.vanuatu.travel/en/local-knowledge/local-knowledge-history

10 BBC. Vanuatu profile – Timeline. 26 October 2022. https://www.bbc.com/news/world-asia-16426561

11 Adams, Ron; Foster, Sophia; et al. History of Vanuatu. Encyclopedia Britannica. Accessed 8 May 2023. https://www.britannica.com/place/Vanuatu/History

12 BBC. Vanuatu profile – Timeline. 26 October 2022. https://www.bbc.com/news/world-asia-16426561

13 Adams, Ron; Foster, Sophia; et al. History of Vanuatu. Encyclopedia Britannica. Accessed 8 May 2023. https://www.britannica.com/place/Vanuatu/History

14 Vanuatu Travel. History. Accessed 8 May 2023. https://www.vanuatu.travel/en/local-knowledge/local-knowledge-history

15 Adams, Ron; Foster, Sophia; et al. History of Vanuatu. Encyclopedia Britannica. Accessed 8 May 2023. https://www.britannica.com/place/Vanuatu/History

16 Radio New Zealand. Vanuatu – A Brief History. Accessed 8 May 2023. https://www.rnz.co.nz/collections/nff-vanuatu/about-vanuatu

17 BBC. Vanuatu profile – Timeline. 26 October 2022. https://www.bbc.com/news/world-asia-16426561

18 Radio New Zealand. Vanuatu – A Brief History. Accessed 8 May 2023. https://www.rnz.co.nz/collections/nff-vanuatu/about-vanuatu

19 BBC. Vanuatu profile – Timeline. 26 October 2022. https://www.bbc.com/news/world-asia-16426561

20 Radio New Zealand. Vanuatu – A Brief History. Accessed 8 May 2023. https://www.rnz.co.nz/collections/nff-vanuatu/about-vanuatu

21 BBC. Vanuatu profile – Timeline. 26 October 2022. https://www.bbc.com/news/world-asia-16426561

22 Radio New Zealand. Vanuatu – A Brief History. Accessed 8 May 2023. https://www.rnz.co.nz/collections/nff-vanuatu/about-vanuatu

23 BBC. Vanuatu profile – Timeline. 26 October 2022. https://www.bbc.com/news/world-asia-16426561

24 Adams, Ron; Foster, Sophia; et al. History of Vanuatu. Encyclopedia Britannica. Accessed 8 May 2023. https://www.britannica.com/place/Vanuatu/History

25 ReliefWeb. Vanuatu: Earthquake - Jan 2002. https://reliefweb.int/disaster/eq-2002-000002-vut

26 BBC. Vanuatu profile – Timeline. 26 October 2022. https://www.bbc.com/news/world-asia-16426561

27 Adams, Ron; Foster, Sophia; et al. History of Vanuatu. Encyclopedia Britannica. Accessed 8 May 2023. https://www.britannica.com/place/Vanuatu/History

28 BBC. Vanuatu profile – Timeline. 26 October 2022. https://www.bbc.com/news/world-asia-16426561

29 Hakkert, Ralph and Pontifex, Scott. Vanuatu 2020 national population and housing census: analytical report - volume 2. Pacific Community. October 2022. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cc/cc03b205d0580fc2a2f727036ae79e58.pdf?sv=2015-12-11&sr=b&sig=f4X82vek8IApUVTtBUCv4yTozNYzBM1xDy1ZDJGVWKs%3D&se=2023-07-14T12%3A16%3A51Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22Vanuatu_2020_Census_Analytical_report_Vol_2.pdf%22

30 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

31 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

32 EC/ECHO/Mathias Eick. 4. Vanuatu: Paradise under threat. 11 May 2012. Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0). https://www.flickr.com/photos/eu_echo/7180673926/in/album-72157629689382992/

33 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

34 Adams, Ron; Foster, Sophia; et al. People of Vanuatu. Encyclopedia Britannica. Accessed 2 June 2023. https://www.britannica.com/place/Vanuatu#ref53973

35 Hakkert, Ralph and Pontifex, Scott. Vanuatu 2020 national population and housing census: analytical report - volume 2. Pacific Community. October 2022. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cc/cc03b205d0580fc2a2f727036ae79e58.pdf?sv=2015-12-11&sr=b&sig=f4X82vek8IApUVTt-BUCv4yTozNYzBM1xDy1ZDJGVWKs%3D&se=2023-07-14T12%3A16%3A51Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22Vanuatu_2020_Census_Analytical_report_Vol_2.pdf%22

36 Internal Displacement Monitoring Centre. Disaster displacement: Vanuatu country briefing. October 2019. https://www.preventionweb.net/publication/disaster-displacement-vanuatu-country-briefing

37 Adams, Ron; Foster, Sophia; et al. People of Vanuatu. Encyclopedia Britannica. Accessed 2 June 2023. https://www.britannica.com/place/Vanuatu#ref53973

38 World Population Review. Population of Cities in Vanuatu (2023). Accessed 2 June 2023. https://worldpopulationreview.com/countries/cities/vanuatu

39 Encyclopedia Britannica. Port-Vila. Accessed 2 June 2023. https://www.britannica.com/place/Port-Vila

40 Vanuatu National Statistics Office. Vanuatu 2020 National Population and Housing Census Preliminary Results has been released on Wednesday 30th June 2021. Retrieved 15 July 2021.

41 World Population Review. Population of Cities in Vanuatu (2023). Accessed 2 June 2023. https://worldpopulationreview.com/countries/cities/vanuatu

42 Internal Displacement Monitoring Centre. Disaster displacement: Vanuatu country briefing. October 2019. https://www.preventionweb.net/publication/disaster-displacement-vanuatu-country-briefing

43 Adams, Ron; Foster, Sophia; et al. People of Vanuatu. Encyclopedia Britannica. Accessed 2 June 2023. https://www.britannica.com/place/Vanuatu#ref53973

44 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

45 Hakkert, Ralph and Pontifex, Scott. Vanuatu 2020 national population and housing census: analytical report - volume 2. Pacific Community. October 2022. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cc/cc03b205d0580fc2a2f727036ae79e58.pdf?sv=2015-12-11&sr=b&sig=f4X82vek8IApUVTt-BUCv4yTozNYzBM1xDy1ZDJGVWKs%3D&se=2023-07-14T12%3A16%3A51Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22Vanuatu_2020_Census_Analytical_report_Vol_2.pdf%22

46 U.S. State Department. 2022 Report on International Religious Freedom: Vanuatu. 15 May 2023. https://www.state.gov/reports/2022-report-on-international-religious-freedom/vanuatu/

47 Hakkert, Ralph and Pontifex, Scott. Vanuatu 2020 national population and housing census: analytical report - volume 2. Pacific Community. October 2022. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cc/cc03b205d0580fc2a2f727036ae79e58.pdf?sv=2015-12-11&sr=b&sig=f4X82vek8IApUVTt-BUCv4yTozNYzBM1xDy1ZDJGVWKs%3D&se=2023-07-14T12%3A16%3A51Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22Vanuatu_2020_Census_Analytical_report_Vol_2.pdf%22

48 U.S. State Department. 2022 Report on International Religious Freedom: Vanuatu. 15 May 2023. https://www.state.gov/reports/2022-report-on-international-religious-freedom/vanuatu/

49 Daily Post. Prime Minster Launches National Gender Equality Policy. 28 August 2021. https://www.dailypost.vu/news/prime-minster-launches-national-gender-equality-policy/article_8aa98d48-4e13-53db-95f3-7ced4fb04e08.html

50 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

51 UN Women. OVERVIEW OF SOCIO-DEMOGRAPHIC 2INDICATORS for Women and Children in Vanuatu and their Impact on Access to Justice. 2016. https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEAsia/Docs/Publications/2016/07/Section_2_WEB.pdf

52 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

53 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

54 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

55 Newnham, Jane. Saving lives and empowering women: delivering contraceptive services in disaster response in Vanuatu. Humanitarian Exchange Number 75 June 2019. pp 14-16. https://odihpn.org/wp-content/uploads/2019/05/HE75_revised.pdf

56 Office of the High Commissioner for Human Rights of the UN. Committee on the Rights of the Child considers reports of Vanuatu. 22 September 2017. https://www.ohchr.org/en/press-releases/2017/09/committee-rights-child-considers-reports-vanuatu

57 Bureau of International Labor Affairs. Child Labor and Forced Labor Reports: Vanuatu. U.S. Department of Labor. 2021. https://www.dol.gov/agencies/ilab/resources/reports/child-labor/vanuatu

58 Hakkert, Ralph and Pontifex, Scott. Vanuatu 2020 national population and housing census: analytical report - volume 2. Pacific Community. October 2022. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cc/cc03b205d0580fc2a2f727036ae79e58.

