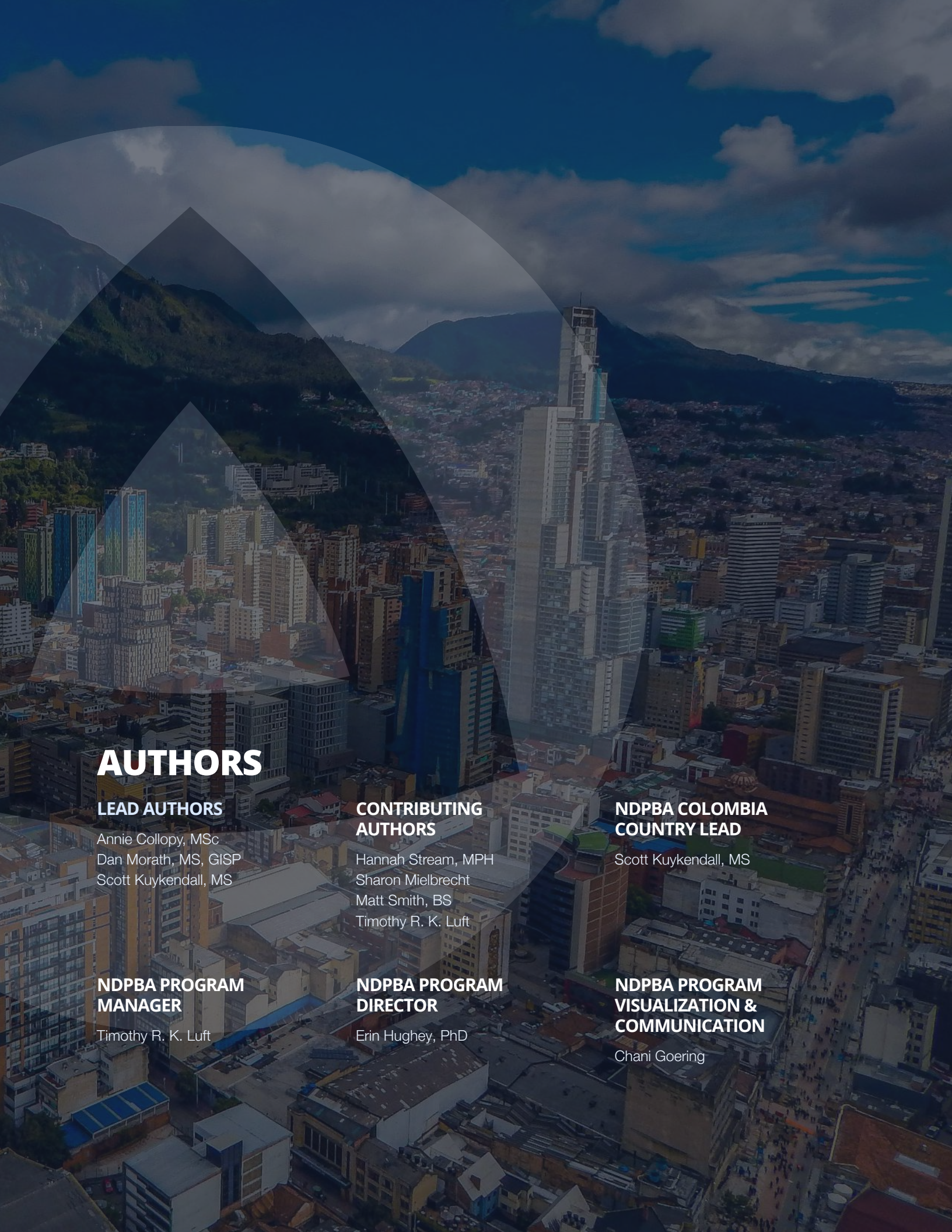
COLOMBIA

NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT

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

PDC | GLOBAL



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ACKNOWLEDGEMENTS

Pacific Disaster Center (PDC) would like to extend a big “mahalo” to all the organizations who assisted in the research, data integration and preparation of the National Disaster Preparedness Baseline Assessment for Colombia. Specifically, we want to recognize the Colombian military and Comando de Ingenieros del Ejército Nacional de Colombia (Colombian Army Engineer Battalion) for their support and efficacy of the project, iMMAP for their assistance in identifying and validating data early in the project, and the U.S. Embassy – Bogotá for their coordination and assistance throughout the assessment. Finally, we offer a special thanks to Unidad Nacional para la Gestión del Riesgo de Desastres (UNGRD), the national disaster management organization for Colombia, for their commitment and leadership to not only this project, but to saving lives and reducing risk, and ultimately providing for a safer and more resilient Colombia.

LIST OF ABBREVIATIONS

CAPRADE: Andean Community and Andean Disaster Prevention and Response Committee

CDDRG: District Councils for Disaster Risk Management

CDM: Comprehensive Disaster Management

CIDH: Interamerican Commission on Human Rights

CMDRG: Municipal Councils for Disaster Risk Management

COG: Continuity of Government

COL: Colombia

COOP: Continuity of Operations

COP: Common operating picture

CRC: Colombian Red Cross

DEM: Digital Elevation Model

DM: Disaster management

DMA: Disaster Management Analysis (of the NDPBA program)

DNP: National Planning Department

DPM: Disaster Prevention Management

DRMKC: Disaster Risk Management Knowledge Center

DRM: Disaster Risk Management

DRR: Disaster risk reduction

DRRM: Disaster risk reduction and management

DTP: Diphtheria-tetanus-pertussis

EAGRD: Andean Strategy for Disaster Risk Management

EMDAT: International Disaster Database

EOC: Emergency Operations Center

EW4ALL: Early Warnings for All

EWS: Early Warning System

FAO: Food and Agriculture Organization

GDP: Gross domestic product

GFDRR: Global Facility for Disaster Risk Reduction (of the World Bank)

GIFMM: Interagency Group on Mixed Migration Flows

GIS: Geographic Information Systems

GP: Guiding Principle (of Sendai Framework)

GPSS: Global Program for Safer Schools

GSMA: Global Systems for Mobile Communication Association

HFA: Hyogo Framework for Action

HiB: Haemophilus influenzae type b

IADB: Inter-American Developmental Bank

ICT: Information and Communications Technology

IDEAM: Institute of Hydrology and Meteorology Studies

ICRC: International Committee of the Red Cross

IDB: Inter-American Development Bank

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

iGOPP: Index of Governance and Public Policy

INS: Immigration and Naturalization Services

IOM: International Organization for Migration

ITU: International Telecommunication Union

LEWS: Landslide Early Warning System

M4H: Mobile for Humanitarian

MADS: Ministry of Environmental and Sustainable Development

MHE: Multi Hazard Exposure

MHEWS: Multi-hazard early warning systems

MMR: Measles, Mumps and Rubella

MSNA: Needs Assessment Multisectoral

NDPBA: National Disaster Preparedness Baseline Assessment (of PDC)

NDRMF: National Disaster Risk Management Fund

NEOC: National Emergency Operations Centre

NGO: Non-Governmental Organization

NUDRM: National Unit for Disaster Risk Management

OEA: Organization of American States

OECD: Organization for Economic Cooperation and Development

PAC: Civil Air Patrol

LIST OF ABBREVIATIONS

PDC: Pacific Disaster Center

PFA: Priority for Action (of Sendai Framework)

PIGRYRECD: Comprehensive Plan for Risk Management, Prevention, Preparation, and Response to Emergencies, Contingencies and Disasters

PNACC: National Plan for Adaptation to Climate Change

RIOCCADAPT: Adaptation to Climate Change Risks in Ibero-American Countries

RVA: Risk and Vulnerability Assessment (of the NDPBA program)

SCJ: Security Coexistence and Justice

SD: Sustainable Development

SDG: Sustainable Development Goal

SELA: Latin American and Caribbean Economic System

SFDRR: Sendai Framework for Disaster Risk Reduction

SNGRD: National System of Disaster Risk Management

SOP: Standard Operating Procedure

UN: United Nations

UN OCHA: UN Office for the Coordination of Humanitarian Affairs

UNDP: UN Development Programme

UNDRR: UN Office for Disaster Risk Reduction

UNESCO: United Nations Educational Scientific, and Cultural Organization

UNHCR: UN High Commissioner for Refugees

UNGRD: National Unit for Disaster Risk Management

USAID: United States Agency for International Development

USD: United States Dollar

USSOUTHCOM: United States Southern Command

WASH: Water, Sanitation, and Hygiene

WFP: World Food Programme

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NDPBA

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Pacific Disaster Center (PDC) completed the Colombia National Disaster Preparedness Baseline Assessment (NDPBA) in partnership with Unidad Nacional para la Gestión del Riesgo de Desastres (UNGRD). The NDPBA is a collaborative effort between PDC and Colombia and is more than just an assessment of risk and disaster risk reduction efforts. It provides the basis for understanding, updating, accessing, and applying critical risk information in decision-making. The NDPBA provides the necessary tools, scientific data, and evidence-based practices to effectively reduce disaster risk—informing decisions from the national down to the municipal level.

The assessment is comprised of two components: the Risk and Vulnerability Assessment (RVA) and the Disaster Management Analysis (DMA). The RVA examines multi-hazard exposure, socioeconomic vulnerabilities and coping capacity to provide a detailed picture of disaster risk and support informed decision. The DMA takes a qualitative approach to assess six subthemes— Enabling Environment; Institutional Arrangements; Disaster Governance Mechanisms; Capabilities and Resources; Capacity Development; and Communication and Information Management. The DMA results are used to contextualize the RVA findings, providing a comprehensive understanding of the current disaster management landscape to support decision-making for programmatic and disaster response challenges. PDC worked in partnership with UNGRD to apply the NDPBA findings in development of a 5-Year Disaster Risk Reduction (DRR) Plan to provide for better targeted use of limited disaster risk reduction resources.

The NDPBA was conducted while the Government of Colombia was undergoing elections and navigating recent instances of corruption within the government. These events presented challenges in program continuity but also provided opportunities in helping to understand Colombia's disaster management challenges. The NDPBA was funded by the United States Government through the United States Southern Command (USSOUTHCOM) and conducted in coordination with United States Embassy in Bogotá.

Colombia is located on the Pacific Ring of Fire and the Andean Volcano Belt which contributes to the multi-hazard risk. Losses due to natural disasters reached a peak in 2024 with losses due to fire, flooding, and drought resulting in high agricultural losses specifically impacting areas in the Caribbean and Amazon regions. In response, UNGRD has worked with the Colombian Army Engineer Battalion and USSOUTHCOM to place temporary bridges in flood prone areas to allow for easier evacuation and movement of vital supplies during flood season. To combat excessive heat and pollution, the city of Medellín, Colombia's second largest city, developed the "green corridors" program which connects greened road verges, gardens, streams, parks and nearby hills. As well as reducing heat, the program is believed to be responsible for improved air quality and a re-introduction of wildlife to the city.

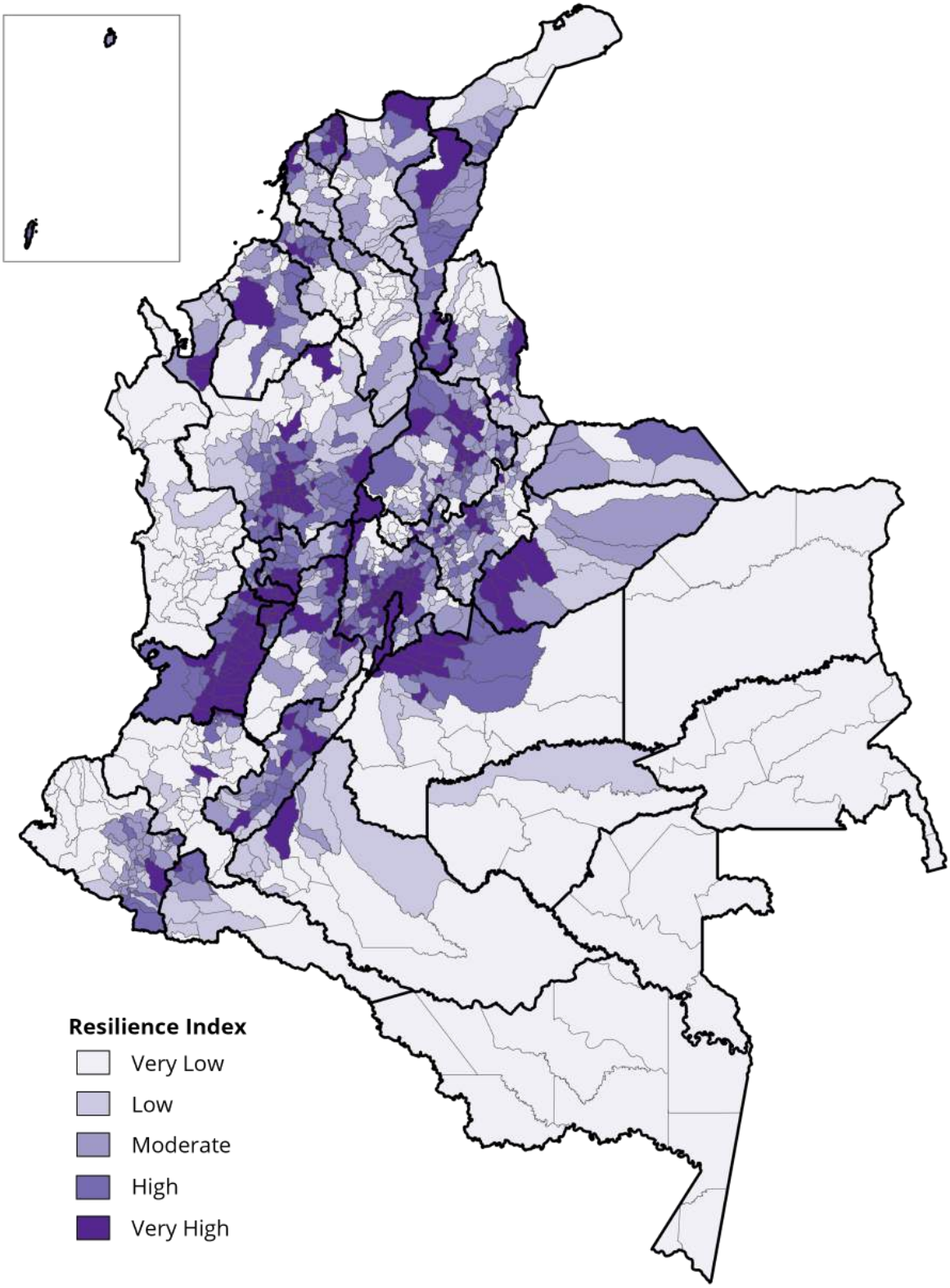
Exposure to multiple hazards is compounded by socioeconomic vulnerabilities in Colombia. With an economy anchored in petroleum exports and a fast-growing Information Technology industry, Colombia has the fourth largest economy in Latin America and the third largest in South America. However, immigration and internal displacements coupled with informal housing settlements pose challenges to broader economic advancement and sustainable development.