pdf?sv=2015-12-11&sr=b&sig=f4X82vek8IApUVTt-BUCv4yTozNYzBM1xDy1ZDJGVWKs%3D&se=2023-07-14T12%3A16%3A51Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22Vanuatu_2020_Census_Analytical_report_Vol_2.pdf%22

59 UNFPA Pacific Sub-Regional Office Suva, Fiji. Population Ageing in the Pacific Islands: A Situation Analysis. July 2014. https://pacific.unfpa.org/sites/default/files/pub-pdf/PopulationAgeinginthePacificIslandsASituationAnalysisReport.pdf

60 HelloCare. "I am proud": Caring for older people in Vanuatu. 21 January 2020. https://hellocare.com.au/proud-caring-older-people-vanuatu/

61 UN Women. OVERVIEW OF SOCIO-DEMOGRAPHIC 2INDICATORS for Women and Children in Vanuatu and their Impact on Access to Justice. 2016. https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEAsia/Docs/Publications/2016/07/Section_2_WEB.pdf

62 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

63 Internal Displacement Monitoring Centre. Disaster displacement: Vanuatu country briefing. October 2019. https://www.preventionweb.net/publication/disaster-displacement-vanuatu-country-briefing

64 UN Women. OVERVIEW OF SOCIO-DEMOGRAPHIC 2INDICATORS for Women and Children in Vanuatu and their Impact on Access to Justice. 2016. https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEAsia/Docs/Publications/2016/07/Section_2_WEB.pdf

65 Hakkert, Ralph and Pontifex, Scott. Vanuatu 2020 national population and housing census: analytical report - volume 2. Pacific Community. October 2022. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cc/cc03b205d0580fc2a2f727036ae79e58.pdf?sv=2015-12-11&sr=b&sig=f4X82vek8IApUVTt-BUCv4yTozNYzBM1xDy1ZDJGVWKs%3D&se=2023-07-14T12%3A16%3A51Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22Vanuatu_2020_Census_Analytical_report_Vol_2.pdf%22

66 CBM International. Organisations of persons with disabilities: making a difference in Vanuatu and Solomon Islands. June 2022. https://www.preventionweb.net/publication/organisations-persons-disabilities-making-difference-vanuatu-and-solomon-islands

67 Internal Displacement Monitoring Centre. Disaster displacement: Vanuatu country briefing. October 2019. https://www.preventionweb.net/publication/disaster-displacement-vanuatu-country-briefing

68 Internal Displacement Monitoring Centre. Disaster displacement: Vanuatu country briefing. October 2019. https://www.preventionweb.net/publication/disaster-displacement-vanuatu-country-briefing

69 CBM International. Organisations of persons with disabilities: making a difference in Vanuatu and Solomon Islands. June 2022. https://www.preventionweb.net/publication/organisations-persons-disabilities-making-difference-vanuatu-and-solomon-islands

70 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

71 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

72 Asian Development Bank. Vanuatu – Asian Development Outlook. April 2023. https://www.adb.org/sites/default/files/publication/863591/van-ado-april-2023.pdf

73 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

74 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

75 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

76 Asian Development Bank. Vanuatu – Key Indicators Database. Exports and Imports (% of GDP). Accessed 16 May 2023. https://kidb.adb.org/economies/vanuatu

77 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

78 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

79 Voloder, Dubravka. Remittances are more than 20pc of Vanuatu's GDP, but fees to send money home from Australia are high. Australian Broadcasting Corporation. 16 March 2023. https://www.abc.net.au/news/2023-03-17/vanuatu-seasonal-workers-pay-high-remittance-fees-after-cyclones/102099386

80 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

81 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

82 Climate Risk Country Profile: Vanuatu (2021): The World Bank Group. https://www.preventionweb.net/publication/climate-risk-country-profile-vanuatu

83 Parliament of Vanuatu. A Brief History of the Vanuatu Parliament. Section 1, Parliamentary Handbook. https://parliament.gov.vu/images/pdf/about_us/history.pdf

84 Government of Vanuatu. CONSTITUTION OF THE REPUBLIC OF VANUATU. May 2020. https://www.sistalibrary.com.vu/wp-content/uploads/2020/05/Constitution_of_the_Republic_of_Vanuatu_Eng.pdf

85 Commonwealth Network. Vanuatu – Government. Accessed 8 May 2023. https://www.commonwealthofnations.org/sectors-vanuatu/government/

86 Commonwealth Local Government Forum. Local Government System in Vanuatu. Country Profile 2017-2018. https://www.clgf.org.uk/default/assets/File/Country_profiles/Vanuatu.pdf

87 IFES. Election Guide. Republic of Vanuatu. 13 October 2022. https://www.electionguide.org/elections/id/3975/

88 Daily Post. Snap Elections 2022 (Official Results). https://www.dailypost.vu/site/se_results.html

89 Maykin, Melissa and Srinivasan, Prianka. Alatoi Ishmael Kalsakau becomes Vanuatu's prime minister after country elects first female MP in 14 years. Australian Broadcasting Corporation. 4 November 2022. https://www.abc.net.au/news/2022-11-05/vanuatu-elections-draw-to-a-close-with-prime-minister-sworn-in/101610512

90 Commonwealth Network. Vanuatu – Government. Accessed 8 May 2023. https://www.commonwealthofnations.org/sectors-vanuatu/government/

91 Parliament of the Republic of Vanuatu. About Vanuatu Parliament. Accessed 8 May 2023. https://parliament.gov.vu/index.php/about-us

92 Commonwealth Network. Vanuatu – Government. Accessed 8 May 2023. https://www.commonwealthofnations.org/sectors-vanuatu/government/

93 Commonwealth Local Government Forum. Local Government System in Vanuatu. Country Profile 2017-2018. https://www.clgf.org.uk/default/assets/File/Country_profiles/Vanuatu.pdf

94 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

95 Hakkert, Ralph and Pontifex, Scott. Vanuatu 2020 national population and housing census: analytical report - volume 2. Pacific Community. October 2022. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cc/cc03b205d0580fc2a2f727036ae79e58.pdf?sv=2015-12-11&sr=b&sig=f4X82vek8IApUVTtBUCv4yTozNYzBM1xDy1ZDJGVWKs%3D&se=2023-07-14T12%3A16%3A51Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22Vanuatu_2020_Census_Analytical_report_Vol_2.pdf%22

96 Adams, Ron; Foster, Sophia; et al. Vanuatu - Land. Encyclopedia Britannica. Accessed 16 May 2023. https://www.britannica.com/place/Vanuatu

97 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

98 Adams, Ron; Foster, Sophia; et al. Vanuatu - Land. Encyclopedia Britannica. Accessed 16 May 2023. https://www.britannica.com/place/Vanuatu

99 Pacific Maritime Boundaries Dashboard. Vanuatu. Pacific Data Hub. Accessed 16 May 2023. https://pacificdata.org/dashboard/maritime-boundaries/vanuatu

100 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

101 Adams, Ron; Foster, Sophia; et al. Vanuatu - Land. Encyclopedia Britannica. Accessed 16 May 2023. https://www.britannica.com/place/Vanuatu

102 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

103 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

104 Humanitarian Advisory Group. Beyond Barriers: Vanuatu Case Study. February 2022. https://www.preventionweb.net/publication/beyond-barriers-vanuatu-case-study

105 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

106 Chapman, et al. Climate Risk Country Profile: Vanuatu. World Bank. 2021. https://www.preventionweb.net/publication/climate-risk-country-profile-vanuatu

107 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

108 Humanitarian Advisory Group. Beyond Barriers: Vanuatu Case Study. February 2022. https://www.preventionweb.net/publication/beyond-barriers-vanuatu-case-study

109 Humanitarian Advisory Group. Beyond Barriers: Vanuatu Case Study. February 2022. https://www.preventionweb.net/publication/beyond-barriers-vanuatu-case-study

110 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

111 McSweeney, Robert and Zeke Hausfather. Q&A: How do climate models work? Carbon Brief, Clear on Climate. 15 January 2018. https://www.carbonbrief.org/qa-how-do-climate-models-work/#inout

112 Hausfather, Zeke. Explainer: The high-emissions 'RCP8.5' global warming scenario. Carbon Brief, Clear on Climate. 21 August 2019. https://www.carbonbrief.org/explainer-the-high-emissions-rcp8-5-global-warming-scenario/

113 Climate Risk Country Profile: Vanuatu (2021): The World Bank Group. https://www.preventionweb.net/publication/climate-risk-country-profile-vanuatu

114 WHO. Health and Climate Change: Country Profile 2020. Small Island Developing States Initiative. https://www.preventionweb.net/publication/health-and-climate-change-country-profile-2020-vanuatu