The RVA results show that earthquakes, landslides, floods, and extreme heat contribute to considerable exposure of people, buildings, and critical infrastructure. Susceptibility to these, and other hazards included in the assessment, highlights the importance of implementing preparedness strategies and risk reduction initiatives. The assessment also identified vulnerabilities and coping capacities that contribute to multi-hazard risk across Colombia's municipalities. RVA Indicators showed that overcoming challenges related to housing and access to information provides opportunities to reduce vulnerability across the country. In addition, improving access to healthcare, emergency services, energy and technology will bolster Colombia's coping capacity and disaster response capabilities. Endeavors to address these challenges, paired with efforts to mitigate hazard impacts, will strengthen the nation's overall resilience to disasters.

The NDPBA provides Colombia with the scientific evidence and essential data for disaster risk monitoring and decision-making, while aligning recommended actions with the United Nations Development Goals and the Sendai Framework for Disaster Risk Reduction 2015-2030. To access all findings, recommendations, and data (tabular and spatial), developed for this analysis, please visit the PDC's DisasterAWARE platform at https://disasteraware.pdc.org/. The Final Report can also be accessed at www.pdc.org.

SUMMARY OF FINDINGS

COLOMBIA RESILIENCE BY MUNICIPALITY

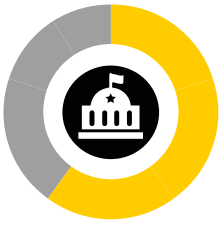


DISASTER MANAGEMENT ANALYSIS

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

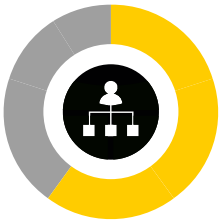
STATUS

Limited or No Capacity — Advanced Capacity



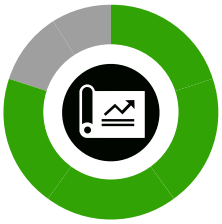
A. Enabling Environment

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



B. Institutional Arrangements

Organizational Structures
Leadership Arrangements
Mechanisms for Stakeholder Engagement



C. Disaster Governance Mechanisms

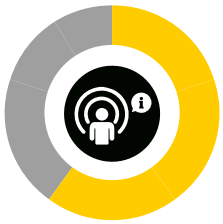
Plans and Processes
Command, Control, and Coordination Systems
Emergency Operations Centers

D. Capabilities and Resources

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

E. Capacity Development

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



F. Communication and Information Management

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

RECOMMENDATIONS

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

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

1 Expand hazard and risk mapping for subnational and local areas, especially in areas where concentrations of informal housing settlements are in hazard zones, to facilitate resilience-building measures and planning efforts.

2 Strengthen all-hazards monitoring, communications systems, and data translation into comprehensive multi-hazard early warning systems (MHEWS) and capabilities.

3 Promote comprehensive strategies to monitor, address, and mitigate the impacts of wildfires, flooding, and landslides.

4 Develop a comprehensive strategy to focus on disaster risk reduction (DRR) and resilience-building measures for informal housing settlements in disaster-prone areas.

5 Monitor population dynamics to anticipate how demographic changes may impact local hazard exposure, disaster risk, and potential conflict.

6 Ensure that municipal disaster management plans consider the complexities and potential cascading impacts of response to emergencies in densely populated communities and urban areas.

7 Promote the use of existing frameworks to establish inter-municipal associations to strengthen capacity building, planning, logistics coordination, and disaster response management based on shared hazard zones.

8 Update and revise cadastral data and land use plans at the municipal level to support DRR and community resilience.

9 Promote evidence-based decision-making and knowledge sharing by creating a centralized national repository that stores all municipal disaster management, land use, and water management plans.

10 Strengthen community involvement in DRR by engaging community leaders with local/traditional/indigenous knowledge in risk assessment, planning, mitigation, and response efforts.

11 Conduct a thorough review of building codes, development regulations, and land use policies and implement updated measures to prevent further expansion into hazard-prone areas, especially informal settlements, to improve disaster outcomes.

12 Assess and ensure that emergency communications are accessible and actionable in rural areas.

13 Adopt a comprehensive strategy to increase infrastructure capacities in rural areas.

14 Prioritize national disaster risk financing strategies to enable rapid financial support for affected municipalities during disasters while promoting long-term economic stability.

15 Leverage the full scope of the National Disaster Fund for Disaster Risk Management for targeted DRR initiatives at district and municipal levels.

16 Support interventions that improve capacities to deliver water, sanitation, and hygiene (WASH) during emergencies.

17 Expand nature-based strategies and sustainable land management practices to strengthen ecosystem resilience and deliver long-term environmental and socioeconomic benefits.

18 Strengthen emergency response services' capacity to effectively and efficiently meet the community's needs and provide timely delivery of life-saving assistance.

19 Continue to reduce marginalization and promote gender equality by encouraging active roles in disaster management.

20 Reassess progress made toward DRR and resilience goals.

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NDPBA

COUNTRY BACKGROUND AND OVERVIEW

GEOGRAPHY

Bogotá
Capital City

1,109,500 km²
Land Area (428,380 mi²)

100,210 km²
Water area (38,691 mi²)

3,208 km
Coastline (1,993 mi)
(Caribbean Sea 1,760 km,
North Pacific Ocean 1,448 km)

52.9%
Forest Area (% of land area) (2022)

36.9%
Agriculture Land (% of land area) (2022)

Neighboring Countries

- Brazil
- Ecuador
- Panama
- Peru
- Venezuela

Administrative Divisions

- 1 capital district (Bogotá)
- 32 departments
- 1,122 municipalities

DEMOGRAPHICS

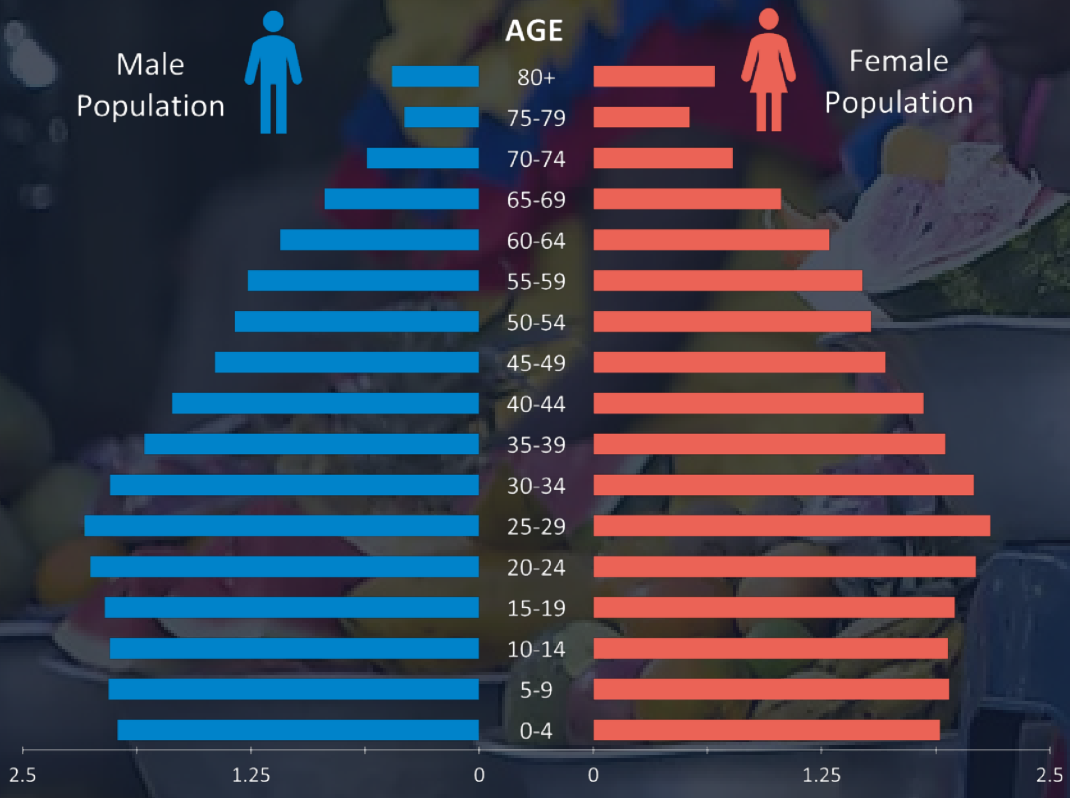
52,156,254
Total Population (2023)

46 per km²
Population Density (2023)

82%
Urban Population (2023)

18%
Rural Population (2023)

1.1%
Average Annual Population Growth (2023)



Healthcare access

73 yrs
Life Expectancy (2021)

2.5
Doctors (per 1,000 people) (2021)

1.4
Nurses and midwives (per 1,000 people) (2021)

1.7
Hospital Beds (per 1,000 people) (2020)

17.6
Infant Mortality Rate (per 1,000 live births) (2020)

65.8
Maternal Mortality Ratio (per 100,000 live births) (2020)

Water, Sanitation, and Hygiene (Wash) Access

86%
Households with piped water supply (2018)

77%
Households with piped sewerage (2018)

70%
Population with access to basic handwashing facilities (2022)

82%
Households with garbage collection (2018)

Access to information

93%
Net enrollment in primary school (2018)

77%
Net enrollment in secondary school (2018)

93%
Literacy Rate (% of people ages 15 and above) (2018)

43%
Households with internet access (2018)

96%
Households with electricity (2018)

ECONOMY

GDP and Key Exports

$343.94 billion
GDP (2022) (USD)

$6,630
GDP per capita (2022) (USD)

3.3%
Avg. annual growth in GDP (2011–2021)

54.8
Income Inequality (Gini Coefficient): (2022)

39.3%
People living below the national Poverty line (2021)

10.7%
Unemployment rate (2022)

Major Exports (2021)

Crude Petroleum

Coal Refined Petroleum

Coffee

Gold

Major Imports (2021)

Refined Petroleum

Cars

Broadcasting Equipment

Packaged Medicines

Cereals

Sectors (% of GDP)

26.7%
Industry (2022)

54.8%
Services (2022)

8.3 %
Agriculture (2022)

KEY INFRASTRUCTURE

Logistics and Transportation

1
Large Airport
El Dorado International Airport

59
Medium Airports

97
Small Airports/ Airstrips

13
Heliports

26
Sea and River Ports

> 440,000 km
Roadways (273,403 mi)

10,543
Bridges

Emergency Services

584
Hospitals

2,787
Clinics and Health Centers

343
Primary Fire Stations

Other Important Assets

55,242
Schools

299
Colleges and universities

57
Dams

23
Power Plants

57,620 km²
Afro-Colombia Community (land area) (22,240 mi²)

333,730 km²
Indigenous Reservation (land area) (128,850 mi²)

DISASTER MANAGEMENT

Major Capacity improvements/milestones:

- On December 21, 2021, Medellín was recognized as one of the first three cities in the Americas and Caribbean region to become a Resilience Hub.
- *Landslide Early Warning Systems in Informal Settlements: Case Study in Medellín,* Colombia, provided a comprehensive framework for developing and implementing landslide early warning systems (LEWS) in informal settlements. (2022)
- In 2018, the city of Cali, Colombia, entered the *Global Program for Safer Schools (GPSS)* as a step toward implementing the first municipal school infrastructure plan.
- *Corredores Verdes* in Medellín established green corridors throughout Medellín to mitigate air pollution and increasing temperatures caused by climate change and exacerbated by the heat island effect of urban areas. *Corredores Verdes* has reduced the average city temperature by an astounding 2°C.

Recent Disaster Impacts*[1]

Dengue Epidemic (2019) Deaths: 169 Affected: 79,639 Losses: *	Hydrological Flood (2019) Deaths: 20 Affected: 23,250 Losses: *	Hurricane Iota (2020) Deaths: 23 Affected: 228,000 Losses: $113 million
Hydrological Flood (2020) Deaths: * Affected: 26,460 Losses: $28.3 million	Hurricane Eta (2020) Deaths: * Affected: 49,800 Losses: $28.3 million	Hydrological Flood (2020) Deaths: 11 Affected: 30,000 Losses: $11.3 million
Hydrological Flood (2021) Deaths: 12 Affected: 23,717 Losses: *	Hydrological Flood (2021) Deaths: * Affected: 14,000 Losses: *	Hydrological Flood (2022) Deaths: 1 Affected: 1,650 Losses: $11 million
Landslide (2022) Deaths: 19 Affected: 9,151 Losses: *	Landslide (2022) Deaths: 22 Affected: 21, 521 Losses: *	Hydrological Flood (2022) Deaths: 5 Affected: 8,101 Losses: *
Hydrological Flood (2022) Deaths: 26 Affected: 44,000 Losses: *	Hydrological Flood (2022) Broken Dam/Burst Bank Deaths: * Affected: 167,250 Losses: *	Hurricane Julia (2022) Deaths: * Affected: 5,002 Losses: *
Hydrological Flood (2023) Deaths: 1 Affected 4,500 Losses: *	Landslide (2023) Deaths: 29 Affected: 106 Losses: *	Hydrological Flood (2023) Deaths: 2 Affected: 38 Losses: *
Flood (2023): Atlantico, Bolivar, Magdalena, La Guajira Deaths: * Injured/Affected: 41,088 Losses: *	Landslide (2023): Rosas, Cauca municipality Deaths: * Injured/Affected: 700 Losses: *	Flood (2023): Suarez, Caloto, La Vega, Jambaló and Santander de Quilichao muncipalities (Cauca) Deaths: 1 Injured/Affected: 4,500 Losses: *
Volcanic activity (2024): 'Los Aburridos' Deaths: * Injured/Affected: 335 Losses: *	Severe weather/flood (2024): San Jacinto del Cauca municipality (Bolívar department); Guaranda, Sucre and Majagual municipalities (Sucre department) Deaths: * Injured/Affected: 7,806 Losses: *	Landslide (2024): Carmen de Atrato Deaths: 34 Injured/Affected: 19 Losses: *

* if none/unknown [1] EMDAT. Accessed 1/7/25.

THE RVA

RISK AND VULNERABILITY ASSESSMENT RESULTS

RISK AND VULNERABILITY

ASSESSMENT RESULTS

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

COLOMBIA

COMPONENTS OF RISK

Multi-hazard Exposure

Vulnerability

Coping Capacity

THE RVA

MULTI-HAZARD EXPOSURE

MULTI-HAZARD EXPOSURE

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

Global Multi-hazard Exposure Rank (PDC Global RVA)

36 OUT OF 216 COUNTRIES / TERRITORIES ASSESSED

Multi-Hazard Exposure within South America

5 OUT OF 14 COUNTRIES / TERRITORIES ASSESSED

COLOMBIA HAZARD ZONES

SEA LEVEL RISE

<1% Population Exposed

95,205 Raw Population Exposure

<1% Built Environment Exposed

1% Critical Infrastructure Exposed

COASTAL FLOODING

<1% Population Exposed

181,671 Raw Population Exposure

<1% Built Environment Exposed

1% Critical Infrastructure Exposed

RIVERINE FLOODING

18% Population Exposed

9,369,469 Raw Population Exposure

22% Built Environment Exposed

30% Critical Infrastructure Exposed

LANDSLIDE

41% Population Exposed

20,675,807 Raw Population Exposure

41% Built Environment Exposed

37% Critical Infrastructure Exposed

EARTHQUAKE

98% Population Exposed

49,929,730 Raw Population Exposure

98% Built Environment Exposed

89% Critical Infrastructure Exposed

EROSION

4% Population Exposed

1,897,658 Raw Population Exposure

5% Built Environment Exposed

3% Critical Infrastructure Exposed

EXTREME HEAT

28% Population Exposed

14,126,330 Raw Population Exposure

33% Built Environment Exposed

41% Critical Infrastructure Exposed

WILDFIRE

3% Population Exposed

1,644,325 Raw Population Exposure

5% Built Environment Exposed

6% Critical Infrastructure Exposed

TROPICAL CYCLONE WIND

2% Population Exposed

1,042,382 Raw Population Exposure

2% Built Environment Exposed

2% Critical Infrastructure Exposed

VOLCANO

5% Population Exposed

2,698,672 Raw Population Exposure

5% Built Environment Exposed

4% Critical Infrastructure Expose

TSUNAMI

4% Population Exposed

1,986,180 Raw Population Exposure

4% Built Environment Exposed

9% Critical Infrastructure Exposed

Colombia: Sea Level Rise (2050) Hazard Exposure

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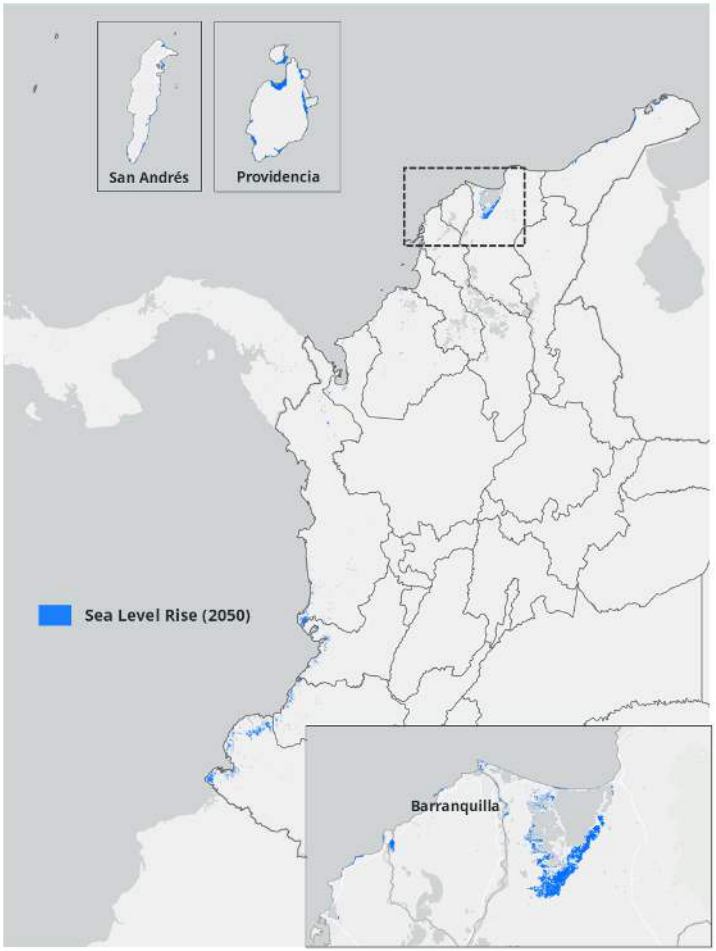


POTENTIAL POPULATION EXPOSURE

95,205 (<1%)

People exposed to sea level rise by 2050

POTENTIAL BUILT ENVIRONMENT EXPOSURE

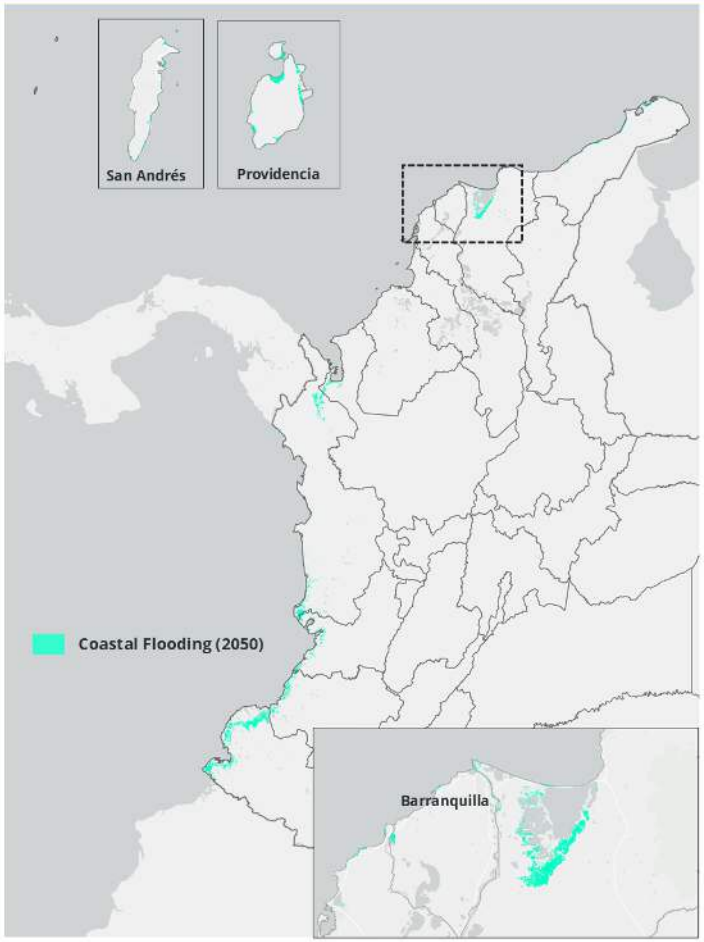
37,200 (<1%)

Buildings exposed to sea level rise by 2050

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

3 (1%) Airports and Heliports	**1** (4%) Sea & River Ports	**145** (<1%) Schools & Colleges	**0** (0%) National EOC	**434 km** (<1%) Roads	**947 km2** (2%) Afro-Colombian Community Areas
0 (0%) Dams	**0** (0%) Power Plants	**39** (<1%) Bridges	**22** (1%) Hospitals & Clinics	**0** (0%) Fire Stations	**277 km2** (<1%) Indigenous Reservation Areas

Colombia: Coastal Flooding (2050) Hazard Exposure



POTENTIAL POPULATION EXPOSURE

181,671 (<1%)

People exposed to coastal flooding by 2050

POTENTIAL BUILT ENVIRONMENT EXPOSURE

67,186 (<1%)

Buildings exposed to coastal flooding by 2050

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

5 (2%)	**2** (8%)	**338** (1%)	**0** (0%)	**642 km** (<1%)	**2,236 km2** (4%)
Airports and Heliports	Sea & River Ports	Schools & Colleges	National EOC	Roads	Afro-Colombian Community Areas
0 (0%)	**0** (0%)	**71** (1%)	**34** (1%)	**0** (0%)	**341 km2** (<1%)
Dams	Power Plants	Bridges	Hospitals & Clinics	Fire Stations	Indigenous Reservation Areas

Colombia: Riverine Flooding Hazard Exposure

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POTENTIAL POPULATION EXPOSURE

9,369,469 (18%)

People exposed to riverine flooding

POTENTIAL BUILT ENVIRONMENT EXPOSURE

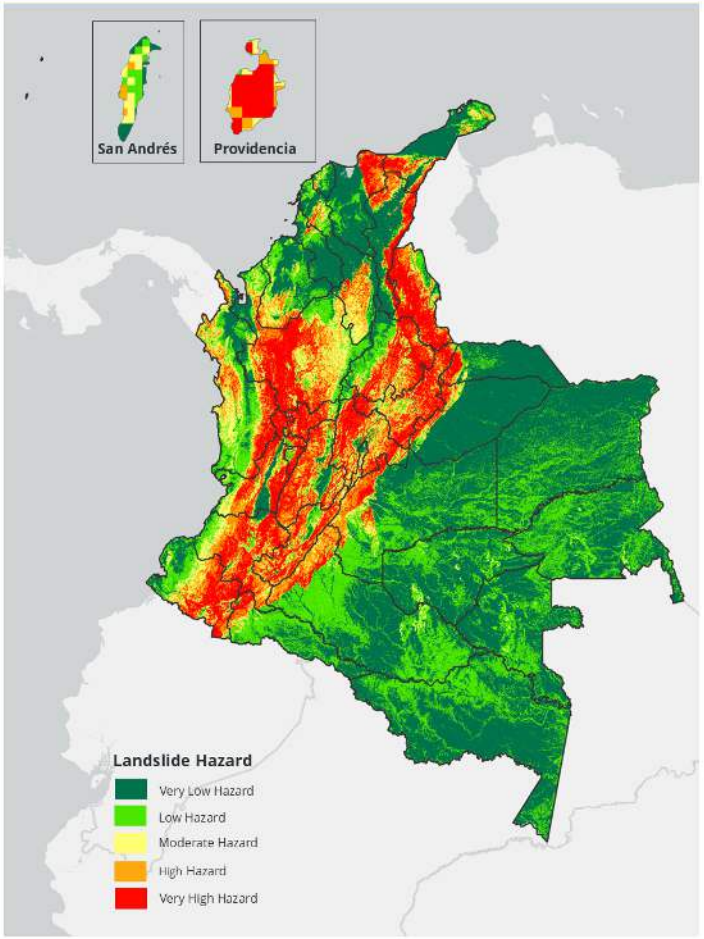
3,707,719 (22%)

Buildings exposed to riverine flooding

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

98 (46%) Airports and Heliports	**14** (54%) Sea & River Ports	**80** (23%) Fire Stations	**0** (0%) National EOC	**90,349 km** (20%) Roads	**20,598 km2** (36%) Afro-Colombian Community Areas
25 (44%) Dams	**12** (52%) Power Plants	**2,487** (24%) Bridges	**971** (29%) Hospitals & Clinics	**11,055** (20%) Schools & Colleges	**35,653 km2** (11%) Indigenous Reservation Areas

Colombia: Landslide Hazard Exposure



POTENTIAL POPULATION EXPOSURE

20,675,807 (41%)

People exposed to landslides (moderate, high, very high)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

6,822,158 (41%)

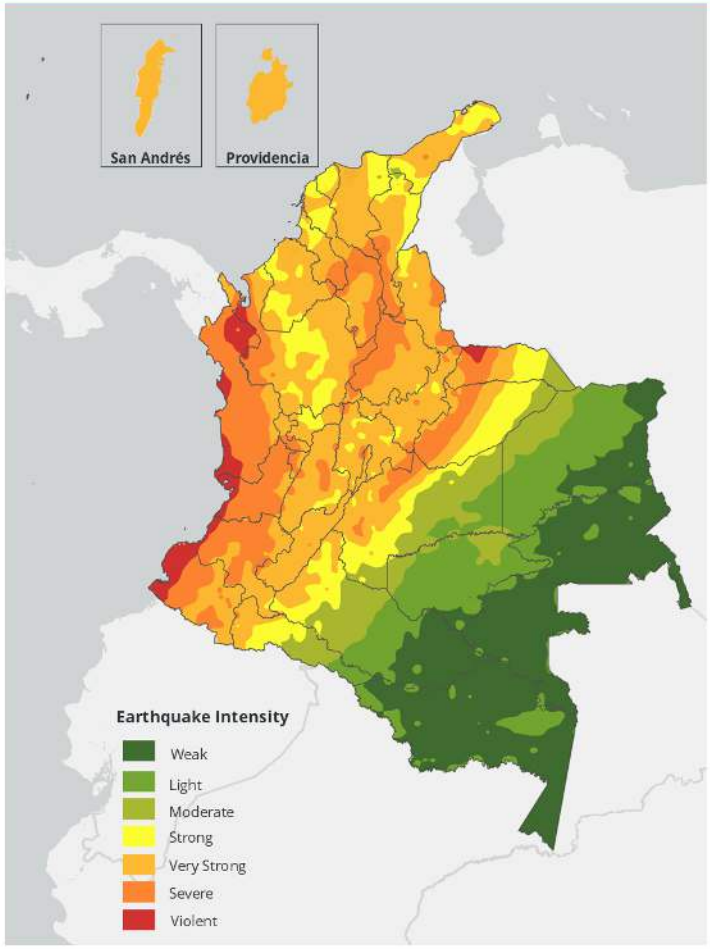
Buildings exposed to landslides (moderate, high, very high)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

34 (16%) Airports and Heliports	**1** (4%) Sea & River Ports	**27,926** (50%) Schools & Colleges	**0** (0%) National EOC	**224,596 km** (51%) Roads	**24,721 km2** (43%) Afro-Colombian Community Areas
51 (89%) Dams	**12** (52%) Power Plants	**5,117** (49%) Bridges	**1,403** (42%) Hospitals & Clinics	**139** (41%) Fire Stations	**36,018 km2** (11%) Indigenous Reservation Areas

Colombia: Earthquake Hazard Exposure

PDC | GLOBAL



POTENTIAL POPULATION EXPOSURE

49,929,730 (98%)

People exposed to earthquake hazard (strong, very strong, severe, and violent)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