115 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

116 WHO. Health and Climate Change: Country Profile 2020. Small Island Developing States Initiative. https://www.preventionweb.net/publication/health-and-climate-change-country-profile-2020-vanuatu

117 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

118 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

119 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

120 Climate Risk Country Profile: Vanuatu (2021): The World Bank Group. https://www.preventionweb.net/publication/climate-risk-country-profile-vanuatu

121 Climate Risk Country Profile: Vanuatu (2021): The World Bank Group. https://www.preventionweb.net/publication/climate-risk-country-profile-vanuatu

122 SPREP. Vanuatu To Benefit From Drought Information. 28 July 2018. https://www.sprep.org/news/vanuatu-benefit-drought-information

123 SPREP. Vanuatu Multi-Hazard Early Warning, Seismic And Volcanic Systems Highlighted At The Pacific Resilience Meeting. 3 May 2019. https://reliefweb.int/report/vanuatu/vanuatu-multi-hazard-early-warning-seismic-and-volcanic-systems-highlighted-pacific

124 Roger, et al. Potential tsunami hazard of the southern Vanuatu subduction zone: tectonics, case study of the Matthew Island tsunami of 10 February 2021 and implication in regional hazard assessment. European Geosciences Union. Articles

Volume 23, issue 2, NHESS, 23, 393–414, 2023. https://nhess.copernicus.org/articles/23/393/2023/

125 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

126 WorldData.info. Earthquakes in Vanuatu. Accessed 5 June 2023. https://www.worlddata.info/oceania/vanuatu/earthquakes.php

127 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

128 Internal Displacement Monitoring Centre. Disaster displacement: Vanuatu country briefing. October 2019. https://www.preventionweb.net/publication/disaster-displacement-vanuatu-country-briefing

129 Climate Risk Country Profile: Vanuatu (2021): The World Bank Group. https://www.preventionweb.net/publication/climate-risk-country-profile-vanuatu

130 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

131 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

132 NOAA. Historical Hurricane Tracks: Vanuatu. Sorted for year, month, and ENSO. Accessed 13 July 2023. https://coast.noaa.gov/hurricanes

133 Climate Risk Country Profile: Vanuatu (2021): The World Bank Group. https://www.preventionweb.net/publication/climate-risk-country-profile-vanuatu

134 Internal Displacement Monitoring Centre. Disaster displacement: Vanuatu country briefing. October 2019. https://www.preventionweb.net/publication/disaster-displacement-vanuatu-country-briefing

135 Climate Risk Country Profile: Vanuatu (2021): The World Bank Group. https://www.preventionweb.net/publication/climate-risk-country-profile-vanuatu

136 Vanuatu Meteorology and Geo-Hazards Department. Volcanic Hazards. Accessed 15 May 2023. https://www.vmgd.gov.vu/vmgd/index.php/geohazards/volcano/volcano-info/volcanic-hazards

137 Vanuatu Meteorology and Geo-hazards Department. Our Active Volcanos. Accessed 15 May 2023. https://www.vmgd.gov.vu/vmgd/index.php/geohazards/volcano/our-active-volcanos

138 Vanuatu Meteorology and GeoHazards Department. Monitoring Methods. Accessed 15 May 2023. https://www.vmgd.gov.vu/vmgd/index.php/geohazards/volcano/volcano-info/monitoring-methods

139 OCHA. Vanuatu: Tropical Cyclones Judy & Kevin: Situation Report No.1 (As of 10 March 2023). 10 March 2023. https://reliefweb.int/report/vanuatu/vanuatu-tropical-cyclones-judy-kevin-situation-report-no1-10-march-2023

140 IFRC. Vanuatu Tropical Cyclone Judy and Kevin 2023 - DREF Application (MDRVU010). 9 March 2023. https://reliefweb.int/report/vanuatu/vanuatu-tropical-cyclone-judy-and-kevin-2023-dref-application-mdrvu010

141 OCHA. Vanuatu: Tropical Cyclones Judy & Kevin: Situation Report No.1 (As of 10 March 2023). 10 March 2023. https://reliefweb.int/report/vanuatu/vanuatu-tropical-cyclones-judy-kevin-situation-report-no1-10-march-2023

142 ECHO. Vanuatu – Multiple crises, update (DG ECHO, UN OCHA) (ECHO Daily Flash of 13 March 2023). 13 March 2023. https://reliefweb.int/report/vanuatu/vanuatu-multiple-crises-update-dg-echo-un-ocha-echo-daily-flash-13-march-2023

143 WFP. WFP-chartered planes deliver critical relief supplies to cyclone-affected Vanuatu. 31 March 2023. https://reliefweb.int/report/vanuatu/wfp-chartered-planes-deliver-critical-relief-supplies-cyclone-affected-vanuatu

144 Save the Children. Clean water and food still out of reach a month after triple disaster. 3 April 2023. https://reliefweb.int/report/vanuatu/clean-water-and-food-still-out-reach-month-after-triple-disaster

145 ReliefWeb. Vanuatu: Yasur Volcano - Oct 2021. https://reliefweb.int/disaster/vo-2021-000174-vut

146 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

147 Flint, Josie; Osborne, Josaia Jirauni; Roche, Chris, and Tarpey, Fiona. Local leadership, Covid-19 and the Pacific. Humanitarian Exchange Number 79 May 2021. pg. 91-97. https://odihpn.org/wp-content/uploads/2021/05/HE-79_Localisation_WEB-1.pdf

148 Government of Vanuatu. POST-DISASTER NEEDS ASSESSMENT: TC HAROLD & COVID-19, VANUATU. October 2020. https://www.preventionweb.net/publication/vanuatu-tropical-cyclone-harold-and-covid-19-post-disaster-needs-assessment

149 WHO. COVID-19 dashboard. Accessed 15 May 2023. https://covid19.who.int/region/wpro/country/vu

150 Our World in Data. Vanuatu: What is the daily number of confirmed cases? Accessed 15 May 2023. https://ourworldindata.org/coronavirus/country/vanuatu

151 Ministry of Health. Covid-19 updates: Health Situation Reports. 8 June 2022. https://covid19.gov.vu/index.php/situation-reports

152 Hemenway, Justin. IN VANUATU, FEW COVID-19 CASES BUT UNICEF ISN'T RESTING EASY. UNICEF. 12 July 2021. https://www.unicefusa.org/stories/vanuatu-few-covid-19-cases-unicef-isnt-resting-easy

153 Olui, Rebecca. Reaching Efate's offshore islands with COVID-19 vaccines. UNICEF. 25 April 2022. https://www.unicef.org/pacificislands/stories/reaching-efates-offshore-islands-covid-19-vaccines

154 WHO. COVID-19 dashboard. Accessed 15 May 2023. https://covid19.who.int/region/wpro/country/vu

155 Government of Vanuatu. Dengue Outbreak in Vanuatu- Situational Report 03 (24 Apr 2019). 24 April 2019. https://reliefweb.int/report/vanuatu/dengue-outbreak-vanuatu-situational-report-03-24-apr-2019

156 ReliefWeb. Vanuatu: Monaro Volcano - Sep 2017. https://reliefweb.int/disaster/vo-2017-000140-vut

157 ReliefWeb. Vanuatu: Monaro Volcano - Mar 2018. https://reliefweb.int/disaster/vo-2018-000044-vut

158 IOM. Vanuatu - Ambae Evacuee Response, Returns Report - Round 6 (Novomber 2019). https://dtm.iom.int/reports/vanuatu-ambae-evacuee-response-returns-report-round-6-novomber-2019

159 ReliefWeb. Tropical Cyclone Donna - May 2017. https://reliefweb.int/disaster/tc-2017-000045-vut

160 ReliefWeb. Pacific: Dengue Outbreak - Oct 2016. https://reliefweb.int/disaster/ep-2016-000112-slb

161 Selmen, Harrison. Early warning concern after damage. 7 April 2016. Daily Post. https://www.dailypost.vu/news/early-warning-concern-after-damage/article_cfa6d018-15b8-57c7-982f-0c11512c0feb.html

162 Government of Vanuatu. 2015 El Niño is now well established: Prepare for drought. 29 August 2015. https://reliefweb.int/report/vanuatu/2015-el-ni-o-now-well-established-prepare-drought

163 Iese, V., Kiem, A.S., Mariner, A. et al. Historical and future drought impacts in the Pacific islands and atolls. Climatic Change 166, 19 (2021). https://doi.org/10.1007/s10584-021-03112-1

164 ReliefWeb. Tropical Cyclone Pam - Mar 2015. https://reliefweb.int/disaster/tc-2015-000020-vut

165 EC/ECHO. Church Roof in the background Ipota. 19 March 2015. https://www.flickr.com/photos/eu_echo/16673891228/; Attribution-NonCommercial-NoDerivs 2.0 Generic (CC BY-NC-ND 2.0)

166 Government of Vanuatu. Post-Disaster Needs Assessment: Tropical Cyclone Pam, March 2015. https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_397678.pdf

167 Bolis, Angela. Vanuatu reconstruction moves ahead in the aftermath of cyclone Pam. Guardian, 28 July 2015. https://www.theguardian.com/world/2015/jul/28/vanuatu-cyclone-pam-el-nino-reconstruction

168 ReliefWeb. Tropical Cyclone Lusi - Mar 2014. https://reliefweb.int/disaster/tc-2014-000033-vut

169 Government of Vanuatu. Humanitarian Action Plan for Tropical Cyclone Lusi. 23 May 2014. https://reliefweb.int/report/vanuatu/humanitarian-action-plan-tropical-cyclone-lusi

170 Fitzgibbon, C. and Crosskey, A. Disaster risk reduction management in the drylands in the Horn of Africa. Brief prepared by a Technical Consortium hosted by CGIAR in partnership with the FAO Investment Centre. Technical Consortium Brief 4. Nairobi: International Livestock Research Institute. 2013. https://repo.mel.cgiar.org/handle/20.500.11766/5197

171 UNDRR. Terminology. Accessed 8 September 2022. https://www.undrr.org/terminology

172 European Commission. Disaster Risk Management Knowledge Centre (DRMKC). INFORM. Accessed 30 January 2023. https://drmkc.jrc.ec.europa.eu/inform-index

173 European Commission. Disaster Risk Management Knowledge Centre (DRMKC). INFORM Global Risk Index. Methodology. https://drmkc.jrc.ec.europa.eu/inform-index/InDepth/Methodology

174 European Commission. Disaster Risk Management Knowledge Centre (DRMKC). INFORM Risk Methodology. https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Methodology

175 European Commission. Disaster Risk Management Knowledge Centre (DRMKC). INFORM Country Risk Profile 2023 – Vanuatu. Accessed 5 June 2023. https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile

176 European Commission. Disaster Risk Management Knowledge Centre (DRMKC). INFORM Country Risk Profile 2023 – Vanuatu. Accessed 5 June 2023. https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile

177 Bündnis Entwicklung Hilft. WorldRiskReport 2022. https://weltrisikobericht.de//wp-content/uploads/2022/09/WorldRiskReport-2022_Online.pdf

178 Eckstein, David, Kunzel, Vera, and Laura Schafer. Global Climate Risk Index 2021. Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events in 2019 and 2000-2019. Briefing Paper. GermanWatch. January 2021. https://www.germanwatch.org/en/19777

179 World Bank. Major Boost for Disaster Risk Management in Vanuatu. 9 January 2020. https://www.worldbank.org/en/news/press-release/2020/01/09/major-boost-for-disaster-risk-management-in-vanuatu

180 OCHA. Vanuatu: Humanitarian Coordination Structure (As of 12 October 2022). https://reliefweb.int/report/vanuatu/vanuatu-humanitarian-coordination-structure-12-october-2022

181 Government of Vanuatu. Cyclone Support Plan 2020-2021. https://ndmo.gov.vu/resources/downloads/category/103-cyclone-support-plan?download=281:cyclone-support-plan-2020-2021

182 Vanuatu NDMO. About Us: About NDMO. 30 May 2023. https://ndmo.gov.vu/about-us

183 Vanuatu NDMO. Resources: Cluster System. 30 May 2023. https://ndmo.gov.vu/resources/clusters

184 Government of Vanuatu, National Advisory Board on Climate Change and DRR. NDC activates new clusters to support NDMO in its response to disasters. 22 May 2020. https://reliefweb.int/report/vanuatu/ndc-activates-new-clusters-support-ndmo-its-response-disasters

185 OCHA. Vanuatu: Humanitarian Coordination Structure (As of 12 October 2022). https://reliefweb.int/report/vanuatu/vanuatu-humanitarian-coordination-structure-12-october-2022

186 Vanuatu NDMO. Inter-Cluster. 30 May 2023. https://ndmo.gov.vu/resources/clusters/96-inter-cluster

187 Pacific Humanitarian Team. Vanuatu Country Preparedness Package. 2017. https://www.rcrc-resilience-southeastasia.org/wp-content/uploads/2020/04/Country-Preparedness-Package-2017.pdf

188 RNZ News. Vanuatu police step up operations. 16 March 2015. https://www.rnz.co.nz/international/pacific-news/268748/vanuatu-police-step-up-operations

189 Vanuatu Daily Post. Police recruits complete first stage of training. 7 October 2014. https://www.dailypost.vu/news/police-recruits-complete-first-stage-of-training/article_f03e9f49-6cb2-5df7-a502-1d29be499244.html

190 Pacific Humanitarian Team. The Vanuatu Humanitarian Team. 2014. pacifichumanitarian.info/wp-content/uploads/2014/10/Session_4b_VHT.pdf

191 OCHA. ROP Vanuatu. 30 May 2023. https://www.unocha.org/office-pacific-islands/vanuatu

192 Government of Vanuatu. Cyclone Support Plan 2020-2021. https://ndmo.gov.vu/resources/downloads/category/103-cyclone-support-plan

193 OCHA. ROP Vanuatu. Accessed 30 May 2023. https://www.unocha.org/office-pacific-islands/vanuatu

194 Vanuatu NDMO. Partner Organisations. Accessed 30 May 2023. https://ndmo.gov.vu/about-us/partners

195 World Bank. Major Boost for Disaster Risk Management in Vanuatu. 9 January 2020. https://www.worldbank.org/en/news/press-release/2020/01/09/major-boost-for-disaster-risk-management-in-vanuatu

196 International Committee of the Red Cross (ICRC). The Movement. Accessed 23 March 2020. https://www.icrc.org/en/movement#:~:text=The%20International%20Red%20Cross%20and,armed%20conflicts%20and%20other%20emergencies.

197 International Federation of Red Cross (IFRC). Who we are. Accessed 23 March 2021. http://www.ifrc.org/en/who-we-are/

198 IFRC. Pacific Islands: 2023 IFRC network multi-country plan. https://prddsgofilestorage.blob.core.windows.net/api/country-plan-pdf/2023-01-17-00-00-08/public-plan-627025.pdf

199 Facebook. Vanuatu Red Cross Society. https://www.facebook.com/VanuatuRedCross/about_details

200 Vanuatu Red Cross Society. About us. https://vanuaturedcross.squarespace.com/about-us

201 USAID. Pacific Islands. https://www.usaid.gov/pacific-islands

202 U.S. Embassy to Papua New Guinea, Solomon Islands and Vanuatu. https://pg.usembassy.gov/

203 Republic of Vanuatu. Disaster Risk Management Act No. 23 of 2019. IFRC, https://disasterlaw.ifrc.org/sites/default/files/media/disaster_law/2021-12/DRM_Act_23_of_2019.pdf

204 ADPC & UNDRR. Disaster Risk Reduction in the Republic of Vanuatu: Status Report, 2022. https://www.undrr.org/media/83389/download?startDownload=true

205 World Bank. Major Boost for Disaster Risk Management in Vanuatu. 9 January 2020. https://www.worldbank.org/en/news/press-release/2020/01/09/major-boost-for-disaster-risk-management-in-vanuatu

206 Government of Vanuatu. Vanuatu 2030: The People's Plan – National Sustainable Development Plan 2016 to 2030. November 2016. https://www.gov.vu/images/publications/Vanuatu2030-EN-FINAL-sf.pdf

207 UNDP. Carbon, Climate, and Community: Vanuatu's Integrated Approach to Sustainable Development. 6 June 2023. https://www.undp.org/pacific/stories/carbon-climate-and-community-vanuatus-integrated-approach-sustainable-development

208 Government of Vanuatu. Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030, https://ndmo.gov.vu/resources/downloads/category/10-strategic-documents?download=36:vanuatu-climate-change-and-disaster-risk-reduction-policy-2016-2030

209 Pierce, Charles and Hemstock, S.L. (2021). Resilience in Formal School Education in Vanuatu: A Mismatch with National, Regional and International Policies. Journal of Education for Sustainable Development. 15. 097340822110313. 10.1177/09734082211031350. https://www.researchgate.net/publication/353896226_Resilience_in_Formal_School_Education_in_Vanuatu_A_Mismatch_with_National_Regional_and_International_Policies

210 Government of Vanuatu. National Policy on Climate Change and Disaster-Induced Displacement, 2018. https://ndmo.gov.vu/resources/downloads/category/10-strategic-documents?download=259:cc-and-di-displacement-policy