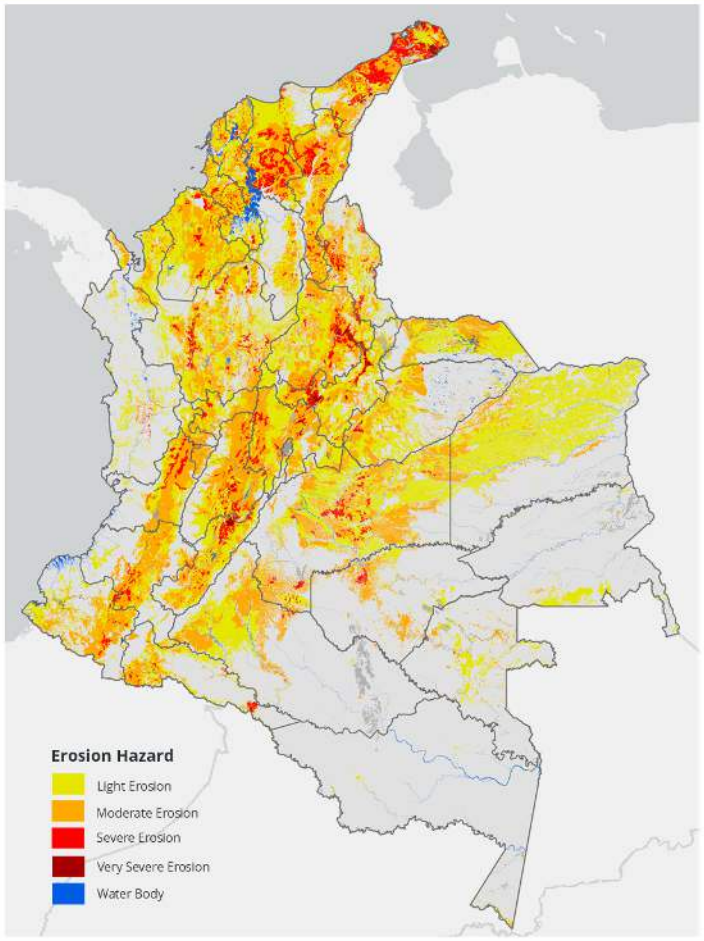
16,246,780 (98%)

Buildings exposed to earthquake hazard (strong, very strong, severe, and violent)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

191 (89%)	**20** (80%)	**54,102** (97%)	**1** (100%)	**419,645 km** (95%)	**57,416 km2** (100%)
Airports and Heliports	Sea & River Ports	Schools & Colleges	National EOC	Roads	Afro-Colombian Community Areas
57 (100%)	**23** (100%)	**10,464** (99%)	**3,312** (98%)	**339** (99%)	**50,517 km2** (15%)
Dams	Power Plants	Bridges	Hospitals & Clinics	Fire Stations	Indigenous Reservation Areas

Colombia: Erosion Hazard Exposure



POTENTIAL POPULATION EXPOSURE

1,897,658 (4%)

People exposed to erosion (severe, very severe)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

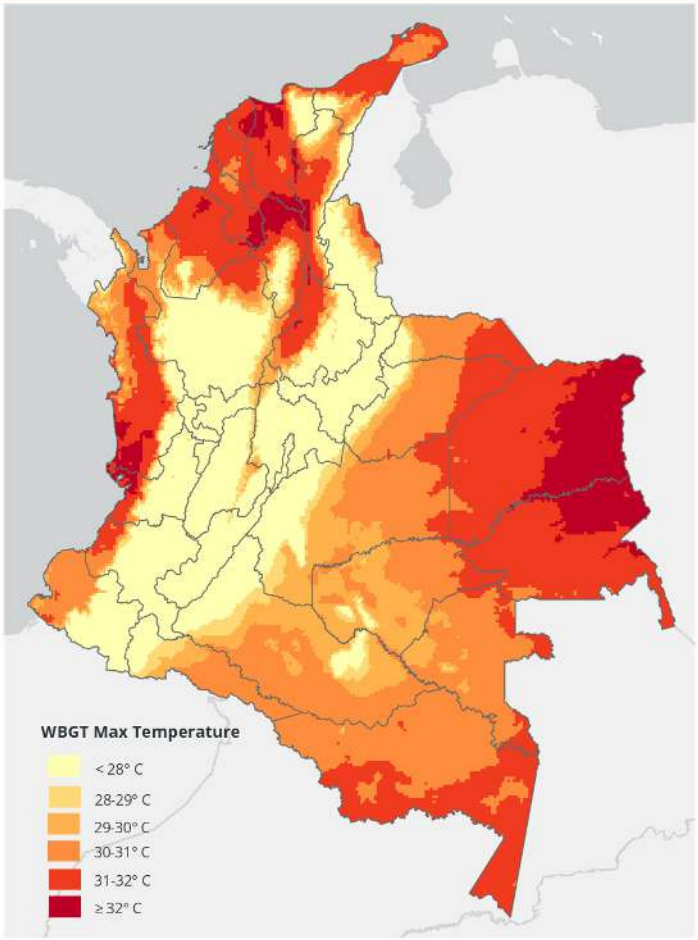
860,132 (5%)

Buildings exposed to erosion (severe, very severe)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

11 (5%)	**0** (0%)	**10** (3%)	**0** (0%)	**31,295 km** (7%)	**8,746 km2** (1%)	**869 km2** (3%)
Airports and Heliports	Sea & River Ports	Fire Stations	National EOC	Roads	Forest	Cropland
3 (5%)	**2** (9%)	**374** (4%)	**177** (5%)	**2,490** (4%)	**5,070 km2** (2%)	**152 km2** (<1%)
Dams	Power Plants	Bridges	Hospitals & Clinics	Schools & Colleges	Indigenous Reservation Areas	Afro-Colombian Community Areas

Colombia: Extreme Heat Hazard Exposure



POTENTIAL POPULATION EXPOSURE

14,126,330 (28%)

People exposed to extreme heat (wet bulb globe temperature of 30° C and above)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

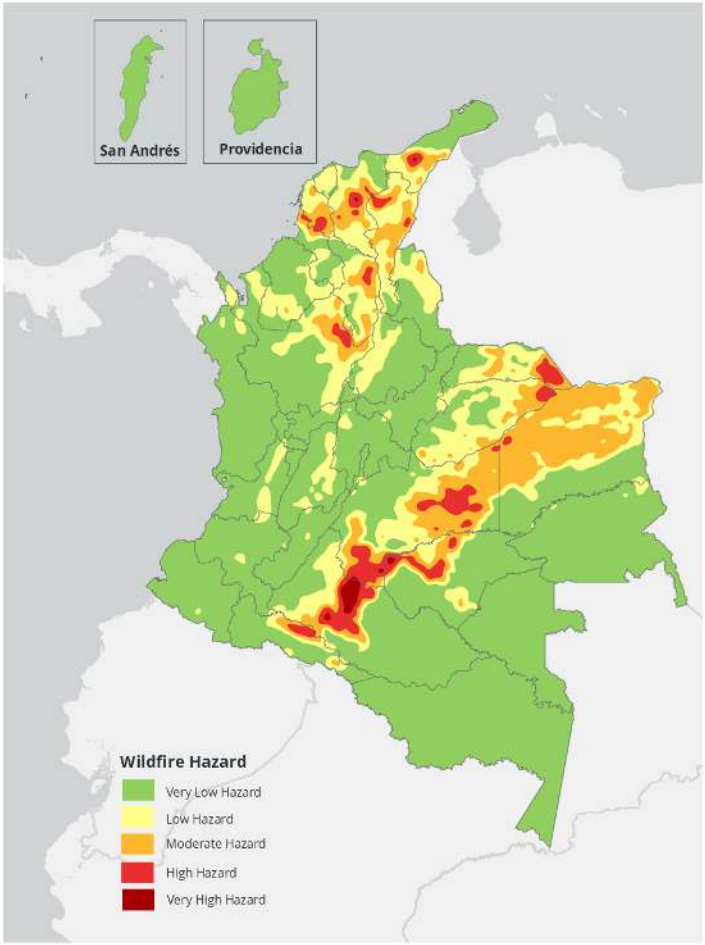
5,451,089 (33%)

Buildings exposed to extreme heat (wet bulb globe temperature of 30° C and above)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

104 (49%)	**22** (85%)	**45** (13%)	**0** (0%)	**128,082 km** (29%)	**463,222 km2** (62%)	**12,126 km2** (45%)
Airports and Heliports	Sea & River Ports	Fire Stations	National EOC	Roads	Forest	Cropland
5 (9%)	**8** (35%)	**1,856** (18%)	**1,241** (37%)	**15,559** (28%)	**296,812 km2** (89%)	**46,110 km2** (80%)
Dams	Power Plants	Bridges	Hospitals & Clinics	Schools & Colleges	Indigenous Reservation Areas	Afro-Colombian Community Areas

Colombia: Wildfire Hazard Exposure



POTENTIAL POPULATION EXPOSURE

1,644,325 (3%)

People exposed to wildfire (moderate, high, very high)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

797,725 (5%)

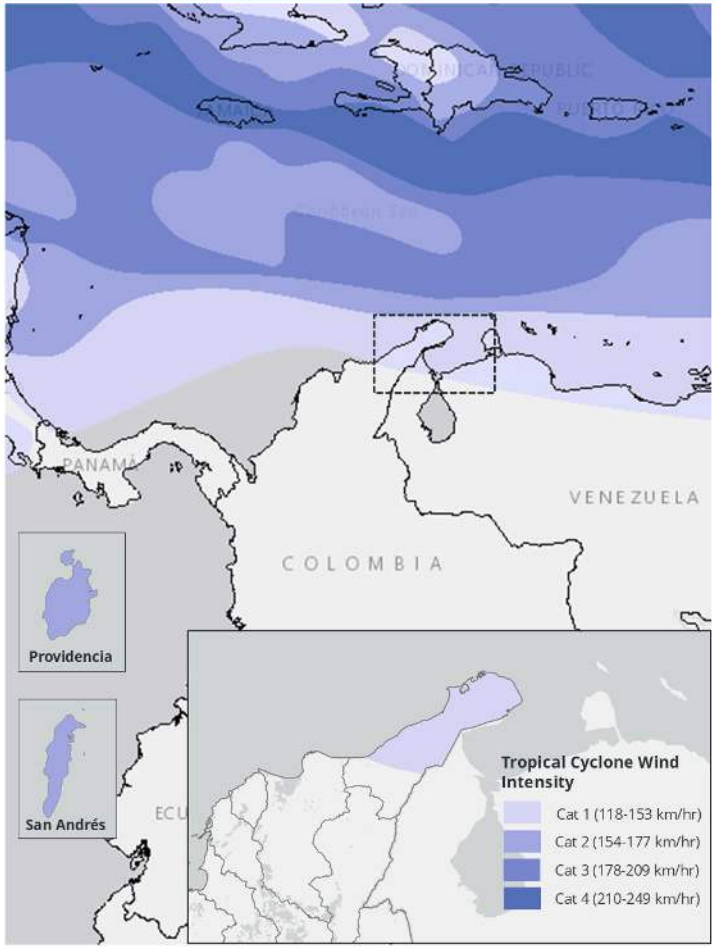
Buildings exposed to wildfire (moderate, high, very high)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

21 (10%)	**3** (12%)	**7** (2%)	**0** (0%)	**37,387 km** (8%)	**65,410 km2** (9%)	**3,173 km2** (12%)
Airports and Heliports	Sea & River Ports	Fire Stations	National EOC	Roads	Forest	Cropland

3 (5%)	**0** (0%)	**312** (3%)	**174** (5%)	**3,081** (6%)	**18,794 km2** (6%)	**182 km2** (<1%)
Dams	Power Plants	Bridges	Hospitals & Clinics	Schools & Colleges	Indigenous Reservation Areas	Afro-Colombian Community Areas

Colombia: Tropical Cyclone Winds Hazard Exposure



POTENTIAL POPULATION EXPOSURE

1,042,382 (2%)

People exposed to tropical cyclone winds (Cat 1 and Cat 2)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

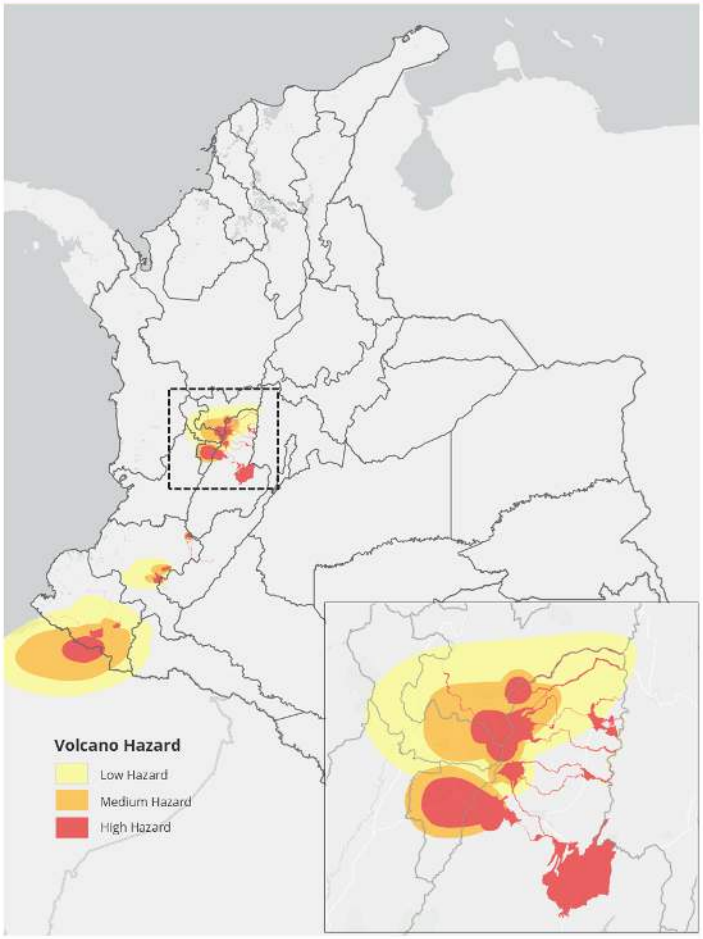
383,386 (2%)

Buildings exposed to tropical cyclone winds (Cat 1 and Cat 2)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

6 (3%)	**4** (15%)	**776** (1%)	**0** (0%)	**8,325 km** (2%)	**2 km2** (<1%)
Airports and Heliports	Sea & River Ports	Schools & Colleges	National EOC	Roads	Afro-Colombian Community Areas
0 (0%)	**0** (0%)	**45** (<1%)	**33** (1%)	**6** (2%)	**10,974 km2** (3%)
Dams	Power Plants	Bridges	Hospitals & Clinics	Fire Stations	Indigenous Reservation Areas

Colombia: Volcano Hazard Exposure



POTENTIAL POPULATION EXPOSURE

2,698,672 (5%)

People exposed to volcano hazards (medium, high)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

814,843 (5%)

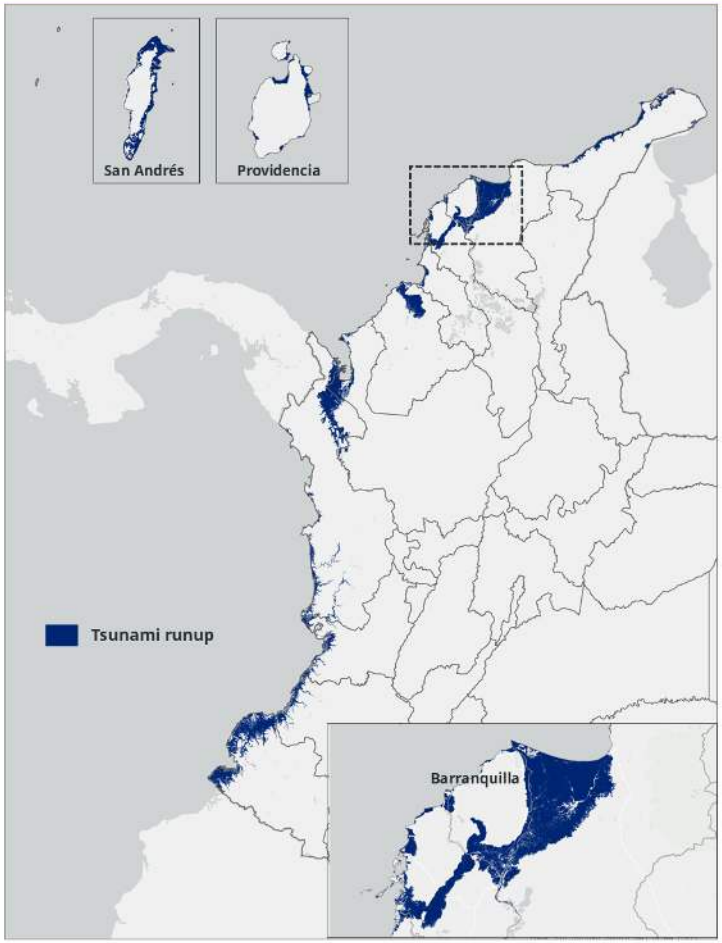
Buildings exposed to volcano hazards (medium, high)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

10 (5%)	**0** (0%)	**2,783** (5%)	**0** (0%)	**22,716 km** (5%)	**7,821 km2** (1%)	**1,638 km2** (6%)
Airports and Heliports	Sea & River Ports	Schools & Colleges	National EOC	Roads	Forest	Cropland

2 (4%)	**0** (0%)	**904** (9%)	**220** (7%)	**34** (10%)	**1,160 km2** (<1%)	**8 km2** (<1%)
Dams	Power Plants	Bridges	Hospitals & Clinics	Fire Stations	Indigenous Reservation Areas	Afro-Colombian Community Areas

Colombia: Tsunami Hazard Exposure



POTENTIAL POPULATION EXPOSURE

1,986,180 (4%)

People exposed to tsunami runup

POTENTIAL BUILT ENVIRONMENT EXPOSURE

591,327 (4%)

Buildings exposed to tsunami runup

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

19 (9%)	**17** (65%)	**1,955** (4%)	**0** (0%)	**8,377 km** (2%)	**7,614 km2** (13%)
Airports and Heliports	Sea & River Ports	Schools & Colleges	National EOC	Roads	Afro-Colombian Community Areas
1 (2%)	**0** (0%)	**421** (4%)	**180** (5%)	**8** (2%)	**1,238 km2** (<1%)
Dams	Power Plants	Bridges	Hospitals & Clinics	Fire Stations	Indigenous Reservation Areas

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MULTI-HAZARD EXPOSURE DEPARTMENT SUMMARY

RANK	DEPARTMENT	AVG SCORE	RANK	DEPARTMENT	AVG SCORE
1	Magdalena	0.674	18	Caldas	0.458
2	San Andrés y Providencia	0.672	19	Tolima	0.441
3	Bolívar	0.642	20	Valle Del Cauca	0.437
4	Arauca	0.636	21	Norte De Santander	0.429
5	Chocó	0.630	22	Santander	0.415
6	La Guajira	0.625	23	Vichada	0.414
7	Cesar	0.614	24	Huila	0.412
8	Córdoba	0.605	25	Meta	0.407
9	Bogotá Distrito Capital	0.584	26	Putumayo	0.401
10	Atlántico	0.583	27	Cundinamarca	0.391
11	Sucre	0.551	28	Caquetá	0.379
12	Nariño	0.543	29	Boyacá	0.362
13	Quindío	0.541	30	Guaviare	0.299
14	Risaralda	0.492	31	Amazonas	0.253
15	Casanare	0.470	32	Vaupés	0.213
16	Antioquia	0.463	33	Guainía	0.176
17	Cauca	0.461			

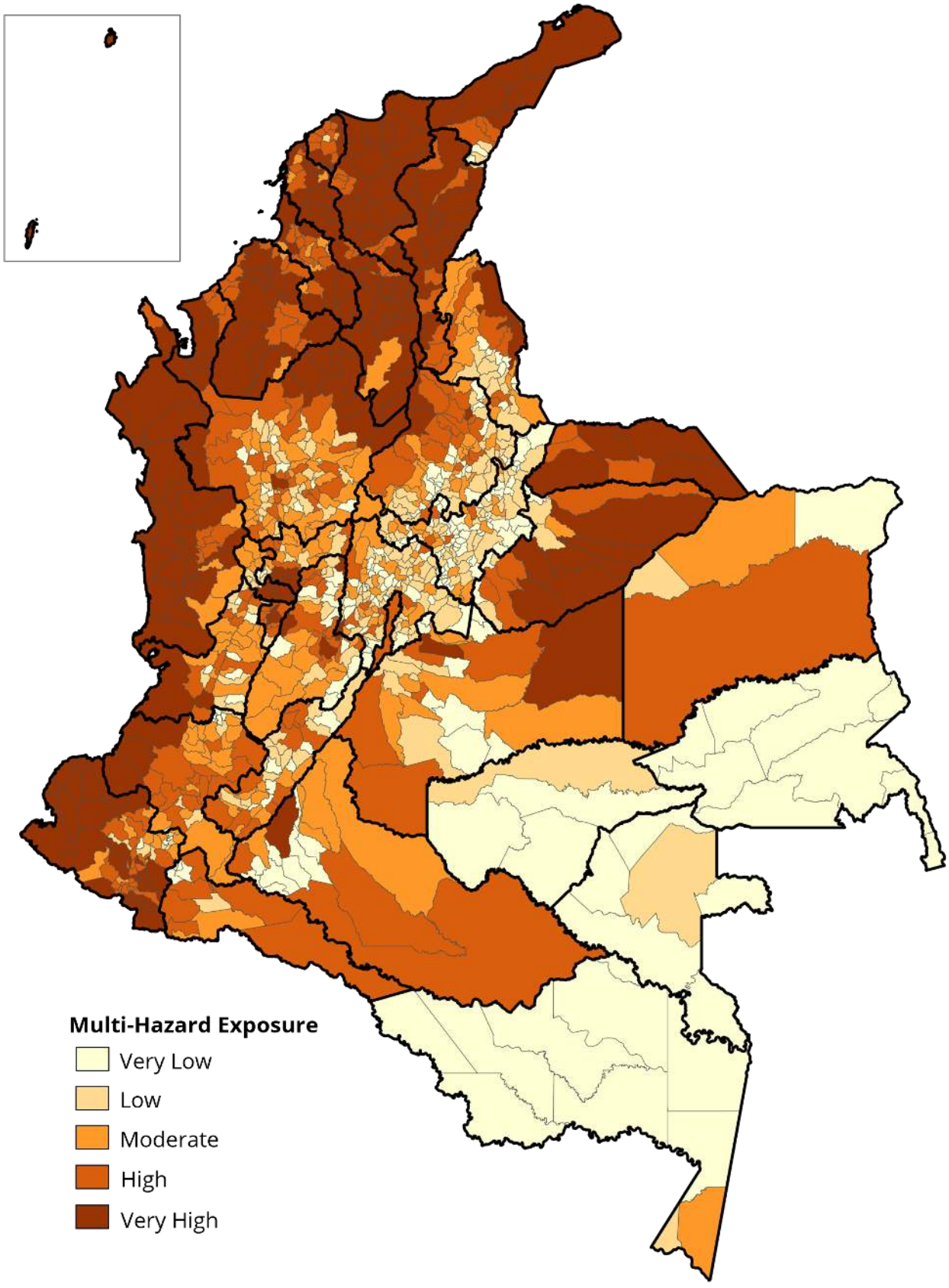
Very Low Low Moderate High Very High

MULTI-HAZARD EXPOSURE: 20 HIGHEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1	Manaure	La Guajira	0.920
2	Riohacha	La Guajira	0.893
3	Guapi	Cauca	0.863
4	Uribia	La Guajira	0.851
4	Maicao	La Guajira	0.851
6	San Andrés De Tumaco	Nariño	0.845
7	Buenaventura	Valle Del Cauca	0.841
8	Plato	Magdalena	0.833
9	Bajo Baudó	Chocó	0.817
9	Albania	La Guajira	0.817
11	El Paso	Cesar	0.813
12	El Bagre	Antioquia	0.812
13	Cartagena De Indias	Bolívar	0.803
14	Montería	Córdoba	0.802
15	El Copey	Cesar	0.797
16	Santa Bárbara	Nariño	0.795
17	Hatonuevo	La Guajira	0.793
18	Timbiquí	Cauca	0.791
19	Curumaní	Cesar	0.790
19	Sitionuevo	Magdalena	0.790

MULTI-HAZARD EXPOSURE: 20 LOWEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1122	La Guadalupe	Guainía	0.052
1121	Cacahual	Guainía	0.101
1120	San Felipe	Guainía	0.109
1119	Papunahua	Vaupés	0.110
1118	Yavaraté	Vaupés	0.119
1117	Puerto Colombia	Guainía	0.133
1116	La Chorrera	Amazonas	0.137
1115	Pana Pana	Guainía	0.150
1114	La Victoria	Amazonas	0.152
1113	Puerto Santander	Amazonas	0.153
1112	Morichal	Guainía	0.164
1111	Puerto Arica	Amazonas	0.176
1110	Taraira	Vaupés	0.177
1108	Padilla	Cauca	0.180
1108	Puerto Concordia	Meta	0.180
1107	Miraflores	Guaviare	0.183
1106	Guachené	Cauca	0.203
1105	Oicatá	Boyacá	0.204
1104	Mirití - Paraná	Amazonas	0.208
1103	Sibundoy	Putumayo	0.212


Multi-Hazard Exposure
Very Low
Low
Moderate
High
Very High

THE RVA

VULNERABILITY

VULNERABILITY

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

Global Vulnerability Rank (PDC Global RVA)

98 OUT OF 204 COUNTRIES / TERRITORIES ASSESSED

Vulnerability within South America

5 OUT OF 12 COUNTRIES / TERRITORIES ASSESSED

VULNERABILITY SUBCOMPONENTS AND INDICATORS

Information Access Vulnerability
Primary School Attendance (ages 7–11)
School Attendance (ages 5–17)
Adult Illiteracy
Adults (over age 25) Highest Education Primary School
Child Labor (ages 10–14)

Marginalization
Female to Male Labor Participation
Female to Male Secondary School Attendance
Adolescent Birth Rate
Female to Male Literacy Rate
Female to Male Population in Need
Population in Need that is Indigenous
Population in Need that is Afro-Colombian

Clean Water Access Vulnerability
Homes with No Public Water Supply
Homes with No Connection to Public Sewerage Service

Vulnerable Health Status
Infant Mortality Rate
Prevalence of Malnutrition
Prevalence of Food Insecurity

Economic Constraints
Economic Dependency Ratio
Multidimensional Poverty Index
Labor Force Participation

Housing Vulnerability
Housing Deficit
Homes with Inadequate Flooring
Homes with Inadequate Materials Used in Outer Walls
Household Overcrowding

VULNERABILITY DEPARTMENT SUMMARY

RANK	DEPARTMENT	AVG SCORE	RANK	DEPARTMENT	AVG SCORE
1	Guainía	0.793	18	Cesar	0.450
2	Vaupés	0.757	19	Boyacá	0.447
3	Amazonas	0.749	20	Huila	0.436
4	Chocó	0.675	21	Casanare	0.434
5	Vichada	0.668	22	Meta	0.430
6	Guaviare	0.566	23	Tolima	0.427
7	Bolívar	0.538	24	Santander	0.411
8	La Guajira	0.534	25	Antioquia	0.397
9	Córdoba	0.530	26	San Andrés y Providencia	0.384
10	Magdalena	0.516	26	Risaralda	0.384
11	Cauca	0.515	28	Atlántico	0.365
12	Caquetá	0.514	29	Caldas	0.364
13	Nariño	0.497	30	Cundinamarca	0.342
14	Norte De Santander	0.483	31	Quindío	0.320
15	Sucre	0.475	32	Valle Del Cauca	0.316
16	Arauca	0.461	33	Bogotá Distrito Capital	0.157
17	Putumayo	0.454			