211 Government of Vanuatu. Cyclone Support Plan 2020-2021. https://ndmo.gov.vu/resources/downloads/category/103-cyclone-support-plan

212 Vanuatu NDMO. NDMO Strategic Plan 2016-2020. https://ndmo.gov.vu/resources/downloads/category/10-strategic-documents?download=35:ndmo-strategic-plan-2016-2020

213 Vanuatu NDMO. Disaster Response Plans. https://ndmo.gov.vu/resources/downloads/category/19-disaster-response-plans

214 Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management (FRDP): 2017 – 2030. Pacific Resilience Partnership. https://www.resilientpacific.org/en/framework-resilient-development-pacific

215 Vanuatu NDMO. News: Communications With Community Engagement. 22 April 2021. https://ndmo.gov.vu/news

216 Australian Humanitarian Partnership. Giving communities a voice in Vanuatu's disaster response system. 3 May 2022. https://australianhumanitarianpartnership.org/field-stories/giving-communities-a-voice-in-vanuatus-disaster-response-system

217 ADF. Vanuatu Government National Emergency Radio Network operational in time for high risk weather season. 2 December 2021. https://www.defence.gov.au/news-events/releases/2021-12-02/vanuatu-government-national-emergency-radio-network-operational-time-high-risk-weather-season

218 SPREP. Vanuatu Multi-Hazard Early Warning, Seismic and Volcanic Systems Highlighted at the Pacific Resilience Meeting. 2 May 2019. https://www.sprep.org/news/vanuatu-multi-hazard-early-warning-seismic-and-volcanic-systems-highlighted-at-the-pacific-resilience-meeting

219 Government of Vanuatu. Cyclone Support Plan 2020-2021. https://ndmo.gov.vu/resources/downloads/category/103-cyclone-support-plan

220 Vanuatu NDMO. Tsunami Siren Launching. 7 August 2017. https://ndmo.gov.vu/news/181-tsunami-siren-launching

221 SPREP. VanKIRAP partners with Vanuatu's national broadcaster to bring climate information to the people. 24 May 2023. https://www.sprep.org/news/vankirap-partners-with-vanuatus-national-broadcaster-to-bring-climate-information-to-the-people

222 Morris, Doddy. Vanuatu launches first Ocean Climate Monitoring Network to combat climate change effects. Vanuatu Daily Post. 20 April 2023. https://www.dailypost.vu/news/vanuatu-launches-first-ocean-climate-monitoring-network-to-combat-climate-change-effects/article_93817728-f140-520a-878a-f1c70fa3fecd.html

223 Vanuatu Daily Post. ORSNET, a new step towards the prevention of earthquakes and tsunamis. 10 June 2016. https://www.dailypost.vu/news/orsnet-a-new-step-towards-the-prevention-of-earthquakes-and-tsunamis/article_2e462ae7-e669-5a3b-9ebc-04607f1e5e21.html

224 SPREP. Vanuatu Multi-Hazard Early Warning, Seismic And Volcanic Systems Highlighted At The Pacific Resilience Meeting. 2 May 2019. https://www.sprep.org/news/vanuatu-multi-hazard-early-warning-seismic-and-volcanic-systems-highlighted-at-the-pacific-resilience-meeting

225 Joint Publication 3-29. Foreign Humanitarian Assistance. 14 May 2019. Page IV-35. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_29.pdf?ver=2019-05-21-150525-607

226 Vanuatu Red Cross Society. About us. https://vanuaturedcross.squarespace.com/about-us

227 Facebook. Vanuatu Red Cross Society. https://www.facebook.com/VanuatuRedCross/about_details

228 International Federation of Red Cross (IFRC). Who we are. Accessed 23 March 2021. http://www.ifrc.org/en/who-we-are

229 Email communication from Julia Hartelius, Interim Disaster Law Coordinator, International Federation of Red Cross and Red Crescent Societies (IFRC). Asia Pacific Regional Office. April 15, 2019.

230 Pacific Community (SPC). https://www.spc.int/

231 Pacific Disaster Center (PDC Global). About DisasterAWARE. Accessed 23 March 2021. https://www.pdc.org/apps/disasteraware/about-disasteraware/

232 Pacific Disaster Center (PDC Global). Disaster Alert. Accessed 23 March 2021. https://disasteralert.pdc.org/disasteralert/

Pacific Disaster Center (PDC Global). DisasterAWARE Quick Start User Guide, 2019, Version 6.5. https://disasteraware.pdc.org/help/Quick-Start-Guide-DisasterAWARE-screen.pdf

233 Pacific Disaster Center (PDC Global). DisasterAlert™. Accessed 23 March 2021. https://www.pdc.org/apps/disaster-alert/

234 All Partners Access Network (APAN). About Us. Accessed 23 March 2021. https://www.apan.org/pages/about

235 All Partners Access Network (APAN). Solutions. Accessed 23 March 2021. https://www.apan.org/pages/solutions-hadr

236 Government of Vanuatu, Ministry of Infrastructure & Public Utilities. Home page. https://mipu.gov.vu/

237 Asian Development Bank. Sector Assessment (Summary): Energy. Energy Access Project (FFP VAN 49450). https://www.adb.org/sites/default/files/linked-documents/49450-008-ssa.pdf

238 UNELCO. About UNELCO. Accessed 14 July 2023. https://unelco.engie.com/en/unelco/about-unelco

239 Department of Water Resources. About Us. Ministry of Lands and Natural Resources. Accessed 14 July 2023. https://mol.gov.vu/index.php/en/about-dptmnt

240 UN Office for the Coordination of Humanitarian Affairs. Vanuatu: Reference Map (As of 04 March 2023). https://reliefweb.int/map/vanuatu/vanuatu-reference-map-04-march-2023

241 World Bank. Vanuatu Aviation Investment Project. 26 June 2020. https://projects.worldbank.org/en/projects-operations/project-detail/P154149

242 RNZ News. Port Vila's Bauerfield airport upgrade nearly done. 24 April 2019. https://www.rnz.co.nz/international/pacific-news/387693/port-vila-s-bauerfield-airport-upgrade-nearly-done

243 World Bank. Rebuilding Vanuatu's Gateway to the World. 6 December 2019. https://www.worldbank.org/en/news/feature/2019/12/06/rebuilding-vanuatus-gateway-to-the-world

244 Logistics Cluster. Vanuatu Logistics Capacity Assessment. April 2017. https://dlca.logcluster.org/vanuatu

245 Aeropath. AIP Vanuatu, AIRAC – AIP Supplement – Effective 17 JUN 21. https://vli.vu/wp-content/uploads/2021/06/aipvanuatu_sup_17jun21.pdf

246 Logistics Cluster. Vanuatu Whitegrass Airport. Vanuatu LCA. 2017. https://dlca.logcluster.org/223-vanuatu-whitegrass-airport

247 Logistics Cluster. Vanuatu Port Assessment. Vanuatu LCA. 2017. https://dlca.logcluster.org/21-vanuatu-port-assessment

248 Pacific Regional Logistics Cluster. Meeting Minutes, Vanuatu Emergency Response. 23 March 2023. https://logcluster.org/document/pacific-region-vanuatu-response-coordination-meeting-minutes-23-march-2023

249 Marine Traffic. Port Vila Port. Accessed 2 June 2023. https://www.marinetraffic.com/en/ais/details/ports/19812?name=PORT-VILA&country=Vanuatu

250 World Port Source. Port of Port Vila. Accessed 2 June 2023. http://www.worldportsource.com/ports/review/VUT_Port_of_Port_Vila_2180.php

251 Napwatt, Fern. Lapetasi wharf officially opens. Vanuatu Daily Post. 24 February 2018. https://www.dailypost.vu/news/lapetasi-wharf-officially-opens/article_19e6b785-ab5b-543e-8d6e-bb2eebc38bbd.html

252 Marine Traffic. Santo Port. Accessed 2 June 2023. https://www.marinetraffic.com/en/ais/details/ports/20298?name=SANTO&country=Vanuatu

253 Logistics Cluster. Torba Province LCA. Vanuatu LCA. 2017. https://dlca.logcluster.org/sites/default/files/2023-03/0.1%20Torba%20Province%20LCA.docx

254 Logistics Cluster. Sanma Province LCA. Vanuatu LCA. 2017. https://dlca.logcluster.org/sites/default/files/2023-03/0.2%20Sanma%20Province%20LCA.docx

255 Logistics Cluster. Penama Province LCA. Vanuatu LCA. 2017. https://dlca.logcluster.org/sites/default/files/2023-03/0.3%20Penama%20Province%20LCA%20.docx

256 Logistics Cluster. Malampa Province LCA. Vanuatu LCA. 2017. https://dlca.logcluster.org/sites/default/files/2023-03/0.4%20Malampa%20Province%20LCA.docx