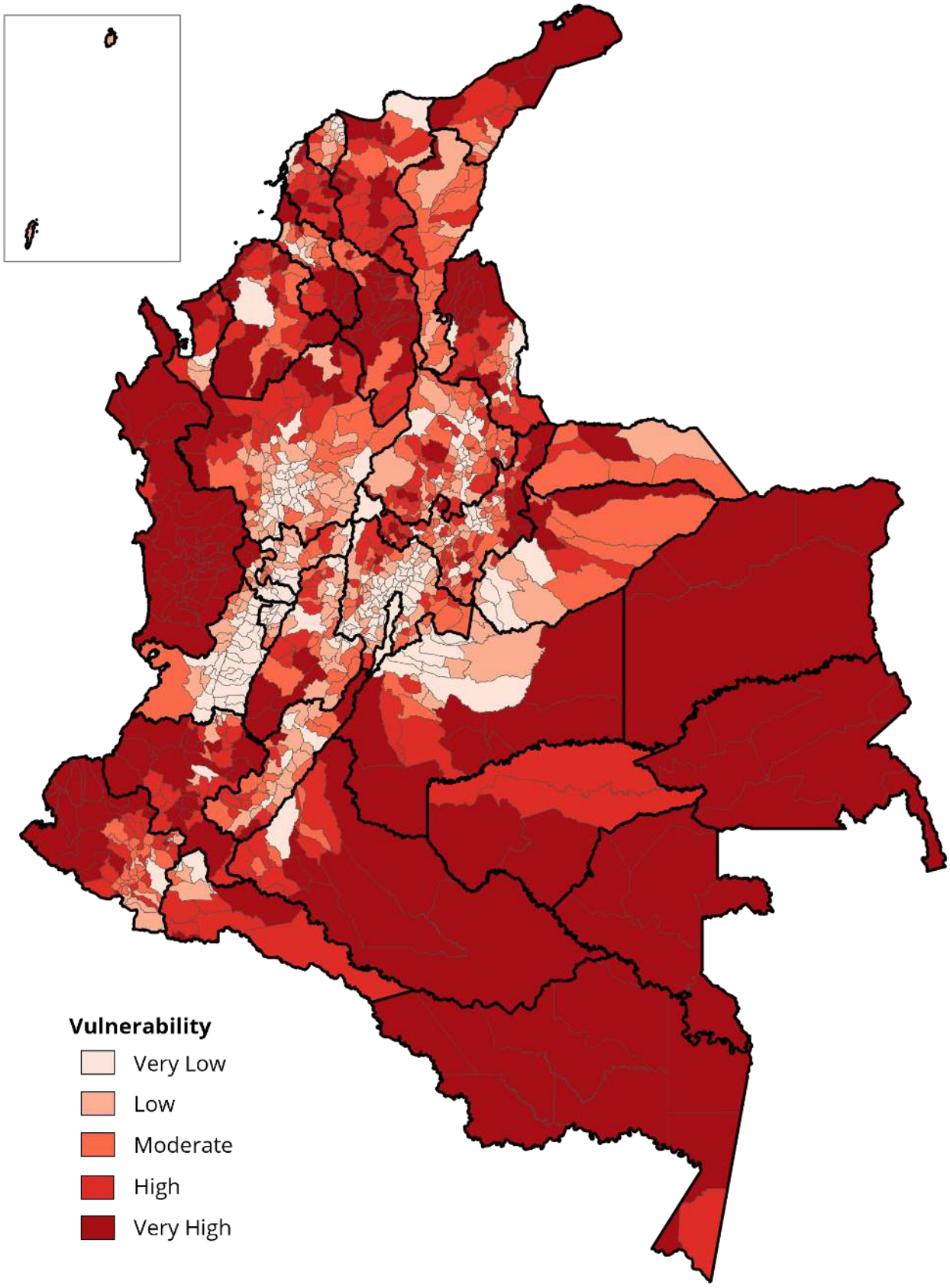
Very Low Low Moderate High Very High

VULNERABILITY: 20 HIGHEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1	Pana Pana	Guainía	0.860
2	Cumaribo	Vichada	0.845
3	Cacahual	Guainía	0.842
4	Papunahua	Vaupés	0.837
5	Pacoa	Vaupés	0.836
6	Alto Baudó	Chocó	0.832
7	Morichal	Guainía	0.831
8	Puerto Colombia	Guainía	0.830
9	Mapiripana	Guainía	0.825
10	Uribia	La Guajira	0.820
11	La Pedrera	Amazonas	0.812
11	Miritíi - Paraná	Amazonas	0.812
11	Medio Baudó	Chocó	0.812
14	La Victoria	Amazonas	0.799
15	Manaure	La Guajira	0.797
16	Carmen Del Darién	Chocó	0.778
17	San Felipe	Guainía	0.777
18	Tarapacá	Amazonas	0.776
19	La Chorrera	Amazonas	0.773
19	Puerto Alegría	Amazonas	0.773

VULNERABILITY: 20 LOWEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1122	Sabaneta	Antioquia	0.113
1121	Chía	Cundinamarca	0.126
1120	Sopó	Cundinamarca	0.136
1119	Mosquera	Cundinamarca	0.137
1118	Funza	Cundinamarca	0.138
1117	Envigado	Antioquia	0.145
1116	Madrid	Cundinamarca	0.150
1115	Facatativá	Cundinamarca	0.152
1114	Cota	Cundinamarca	0.156
1112	Cajicá	Cundinamarca	0.157
1112	Bogotá Distrito Capital	Bogotá Distrito Capital	0.157
1111	Zipaquirá	Cundinamarca	0.160
1110	La Estrella	Antioquia	0.166
1109	Itagüí	Antioquia	0.168
1108	Tocancipá	Cundinamarca	0.175
1107	La Calera	Cundinamarca	0.180
1106	Floridablanca	Santander	0.184
1103	La Ceja	Antioquia	0.189
1103	Duitama	Boyacá	0.189
1103	Gachancipá	Cundinamarca	0.189


Vulnerability
Very Low
Low
Moderate
High
Very High

THE RVA

COPING CAPACITY

COPING CAPACITY

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

Global Coping Capacity Rank (PDC Global RVA)

90 OUT OF 198 COUNTRIES / TERRITORIES ASSESSED

Coping Capacity within South America

5 OUT OF 12 COUNTRIES / TERRITORIES ASSESSED

COPING CAPACITY SUBCOMPONENTS AND INDICATORS

Governance
Homes with Garbage Collection Service
Voter Turnout
Municipal Performance Measure
Violent Crimes per 1,000 persons

Energy and Communications Capacity
Homes with Public Electricity Service
Homes with Connection to Natural Gas Network
Homes with No Internet Service

Transportation Capacity
Average Distance to Port
Average Distance to Airport
Road Density

Health Care and Emergency Services Capacity
Average Distance to Hospital
Health Centers per 1,000 persons
Health Care Providers per 10,000 persons
Fire Stations per 1,000 persons
Health Insurance Coverage
Child Immunization Rate (Pentavalent DTP-HiB-HB)
Child Immunization Rate (Triple viral MMR)

COPING CAPACITY DEPARTMENT SUMMARY

RANK	DEPARTMENT	AVG SCORE	RANK	DEPARTMENT	AVG SCORE
1	Bogotá Distrito Capital	0.772	18	San Andrés y Providencia	0.515
2	Valle Del Cauca	0.631	19	Magdalena	0.513
3	Atlántico	0.607	20	La Guajira	0.508
4	Quindío	0.601	21	Boyacá	0.502
5	Risaralda	0.577	22	Nariño	0.497
6	Cesar	0.559	23	Putumayo	0.496
7	Cundinamarca	0.541	24	Arauca	0.489
8	Antioquia	0.540	25	Bolívar	0.481
9	Huila	0.538	26	Cauca	0.468
9	Caldas	0.538	27	Caquetá	0.465
11	Sucre	0.531	28	Chocó	0.444
12	Santander	0.530	29	Vichada	0.352
13	Tolima	0.528	30	Guaviare	0.347
14	Córdoba	0.527	31	Vaupés	0.289
15	Casanare	0.523	32	Amazonas	0.284
16	Norte De Santander	0.521	33	Guainía	0.263
17	Meta	0.517			

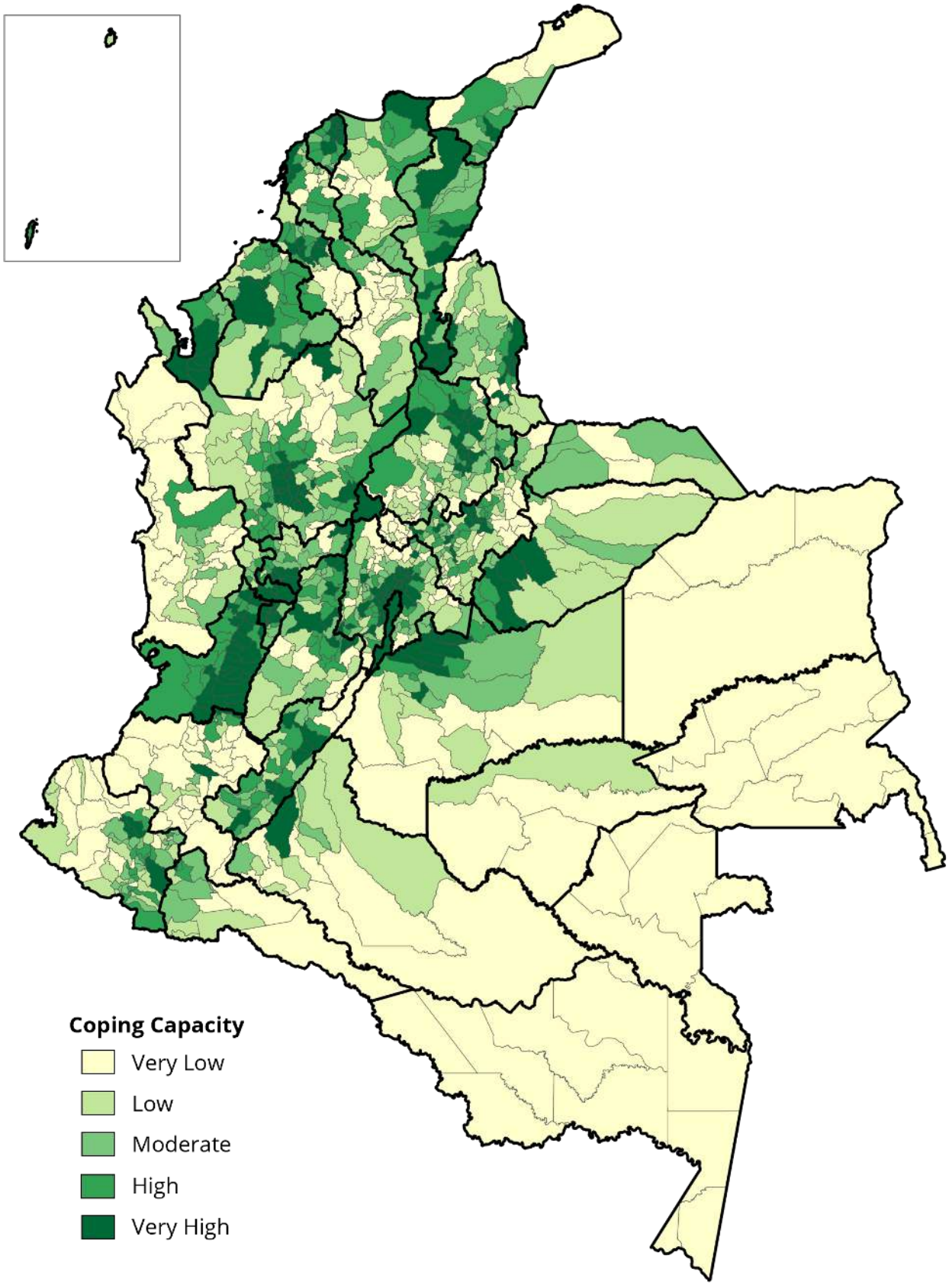
Very Low Low Moderate High Very High

COPING CAPACITY: 20 HIGHEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1	Cali	Valle Del Cauca	0.813
2	Barranquilla	Atlántico	0.790
2	Bucaramanga	Santander	0.790
4	Sabaneta	Antioquia	0.787
5	Pereira	Risaralda	0.783
6	Bogotá Distrito Capital	Bogotá Distrito Capital	0.772
7	Yumbo	Valle Del Cauca	0.770
7	Rionegro	Antioquia	0.770
9	Medellín	Antioquia	0.769
9	Itagüí	Antioquia	0.769
11	Chía	Cundinamarca	0.768
12	Armenia	Quindío	0.763
13	Tunja	Boyacá	0.757
14	Palmira	Valle Del Cauca	0.756
15	Cartagena De Indias	Bolívar	0.753
16	Funza	Cundinamarca	0.751
17	Floridablanca	Santander	0.749
18	Cajicá	Cundinamarca	0.748
19	Candelaria	Valle Del Cauca	0.737
19	Dosquebradas	Risaralda	0.737

COPING CAPACITY: 20 LOWEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1122	Papunahua	Vaupés	0.134
1119	Pana Pana	Guainía	0.197
1119	Morichal	Guainía	0.197
1119	La Pedrera	Amazonas	0.197
1118	Miraflores	Guaviare	0.204
1117	Puerto Colombia	Guainía	0.213
1116	Pacoa	Vaupés	0.228
1114	Mirití - Paraná	Amazonas	0.236
1114	Puerto Arica	Amazonas	0.236
1113	Tarapacá	Amazonas	0.241
1111	Cumaribo	Vichada	0.247
1111	Puerto Santander	Amazonas	0.247
1110	San Felipe	Guainía	0.251
1109	Cacahual	Guainía	0.262
1108	La Guadalupe	Guainía	0.267
1107	Mapiripana	Guainía	0.285
1106	Barrancominas	Guainía	0.286
1105	La Chorrera	Amazonas	0.289
1104	Puerto Alegría	Amazonas	0.293
1103	El Encanto	Amazonas	0.297


Coping Capacity
Very Low
Low
Moderate
High
Very High

THE RVA

RESILIENCE

RESILIENCE

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

Global Resilience Rank (PDC Global RVA)

91 OUT OF 194 COUNTRIES / TERRITORIES ASSESSED

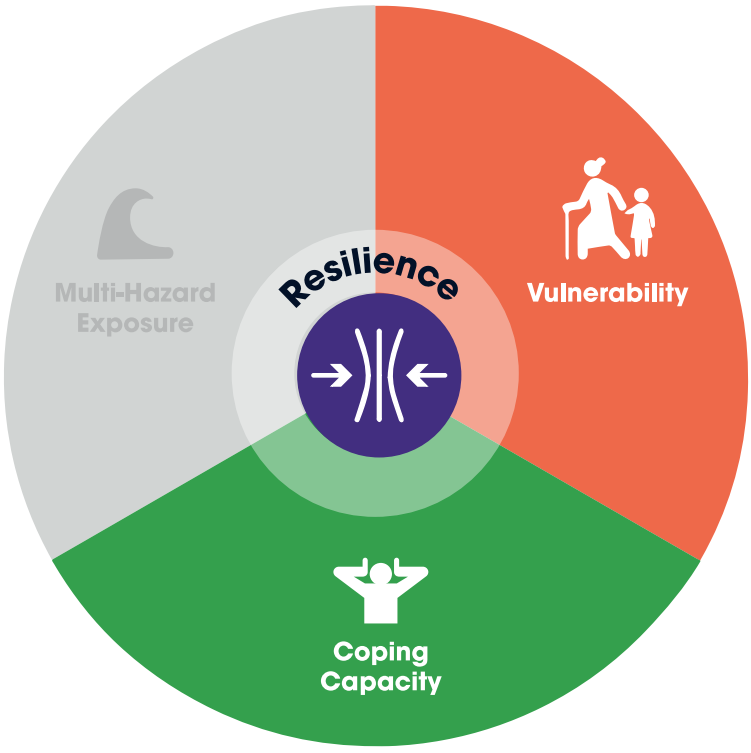
Resilience Rank within South America

5 OUT OF 12 COUNTRIES / TERRITORIES ASSESSED

RESILIENCE COMPONENTS

Vulnerability

Coping Capacity



RESILIENCE DEPARTMENT SUMMARY

RANK	DEPARTMENT	AVG SCORE	RANK	DEPARTMENT	AVG SCORE
1	Bogotá Distrito Capital	0.807	18	Putumayo	0.521
2	Valle Del Cauca	0.657	19	Norte De Santander	0.519
3	Quindío	0.640	20	Arauca	0.514
4	Atlántico	0.621	21	Nariño	0.500
5	Cundinamarca	0.600	22	Magdalena	0.499
6	Risaralda	0.597	23	Córdoba	0.498
7	Caldas	0.587	24	La Guajira	0.487
8	Antioquia	0.572	25	Cauca	0.476
9	San Andrés y Providencia	0.566	26	Caquetá	0.475
10	Santander	0.560	27	Bolívar	0.472
11	Cesar	0.555	28	Guaviare	0.390
12	Huila	0.551	29	Chocó	0.384
13	Tolima	0.550	30	Vichada	0.342
14	Casanare	0.545	31	Amazonas	0.267
15	Meta	0.543	32	Vaupés	0.266
16	Sucre	0.528	33	Guainía	0.235
17	Boyacá	0.527			