257 Logistics Cluster. Shefa Province LCA. Vanuatu LCA. 2017. https://dlca.logcluster.org/sites/default/files/2023-03/0.5%20Shefa%20Province%20LCA.docx

258 Logistics Cluster. Tafea Province LCA. Vanuatu LCA. 2017. https://dlca.logcluster.org/sites/default/files/2023-03/0.6%20Tafea%20Province%20LCA%20.docx

259 AidData. Project ID: 37763. College of William and Mary. https://china.aiddata.org/projects/37763/

260 Logistics Cluster. Vanuatu Road Network. Vanuatu LCA. April 2017. https://dlca.logcluster.org/23-vanuatu-road-network

261 Stanley, David. Moon Handbooks: South Pacific. 2004, p. 922, 938.

262 Logistics Cluster. Vanuatu Waterways. Vanuatu LCA. April 2017. https://dlca.logcluster.org/25-vanuatu-waterways-assessment

263 Global Partnership for Education. Education in Vanuatu, 2023. https://www.globalpartnership.org/where-we-work/vanuatu

264 Global Partnership for Education. Vanuatu Education and Training Sector Strategic Plan 2020-2030. https://www.globalpartnership.org/content/education-and-training-sector-strategic-plan-2020-2030-vanuatu

265 ADPC, UNDRR. Disaster Risk Reduction in the Republic of Vanuatu Status Report, 2022. https://www.undrr.org/media/83389/download?startDownload=true

266 Pierce, Charles and Hemstock, S.L. (2021). Resilience in Formal School Education in Vanuatu: A Mismatch with National, Regional and International Policies. Journal of Education for Sustainable Development. 15. 097340822110313. 10.1177/09734082211031350.

267 UNICEF. Vanuatu: Preparing children and schools for emergencies is key. 3 April 2017. https://reliefweb.int/report/vanuatu/vanuatu-preparing-children-and-schools-emergencies-key

268 Roberts, Anita. Strengthening disaster management in schools. Vanuatu Daily Post. 14 September 2018. https://www.dailypost.vu/news/strengthening-disaster-management-in-schools/article_7caf621b-8c15-5357-bce4-f3e50471db1c.html

269 Roberts, Anita. 'Pikinini i redi' launch on Tanna. Vanuatu Daily Post. 2 March 2019. https://www.dailypost.vu/news/pikinini-i-redi-launch-on-tanna/article_816293ac-8799-56e7-987e-69ab16415843.html

270 International Telecommunication Union (ITU). Digital Development Dashboard: Vanuatu. 2021. https://www.itu.int/en/ITU-D/Statistics/Dashboards/Pages/Digital-Development.aspx

271 VBTC. Television Blong Vanuatu. Accessed 9 June 2023. https://www.vbtc.vu/television-blong-vanuatu/

272 BBC. Vanuatu Media Guide. 7 February 2023. https://www.bbc.com/news/world-asia-16426202

273 Freedom House. Vanuatu: Freedom in the World 2022 Country Report. https://freedomhouse.org/country/vanuatu/freedom-world/2022

274 Rowlands, Lyndal. 'Chilling': Vanuatu libel bill prompts fears for free speech. The Guardian. 28 April 2021. https://www.theguardian.com/world/2021/apr/29/chilling-vanuatu-libel-bill-prompts-fears-for-free-speech

275 Vanuatu Post. Home. Accessed 8 June 2023. https://www.vanuatupost.vu/

276 Nalewicki, Jennifer. Whale Mail Is the New Snail Mail at the World's First Underwater Post Office. Smithsonian Magazine. 9 August 2017. https://www.smithsonianmag.com/travel/worlds-first-underwater-post-office-180964385/

277 Vanuatu Post. Underwater Post. Accessed 8 June 2023. https://www.vanuatupost.vu/underwater-post

278 Jackson, Lagipoiva Cherelle. Vanuatu, one of the most climate-vulnerable countries, launches ambitious climate plan. The Guardian. 13 August 2022. https://www.theguardian.com/world/2022/aug/14/vanuatu-one-of-most-climate-vulnerable-countries-launches-ambitious-climate-plan

279 Ritchie, Hannah and Max Roser. Vanuatu: Energy Country Profile, Our World in Data, 2022. https://ourworldindata.org/energy/country/vanuatu

280 Asia Pacific Energy. Vanuatu: National Green Energy Fund. https://policy.asiapacificenergy.org/node/4381

281 UNDP. Carbon, Climate, and Community: Vanuatu's Integrated Approach to Sustainable Development. 6 June 2023. https://www.undp.org/pacific/stories/carbon-climate-and-community-vanuatus-integrated-approach-sustainable-development

282 UNDP. Vanuatu launches country's first-ever community-run solar power station. 30 November 2020. https://www.undp.org/pacific/news/vanuatu-launches-country%E2%80%99s-first-ever-community-run-solar-power-station

283 WHO, UNICEF. Vanuatu, Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, July 2021. https://washdata.org/data/country/VUT/household/download

284 UNELCO. Drinking water, 2020. https://unelco.engie.com/en/water/drinking-water

285 Coastal Water Quality Program. Analysis Report 2020/2021. https://coastalwater.vu/coastal-water-analysis-report-2020-2021/

286 Institute for Health Metrics and Evaluation (IHME). Vanuatu. Accessed 7 June 2023. https://www.healthdata.org/vanuatu

287 Institute for Health Metrics and Evaluation (IHME). Vanuatu. Accessed 7 June 2023. https://www.healthdata.org/vanuatu

288 Wilson, Catherine. Waterborne diseases surge among Vanuatu children after cyclones. Al-Jazeera. 4 April 2023. https://www.aljazeera.com/news/2023/4/4/waterborne-diseases-surge-among-vanuatu-children-after-cyclones

289 WHO Western Pacific Region. Vanuatu – WHO Country Cooperation Strategy 2018-2022. https://apps.who.int/iris/rest/bitstreams/1143634/retrieve

290 Wilson, Catherine. Waterborne diseases surge among Vanuatu children after cyclones. Al-Jazeera. 4 April 2023. https://www.aljazeera.com/news/2023/4/4/waterborne-diseases-surge-among-vanuatu-children-after-cyclones

291 Institute for Health Metrics and Evaluation (IHME). Vanuatu. Accessed 7 June 2023. https://www.healthdata.org/vanuatu

292 WHO Western Pacific Region. Vanuatu – WHO Country Cooperation Strategy 2018-2022. https://apps.who.int/iris/rest/bitstreams/1143634/retrieve

293 WHO Western Pacific Region. Vanuatu – WHO Country Cooperation Strategy 2018-2022. https://apps.who.int/iris/rest/bitstreams/1143634/retrieve

294 Ministry of Health. MOH Organisational Structure. Accessed 7 June 2023. https://moh.gov.vu/index.php/pages/moh-organisational-structure

295 Ministry of Health. Directorate of Curative Services. Accessed 7 June 2023. https://moh.gov.vu/index.php/curative-services/curative-directorate-office

296 Ministry of Health. MOH Organisational Structure. Accessed 7 June 2023. https://moh.gov.vu/index.php/pages/moh-organisational-structure

297 Ministry of Health. Directorate of Curative Services. Accessed 7 June 2023. https://moh.gov.vu/index.php/curative-services/curative-directorate-office

298 Ministry of Health. Outbreak Response. Accessed 7 June 2023. https://moh.gov.vu/index.php/updates/outbreak-response

299 Ministry of Health. Disaster Response. Accessed 7 June 2023. https://moh.gov.vu/index.php/updates/disaster-response

300 WHO Western Pacific Region. Vanuatu – WHO Country Cooperation Strategy 2018-2022. https://apps.who.int/iris/rest/bitstreams/1143634/retrieve

301 Hakkert, Ralph and Pontifex, Scott. Vanuatu 2020 national population and housing census: analytical report - volume 2. Pacific Community. October 2022. https://spccfpstore1.blob.core.windows.net/digitallibrary-docs/files/cc/cc03b205d0580fc2a2f727036ae79e58.pdf?sv=2015-12-11&sr=b&sig=f4X82vek8IApUVTtBUCv4yTozNYzBM1xDy1ZDJGVWKs%3D&se=2023-07-14T12%3A16%3A51Z&sp=r&rscc=public%2C%20max-age%3D864000%2C%20max-stale%3D86400&rsct=application%2Fpdf&rscd=inline%3B%20filename%3D%22Vanuatu_2020_Census_Analytical_report_Vol_2.pdf%22

302 Ministry of Health. Health Sector Strategy 2021-2030. https://moh.gov.vu/images/Strategic_Plan/Health_Sector_Strategy_HSS_2021-2030_.pdf

303 Lele, Kenslyne. One strong health system for Vanuatu. World Bank. 25 November 2021. https://blogs.worldbank.org/eastasiapacific/one-strong-health-system-vanuatu

304 Ministry of Health. Health Sector Strategy 2021-2030. https://moh.gov.vu/images/Strategic_Plan/Health_Sector_Strategy_HSS_2021-2030_.pdf

305 Ministry of Health. Outbreak Response. Accessed 7 June 2023. https://moh.gov.vu/index.php/updates/outbreak-response

306 WHO. Vanuatu leads the way for Pacific elimination of trachoma – the world's biggest infectious cause of blindness. 12 August 2022. https://www.who.int/news/item/12-08-2022-vanuatu-leads-the-way-for-pacific-elimination-of-trachoma-the-world-s-biggest-infectious-cause-of-blindness

307 IFRC. Vanuatu: One month on since double cyclones, rising cases of Leptospirosis a concern. 31 March 2023. https://www.ifrc.org/press-release/vanuatu-one-month-double-cyclones-rising-cases-leptospirosis-concern

308 TravelHealthPro. Dengue. UK Health Security Agency. Accessed 7 June 2023. https://travelhealthpro.org.uk/disease/42/dengue

309 Taeo, George; Capuano, Corinne and Thomas R. Burkot. Dengue Control in Vanuatu: Towards an Integrated

Vertical and Horizontal Control Programme. WHO Dengue Bulletin – Volume 24, 2000. https://apps.who.int/iris/bitstream/handle/10665/148786/dbv24p11.pdf;jsessionid=722A308196E6781AAE63838A547DA256?sequence=1

310 World Mosquito Program. Vanuatu. June 2022. https://www.worldmosquitoprogram.org/en/global-progress/vanuatu

311 U.S. CDC. About HIV. Accessed 8 June 2023. https://www.cdc.gov/hiv/basics/whatishiv.html#:~:text=HIV%20(human%20immunodeficiency%20virus)%20is,care%2C%20HIV%20can%20be%20controlled.

312 Daily Post Digital. HIV/AIDS THREAT. 1 December 2022. https://www.dailypost.vu/news/hiv-aids-threat/article_849a0bae-fc3b-53f3-a1d8-64a85305c9c9.html

313 U.S. CDC. Leptospirosis. Accessed 8 June 2023. https://www.cdc.gov/leptospirosis/index.html#:~:text=Leptospirosis%20is%20a%20bacterial%20disease,have%20no%20symptoms%20at%20all.

314 Pakoa, Junior George, Soupé-Gilbert, Marie-Estelle, Girault, Dominique, et al. High incidence of leptospirosis in an observational study of hospital outpatients in Vanuatu highlights the need for improved awareness and diagnostic capacities. PLOS Neglected Tropical Diseases. 4 June 2018. https://doi.org/10.1371/journal.pntd.0006564

315 IFRC. Vanuatu: One month on since double cyclones, rising cases of Leptospirosis a concern. 31 March 2023. https://www.ifrc.org/press-release/vanuatu-one-month-double-cyclones-rising-cases-leptospirosis-concern

316 Crisis24. Vanuatu: Elevated leptospirosis activity reported nationwide in Vanuatu through April. 28 April 2023. https://crisis24.garda.com/alerts/2023/04/vanuatu-elevated-leptospirosis-activity-reported-nationwide-in-vanuatu-through-april

317 UNDP Pacific Office. A MALARIA-FREE VANUATU, CONTRIBUTING TO THE GOOD HEALTH AND WELL-BEING OF THE POPULATION. Accessed 7 June 2023. https://www.undp.org/pacific/projects/malaria-free-vanuatu-contributing-good-health-and-well-being-population

318 TravelHealthPro. Malaria. UK Health Security Agency. Accessed 7 June 2023. https://travelhealthpro.org.uk/disease/113/malaria

319 UNDP Pacific Office. A MALARIA-FREE VANUATU, CONTRIBUTING TO THE GOOD HEALTH AND WELL-BEING OF THE POPULATION. Accessed 7 June 2023. https://www.undp.org/pacific/projects/malaria-free-vanuatu-contributing-good-health-and-well-being-population

320 U.S. CDC. Tuberculosis General Information Fact Sheet. Accessed 8 June 2023. https://www.cdc.gov/tb/publications/factsheets/general/tb.htm#:~:text=What%20is%20TB%3F,they%20do%20not%20get%20treatment.

321 Yanagawa, Manami, et al. Epidemiology of tuberculosis in the Pacific island countries and areas, 2000–2020. Western Pacific Surveillance and Response Journal. Vol 14, No 1, 2023 | doi: 10.5365/wpsar.2023.14.1.996

322 UNDP. MULTI-COUNTRY WESTERN PACIFIC PROGRAMME: Programme Brief. October 2017. https://www.undp.org/sites/g/files/zskgke326/files/migration/pacific/f2c4ca9311ed16724061833233ae472122ba99100b-cad2168391532543a8034a.pdf

323 Ministry of Health. Vanuatu Non – Communicable Disease Policy & Strategic Plan 2021-2030. https://www.iccp-portal.org/system/files/plans/VUT_B3_s21_Final%20Draft%20NCD%20Policy%20and%20Strategic%20Plan%202021-2030_5.5.2021.pdf

324 Ministry of Health. WORKFORCE DEVELOPMENT PLAN 2019-2025. https://moh.gov.vu/images/health_policies/plans/191002_Final_Workforce_Development_Plan_MoH_002.pdf

325 Ministry of Health. Vanuatu Non – Communicable Disease Policy & Strategic Plan 2021-2030. https://www.iccp-portal.org/system/files/plans/VUT_B3_s21_Final%20Draft%20NCD%20Policy%20and%20Strategic%20Plan%202021-2030_5.5.2021.pdf

326 Gero, A, Fletcher, SM, Rumsey, M, Thiessen, J, Kuruppu, N, Buchan, J, Daly, J & Willetts, J. Disaster response and climate change in the Pacific. National Climate Change Adaptation Research Facility, Gold Coast. 2013. https://www.preventionweb.net/publication/disaster-response-and-climate-change-pacific

327 Ministry of Health. Directorate of Curative Services. Accessed 7 June 2023. https://moh.gov.vu/index.php/curative-services/curative-directorate-office

328 Ministry of Health. WORKFORCE DEVELOPMENT PLAN 2019-2025. https://moh.gov.vu/images/health_policies/plans/191002_Final_Workforce_Development_Plan_MoH_002.pdf

329 United States Institute of Peace. What is UNSCR 1325? Accessed 8 June 2023. https://www.usip.org/gender_peacebuilding/about_UNSCR_1325

330 Department of Political and Peacebuilding Affairs (DPPA). 2023 Factsheet: Women, Peace and Security. United Nation. https://dppa.un.org/sites/default/files/wps.pdf

331 United Nations Environment Programme, UN Women, UNDP and UNDPPA/PBSO. GENDER, CLIMATE & SECURITY: Sustaining inclusive peace on the frontlines of climate change. 11 June 2020. https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2020/Gender-climate-and-security-en.pdf

332 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

333 Daily Post. Prime Minster Launches National Gender Equality Policy. 28 August 2021. https://www.dailypost.vu/news/prime-minster-launches-national-gender-equality-policy/article_8aa98d48-4e13-53db-95f3-7ced4fb04e08.html

334 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

335 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

336 UN Women, Australia. Women's Resilience to Disasters Programme Launched in Vanuatu. 5 January 2023. https://unwomen.org.au/womens-resilience-to-disasters-programme-launched-in-vanuatu/

337 Women Count. Vanuatu. UN Women. Accessed 9 June 2023. https://data.unwomen.org/country/vanuatu

338 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

339 U.S. State Department. 2022 Country Reports on Human Rights Practices: Vanuatu. https://www.state.gov/reports/2022-country-reports-on-human-rights-practices/vanuatu

340 International Women's Development Agency. CREATING THE LANGUAGE OF GENDER EQUALITY IN VANUATU. 13 July 2022. https://iwda.org.au/creating-the-language-of-gender-equality-in-vanuatu/

341 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

342 U.S. State Department. 2022 Country Reports on Human Rights Practices: Vanuatu. https://www.state.gov/reports/2022-country-reports-on-human-rights-practices/vanuatu

343 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

344 Maykin, Melissa and Srinivasan, Prianka. Alatoi Ishmael Kalsakau becomes Vanuatu's prime minister after country elects first female MP in 14 years. Australian Broadcasting Corporation. 4 November 2022. https://www.abc.net.au/news/2022-11-05/vanuatu-elections-draw-to-a-close-with-prime-minister-sworn-in/101610512