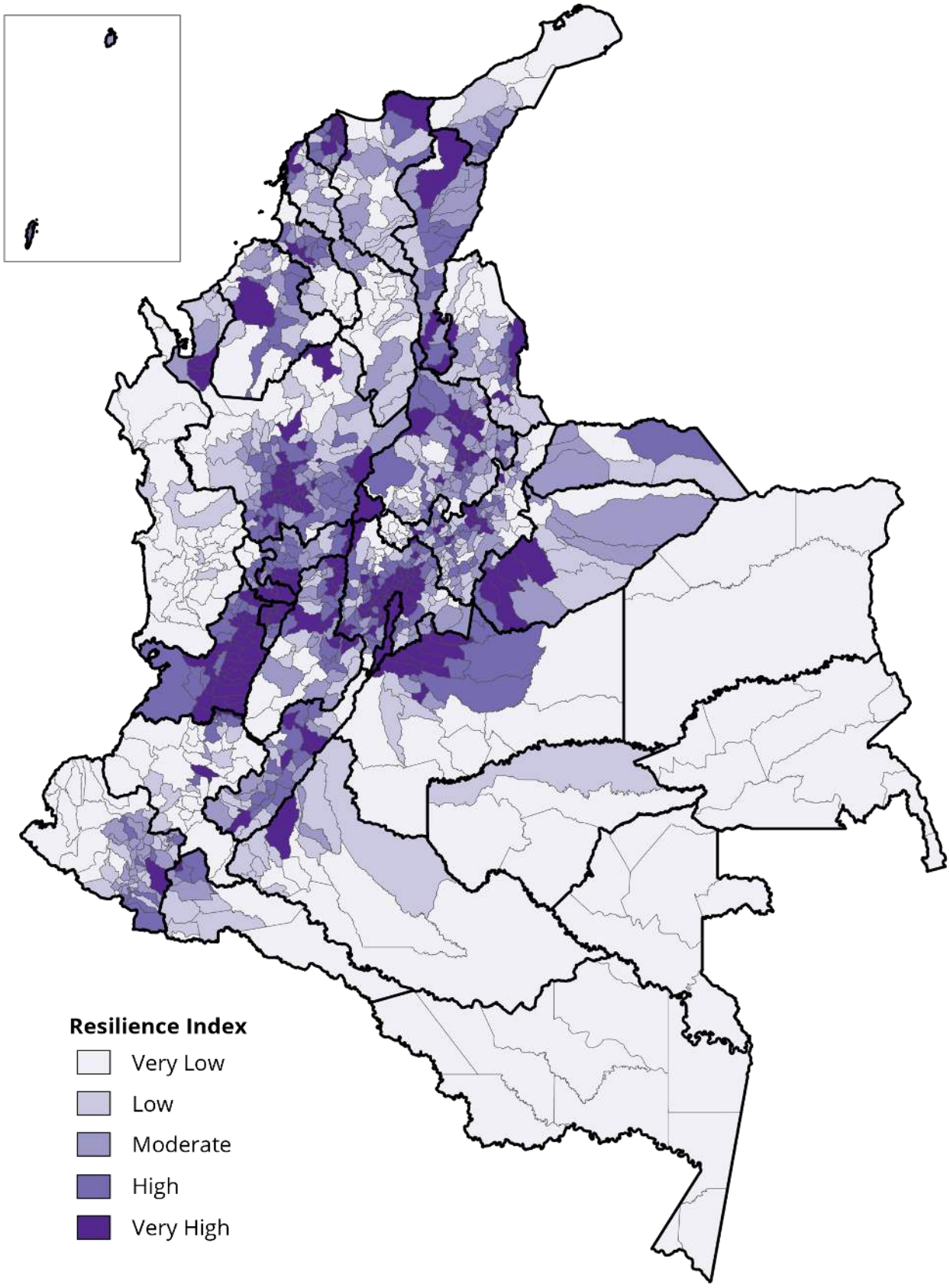
Very Low Low Moderate High Very High

RESILIENCE: 20 HIGHEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1	Sabaneta	Antioquia	0.837
2	Chía	Cundinamarca	0.821
3	Funza	Cundinamarca	0.807
3	Bogotá Distrito Capital	Bogotá Distrito Capital	0.807
5	Cali	Valle Del Cauca	0.802
6	Itagüí	Antioquia	0.800
7	Cajicá	Cundinamarca	0.796
8	Barranquilla	Atlántico	0.795
8	Mosquera	Cundinamarca	0.795
10	Bucaramanga	Santander	0.792
11	Envigado	Antioquia	0.791
12	Madrid	Cundinamarca	0.786
13	Medellín	Antioquia	0.785
14	Zipaquirá	Cundinamarca	0.783
14	Floridablanca	Santander	0.783
16	Tunja	Boyacá	0.782
17	Sopó	Cundinamarca	0.781
18	Rionegro	Antioquia	0.780
19	La Estrella	Antioquia	0.771
20	Pereira	Risaralda	0.770

RESILIENCE: 20 LOWEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1122	Papunahua	Vaupés	0.148
1121	Pana Pana	Guainía	0.169
1120	Morichal	Guainía	0.183
1118	Puerto Colombia	Guainía	0.192
1118	La Pedrera	Amazonas	0.192
1117	Pacoa	Vaupés	0.196
1116	Cumaribo	Vichada	0.201
1115	Cacahual	Guainía	0.210
1114	Miritíi - Paraná	Amazonas	0.212
1113	Mapiripana	Guainía	0.230
1112	Tarapacá	Amazonas	0.233
1110	San Felipe	Guainía	0.237
1110	Puerto Arica	Amazonas	0.237
1109	Puerto Santander	Amazonas	0.243
1108	Uribia	La Guajira	0.248
1107	La Guadalupe	Guainía	0.254
1106	La Victoria	Amazonas	0.256
1105	La Chorrera	Amazonas	0.258
1104	Puerto Alegría	Amazonas	0.260
1103	Alto Baudó	Chocó	0.262


Resilience Index
Very Low
Low
Moderate
High
Very High

THE RVA

MULTI-HAZARD RISK

MULTI-HAZARD RISK

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

Multi-hazard risk was calculated by averaging Multi-Hazard Exposure, Vulnerability, and Coping Capacity. Results are displayed below, while additional detailed analysis of risk is provided in the subnational profiles report.

Global Multi-Hazard Risk Rank (PDC Global RVA)

62 OUT OF 193 COUNTRIES / TERRITORIES ASSESSED

Multi-Hazard Risk Rank within South America

5 OUT OF 12 COUNTRIES ASSESSED

MULTI-HAZARD RISK COMPONENTS

Multi-Hazard Exposure

Vulnerability

Coping Capacity

MULTI-HAZARD RISK DEPARTMENT SUMMARY

RANK	DEPARTMENT	AVG SCORE	RANK	DEPARTMENT	AVG SCORE
1	Chocó	0.621	18	Norte De Santander	0.464
2	Vichada	0.577	19	Casanare	0.460
3	Amazonas	0.573	20	Putumayo	0.453
4	Guainía	0.569	21	Atlántico	0.447
5	Bolívar	0.566	21	Tolima	0.447
6	Vaupés	0.560	23	Antioquia	0.440
7	Magdalena	0.559	23	Meta	0.440
8	La Guajira	0.550	25	Huila	0.437
9	Arauca	0.536	26	Boyacá	0.436
9	Córdoba	0.536	27	Risaralda	0.433
11	San Andrés y Providencia	0.514	28	Santander	0.432
11	Nariño	0.514	29	Caldas	0.428
13	Guaviare	0.506	30	Quindío	0.42
14	Cauca	0.503	31	Cundinamarca	0.397
15	Cesar	0.501	32	Valle Del Cauca	0.374
16	Sucre	0.498	33	Bogotá Distrito Capital	0.323
17	Caquetá	0.476			

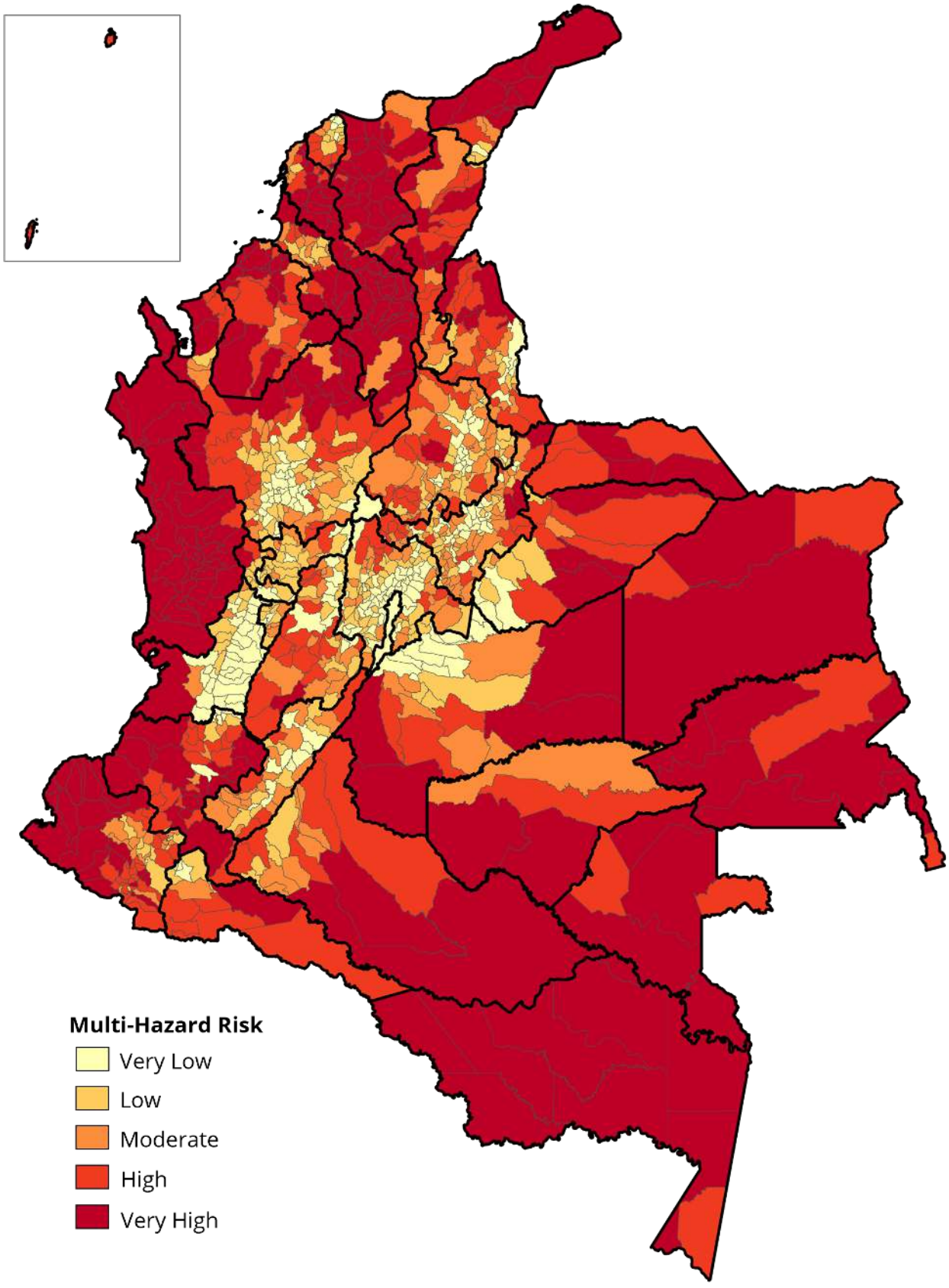
Very Low Low Moderate High Very High

MULTI-HAZARD RISK: 20 HIGHEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1	Uribia	La Guajira	0.785
2	Manaure	La Guajira	0.781
3	Bajo Baudó	Chocó	0.722
4	Alto Baudó	Chocó	0.710
5	El Litoral Del San Juan	Chocó	0.709
6	Medio Baudó	Chocó	0.707
7	Olaya Herrera	Nariño	0.704
8	El Charco	Nariño	0.699
9	Santa Bárbara	Nariño	0.698
10	Cumaribo	Vichada	0.694
11	Mosquera	Nariño	0.691
12	Bojayá	Chocó	0.690
13	Medio San Juan	Chocó	0.684
14	Barbacoas	Nariño	0.683
15	Guapi	Cauca	0.682
15	Tiquisio	Bolívar	0.682
17	Medio Atrato	Chocó	0.676
18	Murindó	Antioquia	0.675
19	Timbiquí	Cauca	0.670
19	Riosucio	Chocó	0.670

MULTI-HAZARD RISK: 20 LOWEST MUNICIPALITIES

RANK	MUNICIPALITY	DEPARTMENT	INDEX SCORE
1122	Funza	Cundinamarca	0.241
1121	Sabaneta	Antioquia	0.243
1120	Cajicá	Cundinamarca	0.253
1119	El Rosal	Cundinamarca	0.260
1118	Chía	Cundinamarca	0.265
1116	Madrid	Cundinamarca	0.269
1116	Mosquera	Cundinamarca	0.269
1114	La Ceja	Antioquia	0.278
1114	Cota	Cundinamarca	0.278
1113	Sopó	Cundinamarca	0.280
1112	Rionegro	Antioquia	0.282
1111	Zipaquirá	Cundinamarca	0.288
1110	Itagüí	Antioquia	0.292
1107	Bojacá	Cundinamarca	0.293
1107	Tabio	Cundinamarca	0.293
1107	Tocancipá	Cundinamarca	0.293
1106	La Estrella	Antioquia	0.294
1105	Facatativá	Cundinamarca	0.298
1103	Envigado	Antioquia	0.299
1103	Subachoque	Cundinamarca	0.299


Multi-Hazard Risk
Very Low
Low
Moderate
High
Very High

THE DMA

DISASTER MANAGEMENT ANALYSIS

SUMMARY OF FINDINGS

DISASTER MANAGEMENT ANALYSIS

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

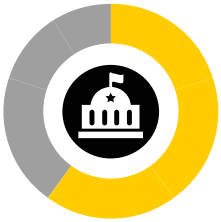
Considering a spectrum of operational achievements and challenges, the DMA examined six core disaster management themes: Enabling Environment; Institutional Arrangements; Disaster Governance Mechanisms; Capabilities and Resources; Capacity Development; and Communication and Information Management.