345 Daily Post. Snap Elections 2022 (Official Results). https://www.dailypost.vu/site/se_results.html

346 Maykin, Melissa and Srinivasan, Prianka. Alatoi Ishmael Kalsakau becomes Vanuatu's prime minister after country elects first female MP in 14 years. Australian Broadcasting Corporation. 4 November 2022. https://www.abc.net.au/news/2022-11-05/vanuatu-elections-draw-to-a-close-with-prime-minister-sworn-in/101610512

347 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

348 U.S. State Department. 2022 Country Reports on Human Rights Practices: Vanuatu. https://www.state.gov/reports/2022-country-reports-on-human-rights-practices/vanuatu

349 World Economic Forum. Global Gender Gap Report 2022. 13 July 2022. https://www3.weforum.org/docs/WEF_GGGR_2022.pdf

350 World Economic Forum. Global Gender Gap Report 2022. 13 July 2022. https://www3.weforum.org/docs/WEF_GGGR_2022.pdf

351 Jennings, Steve; Kenni, Linda; and McCormack, Caitlin. Gender and LGBTQI+ Policy and Programming in Vanuatu: Opportunities, challenges, capacity, and tools for change. Oxfam. 2020. Doi: 10.21201/2020.6508. https://policy-practice.oxfam.org/resources/gender-and-lgbtqi-policy-and-programming-in-vanuatu-opportunities-challenges-ca-621057/

352 Comunian, Cristina. In Vanuatu, women lead climate change resilience efforts. Spotlight Initiative. 27 June 2022. https://www.spotlightinitiative.org/news/vanuatu-women-lead-climate-change-resilience-efforts

353 Humanitarian Advisory Group. Beyond Barriers: Vanuatu Case Study. February 2022. https://www.preventionweb.net/publication/beyond-barriers-vanuatu-case-study

354 U.S. Indo-Pacific Command. Pacific Angel 18-3 to begin in Vanuatu. Headquarters Pacific Air Forces Public Affairs. July 12, 2018. https://www.pacom.mil/Media/News/News-Article-View/Article/1573689/pacific-angel-18-3-to-begin-in-vanuatu/

355 U.S. Indo-Pacific Command. Pacific Angel 18-3 is Underway in Vanuatu. By Senior Airman Kelsey Tucker Pacific Air Forces Public Affairs. July 20, 2018. https://www.pacom.mil/Media/News/News-Article-View/Article/1580808/pacific-angel-18-3-is-underway-in-vanuatu/

356 U.S. Army. Army, South Pacific partners prepare effective responses to natural disasters. Staff Sgt. David Overson. September 19, 2017. https://www.army.mil/article/194039/army_south_pacific_partners_prepare_effective_responses_to_natural_disasters

357 U.S. Army. Pacific Resilience Disaster Response Exercise and Exchange kicks off in Port Vila, Vanuatu. Capt. Chad Cooper. August 3, 2016 https://www.army.mil/article/172754/pacific_resilience_disaster_response_exercise_and_exchange_kicks_off_in_port_vila_vanuatu

358 Photo Credit: U.S. Army. Pacific Resilience Disaster Response Exercise and Exchange kicks off in Port Vila, Vanuatu. Capt. Chad Cooper. August 3, 2016 https://www.army.mil/article/172754/pacific_resilience_disaster_response_exercise_and_exchange_kicks_off_in_port_vila_vanuatu

359 Global Security.org. Vanuatu-Foreign Relations. Accessed June 1, 2023. https://www.globalsecurity.org/military/world/oceania/vanuatu-forrel.htm#:~:text=Vanuatu%20retains%20strong%20economic%20and%20cultural%20ties%20to,banking%20and%20in%20services%20sectors%2C%20such%20as%20tourism.

360 United States Indo-Pacific Command. Intent to Open U.S. Embassy Port Vila, Republic of Vanuatu. April 3, 2023. https://www.pacom.mil/Media/News/News-Article-View/Article/3350517/intent-to-open-us-embassy-port-vila-republic-of-vanuatu/

361 U.S. Department of State. U.S.-Pacific Islands Forum Leaders Dialogue in Papua New Guinea. 22 May 2023. https://www.state.gov/u-s-pacific-islands-forum-leaders-dialogue-in-papua-new-guinea/

362 Australian Department of Foreign Affairs and Trade. Vanuatu Economic and Trade Fact Sheet. 2022. https://www.dfat.gov.au/sites/default/files/vanu-cef.pdf

363 Australian Department of Foreign Affairs and Trade. Australia's engagement in Vanuatu. Last updated February 2023. https://www.dfat.gov.au/geo/vanuatu/engagement-in-vanuatu

364 Georgetown University. The United States Must Operationalize Resources to Secure the Pacific. Ambassador C. Steven McGann (ret). February 7, 2022. https://canzps.georgetown.edu/2022/02/07/the-united-states-must-operationalize-resources-to-secure-the-pacific/

365 U.S. Naval Institute. Fishing for Trouble: Chinese IUU Fishing and the Risk of Escalation. February 2023. By Commander Jennifer Runion, U.S. Coast Guard. Vol. 149/2. https://www.usni.org/magazines/proceedings/2023/february/fishing-trouble-chinese-iuu-fishing-and-risk-escalation

366 U.S. Department of State. U.S. Relations with Vanuatu. Bilateral Relations Fact Sheet. May 17, 2022. https://www.state.gov/u-s-relations-with-vanuatu/

367 U.S. Naval Institute. Fishing for Trouble: Chinese IUU Fishing and the Risk of Escalation. February 2023. By Commander Jennifer Runion, U.S. Coast Guard. Vol. 149/2. https://www.usni.org/magazines/proceedings/2023/february/fishing-trouble-chinese-iuu-fishing-and-risk-escalation

368 Gibson, Liam. Pacific islands summit begins amid US-China battle for influence. Al-Jazeera. 11 July 2022. https://www.aljazeera.com/economy/2022/7/11/pacific-islands-summit-begins-amid-us-china-battle-for-influence

369 The Sunday Guardian. After Solomons, Vanuatu is PLA's next Pacific island base. M.D. Nalapat. June 4, 2022. https://sundayguardianlive.com/news/solomons-vanuatu-plas-next-pacific-island-base

370 Pacific Islands Forum. Forum Dialogue Partners. Accessed 16 June 2023. https://www.forumsec.org/dialogue-partners/

371 National Advisory Board. Vanuatu's ICJ Climate Initiative endorsed by 51st PIF Leaders. Government of Vanuatu. https://www.nab.vu/news/vanuatu%E2%80%99s-icj-climate-initiative-endorsed-51st-pif-leaders

372 Gibson, Liam. Pacific islands summit begins amid US-China battle for influence. Al-Jazeera. 11 July 2022. https://www.aljazeera.com/economy/2022/7/11/pacific-islands-summit-begins-amid-us-china-battle-for-influence

373 U.S. State Department. Vanuatu International Travel Information. Accessed 8 May 2023. https://travel.state.gov/content/travel/en/international-travel/International-Travel-Country-Information-Pages/Vanuatu.html

374 United States Indo-Pacific Command. Intent to Open U.S. Embassy Port Vila, Republic of Vanuatu. April 3, 2023. https://www.pacom.mil/Media/News/News-Article-View/Article/3350517/intent-to-open-us-embassy-port-vila-republic-of-vanuatu/

375 CDC. Traveler's Health – Vanuatu. Accessed 8 May 2023. https://wwwnc.cdc.gov/travel/destinations/traveler/none/vanuatu?s_cid=ncezid-dgmq-travel-single-001

376 PreventionWeb.net. Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030. http://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf

377 UNISDR. Sendai Framework for Disaster Risk Reduction. https://www.unisdr.org/we/coordinate/sendai-framework

378 PreventionWeb.net. Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030. http://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf

379 UNISDR. Sendai Framework for Disaster Risk Reduction. https://www.unisdr.org/we/coordinate/sendai-framework

380 PreventionWeb.net. Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030. http://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf

381 UNDRR. Disaster Risk Reduction in Republic Of Vanuatu: STATUS REPORT 2022. https://www.preventionweb.net/publication/disaster-risk-reduction-republic-vanuatu-status-report-2022

382 CIA World Factbook. Vanuatu. Accessed 8 May 2023. https://www.cia.gov/the-world-factbook/countries/vanuatu/

383 CIA World Factbook. Vanuatu – People and Society. Accessed 8 May 2023. https://www.cia.gov/the-world-factbook/countries/vanuatu/#people-and-society



Center for Excellence in Disaster Management & Humanitarian Assistance
456 Hornet Avenue, Building 76, Joint Base Pearl Harbor - Hickam, Hawaii 96860-3503
Telephone: 808.472.0518 | DSN: 315.472.0518
https://www.cfe-dmha.org
@cfedmha