DISASTER MANAGEMENT ANALYSIS RESULTS

STATUS

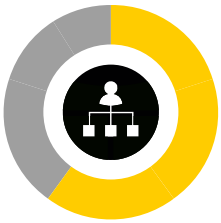
Limited or No Capacity — Advanced Capacity

DISASTER MANAGEMENT ANALYSIS THEME AND SUBTHEMES



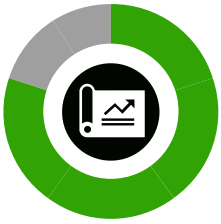
A. Enabling Environment

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



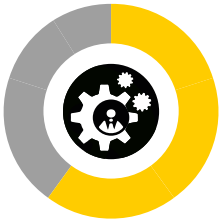
B. Institutional Arrangements

Organizational Structures
Leadership Arrangements
Mechanisms for Stakeholder Engagement



C. Disaster Governance Mechanisms

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

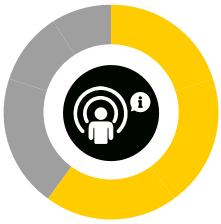


D. Capabilities and Resources

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

E. Capacity Development

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



F. Communication and Information Management

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

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

DISASTER MANAGEMENT ANALYSIS RESULTS

Colombia's disaster risk reduction (DRR) efforts include pioneering, community-centered approaches to mitigate vulnerabilities and enhance resilience. Medellín is a global leader in integrating technology-driven solutions and nature-based strategies to address climate and disaster risks. Two key initiatives—the Landslide Early Warning System (LEWS) and the Corredores Verdes (Green Corridors) project—demonstrate how communities can leverage scientific advancements and environmental restoration to protect lives, safeguard infrastructure, and foster long-term sustainability.

LEWS exemplifies a proactive DRR strategy that harnesses real-time monitoring, community engagement, and cost-effective implementation to mitigate landslide risks in vulnerable informal settlements. LEWS offers a cost-efficient alternative to large-scale infrastructure investments or resettlement programs, making it a scalable model for disaster-prone regions worldwide.

The Corredores Verdes initiative is a climate adaptation project that reduces disaster risks associated with extreme heat, air pollution, and urban flooding. By integrating green corridors with parks, waterways, and vertical gardens, the initiative mitigates the urban heat-island effect, lowers city temperatures by an average of 2°C, and enhances biodiversity. Additionally, the

project improves flood resilience, reduces air pollution, and strengthens ecosystem services. Together, these initiatives highlight the importance of integrating data-driven risk assessment with sustainable urban planning to build resilient communities.

Notwithstanding the highlighted initiatives above, Colombia continues to grapple with significant DRR and disaster management (DM) challenges. The country's diverse geography, socio-economic disparities, and exposure to multiple natural hazards—including wildfires, landslides, floods, earthquakes, and hurricanes—pose ongoing risks that require sustained and scalable solutions.

Despite some notable advancements in localized resilience strategies, several systemic challenges hinder broader disaster management efforts. Limited infrastructure in rural and informal urban settlements, gaps in early warning system coverage and hazard and risk mapping, and the financial strain of post-disaster recovery efforts all complicate Colombia's ability to build long-term resilience.

Understanding these challenges is crucial for developing a more inclusive and sustainable disaster management strategy that ensures vulnerable populations across the country benefit from improved preparedness, mitigation, and recovery strategies. The following sections explore some of Colombia's key obstacles in its DRR and DM efforts and recommendations to address them.

This assessment is designed to establish Colombia's baseline disaster management preparedness levels presented in six interconnected themes. It is a step towards meaningfully tracking progress while setting clear and coherent objectives aligned with Colombia's commitment to the Sendai Framework for Disaster Risk Reduction, the United Nations Sustainable Development Goals, and the Andean Strategy for Disaster Risk Management.

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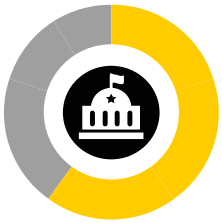
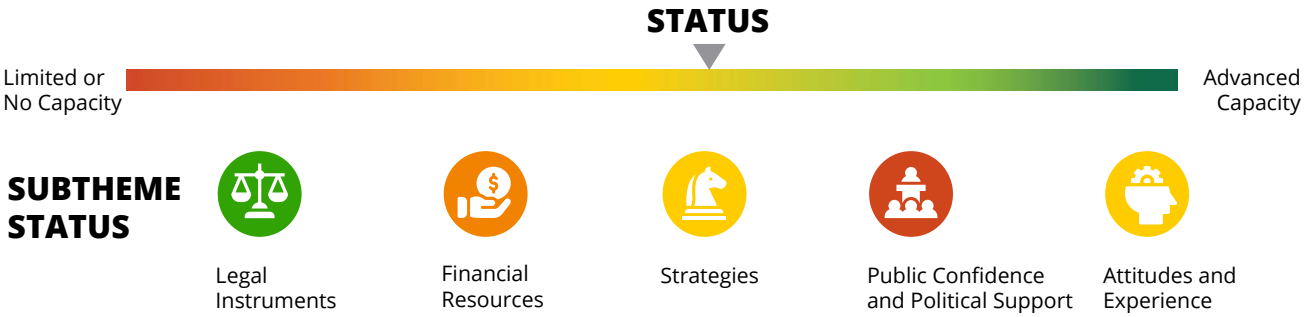
THE DMA

ENABLING ENVIRONMENT



ENABLING ENVIRONMENT

Findings indicate Colombia's Enabling Environment shows achievement with significant limitations.



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

ENABLING ENVIRONMENT

FINANCIAL RESOURCES

FINDINGS

Colombia has made progress in establishing pre-funding mechanisms for disaster recovery. The National Disaster Risk Management Policy, established under the National Disaster Risk Management System (SNGRD), formally outlines financial protections against disaster. The National Fund for Disaster Risk Management, managed by the National Unit for Disaster Risk Management (UNGRD), is Colombia's primary contingency fund for recovery and reconstruction. However, there are still challenges in securing timely funding for recovery and reconstruction efforts, which slows the delivery of essential services and can have adverse long-term economic impacts.

It is important for Colombia to continue to bolster financial disaster assistance programs, streamlining the funding process with a focus on flexibility, equity, and focused targeting. This support will facilitate timely aid distribution, address the specific needs of each municipality, and foster adaptability for dynamic disaster recovery conditions.

RECOMMENDATIONS

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

- Continue to invest in disaster risk reduction mechanisms to facilitate rapid financing in the event of disasters. Establish programs for:
  - Catastrophe insurance
  - Public assets financial protection
- Augment financial options with micro-loans if the conventional loan criteria are unmet.
- Continue to explore incentives for regional and national partners tailored to specific municipality needs.
- Clarify guidelines for expedited funding distribution, including at minimum:
  - Administrative procedures
  - Eligibility criteria
  - Defined categories of assistance

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

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

SDGs
11, 13

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.4), 2(2.2,2.3), 3(3.1-3.4,3.6-3.9)

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

ENABLING ENVIRONMENT

FINANCIAL RESOURCES

FINDINGS

Colombia has established the National Fund for Disaster Risk Management, the Adaptation Fund, and the Catastrophe Deferred Drawdown Option to optimize reconstruction and recovery efforts. As these initiatives are implemented, it is important to ensure that UNGRD, CMGRDs, and CDGRDs unilaterally receive appropriate funding and allocation to meet Colombia's disaster management (DM) and DRR needs.

Funding targeted for DM and DRR initiatives should include timely communication and coordination mechanisms to improve cross-collaboration among national and international partners and promote community resilience-building activities. Ensuring that the financial requirements of these initiatives are met will enable Colombia to improve its response capacity and capabilities, strengthening the nation's resilience in the face of disasters.

RECOMMENDATIONS

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

- Leverage the full scope of the National Fund for Disaster Risk Management.
  - Establish concrete budgetary arrangements for available and predetermined annual funding for UNGRD, CMGRDs, and CDGRDs.
- Examine policies implemented by Organisation for Economic Co-operation and Development (OECD) countries, such as Mexico's Natural Disasters Fund (FONDEN), that use a cooperative and mutual cost-sharing approach.
- Leverage the Anticorruption Plan to establish full transparency and ensure the proper use of funds and resources for recovery and reconstruction efforts.
  - Consider implementing a tool like Mexico's Reconstrucción MX. This tool allows citizens to report any observed misuse of the fund's resources, providing a valuable accountability mechanism.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

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

SDGs
11, 13, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.4,1.6,1.7), 2(2.2,2.3), 3(3.1-3.4,3.6-3.9), 4(4.1)

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

ENABLING ENVIRONMENT

FINANCIAL RESOURCES

FINDINGS

Colombia's primary disaster risk management law (Law 1523/2012) includes financial protection strategies and focused disaster risk reduction (DRR) measures. The National Plan for Disaster Risk Management (PNGRD) provides a roadmap for policy implementation and guidance to government sectors and businesses. However, limited technical and resource capacity at the local and central government levels has prevented PNGRD from being employed to its full potential.

This challenge is compounded by the UNGRD's limited role in the local-level DRR agenda and the allocation of available central funding mechanisms to implement DRR measures. An established cost-sharing process between the UNGRD, CMGRDs, and CDGRDs would empower the UNGRD to administer budget allocations and better support subnational capacity development. The National Fund for Disaster Risk Management should also be explicitly designated for DRR and anticipatory risk initiatives.

RECOMMENDATIONS

To support Colombia in meeting essential DM funding requirements, the following activities are recommended:

- Leverage the full scope of the National Fund for Disaster Risk Management to support DRR and reconstruction projects.
  - Establish a required annual sectoral contribution to access the full potential of co-financing for DRR measures, as Law 1523/2012 requires.
- Expand the role and responsibilities of UNGRD within the PNGRD, allowing for enhanced contribution to the DRR agenda and funding mechanisms.
  - Provide technical assistance and co-financing capacity to support local-level DRR efforts.
  - Allocate local and national disaster management resources for programmatic, administrative, and operational needs.
  - Strengthen sharing and information pertaining to funding mechanisms and DRR efforts for local and national government.
  - Update the PNGRD to specify that funding may be used only for disaster-related purposes.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

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

SDGs
11, 13, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.4,1.6,1.7), 2(2.2,2.3), 3(3.1-3.4,3.6-3.9), 4(4.1)

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

ENABLING ENVIRONMENT

STRATEGIES

FINDINGS

Colombia has made significant progress in diversifying its projects, funding, and planning strategies to improve the nation's resilience. As the country implements these initiatives, investments to meet the needs of UNGRD should be prioritized.

Continuing to harmonize the Sendai Framework for Disaster Risk Reduction (DRR) and Sustainable Development Goals (SDG) initiatives will prevent the duplication of efforts and assist UNGRD in improving coordination and collaboration among stakeholders.

UNGRD's continued efforts to build capacity, develop policies, and advocate for initiatives to improve preparedness and resilience to predicted risks should be prioritized. This will allow limited resources to be used most efficiently while strengthening a more unified and collaborative approach to disaster management.

RECOMMENDATIONS

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

- Allocate and prioritize funds to meet the specific needs of the UNGRD.
  - Include funding avenues for equipment, infrastructure, training, and capacity building.
  - Focus on strengthening logistics and redundancies to ensure uninterrupted support of humanitarian activities and deliver disaster relief supplies during an emergency response.
- Develop clear project proposals demonstrating alignment, funding, and planning with national development goals and international agendas for DRR and SDGs
  - Focus efforts on predicted future impacts of hazards and resilient infrastructure.
- Strengthen avenues for sharing information and mechanisms for conducting and incorporating mapping and risk assessments into national DRR and SDG efforts, focusing on local municipal levels.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action

1, 2, 4

Global Targets

A, B, C, D

Guiding Principles

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

SDGs

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

Andean Strategy: Thematic Axes + Lines of Intervention

1, 2, 3, 4

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

ENABLING ENVIRONMENT

STRATEGIES

FINDINGS

Outdated and unenforced building codes, development regulations, and land use policies, especially in urban and informal settlements, undermine processes at every phase of disaster management in Colombia.

Adopting updated policy measures to prevent construction or habitation in hazard-prone urban areas will improve disaster outcomes, especially within informal settlements.

In addition, emphasis on sustainable development via private sector incentives and funding subsidies to expand low-income housing options will mitigate environmental and safety hazards caused by unplanned urban sprawl and improve the resilience of Colombian cities.

RECOMMENDATIONS

To support Colombia in its disaster risk reduction requirements, the following activities are recommended:

- Update, implement, and enforce policies to regulate urban expansion and informal settlements that include:
  - Building codes
  - Development regulations
  - Land use controls
  - Environmental preservation measures
- Provide subsidies for social housing/low-income housing, such as affordable rental and homeowner opportunities.
  - Develop programs for alternative housing arrangements and promote sustainable urban development within the private sector.
  - Encourage the private sector to implement compact urban development planning.
  - Conduct assessments to better understand existing housing shortages and affordability issues to implement low-income and sustainable development strategies.
- Leverage property taxes and fees to control sprawl.
- Enlist the Ministry of Housing, City, and Territory (MinVivienda) and municipal planning offices (Oficinas de Planeación Municipal).

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

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

SDGs
6, 9, 11, 12, 13, 14, 15

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.2, 1.3,1.10,1.11), 2, 3(3.2,3.3,3.5-3.9), 4(4.1,4.2)

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

ENABLING ENVIRONMENT

STRATEGIES

FINDINGS

Informal settlements are particularly vulnerable to the dangers and hardships caused by disasters. Ethnic minorities displaced by conflict often settle in rural areas, adding to the challenges of managing disasters in informal settlements. A focused approach to preparedness and response to protect internally displaced populations and other vulnerable groups, such as migrants, would significantly improve the quality of life for many people within Colombia.

In this context, the International Organization for Migration (IOM) has identified critical interventions within the Colombia Crisis Response Plan 2023-2024 (CCRP) that provide avenues to support vulnerable populations. Improved coordination from UNGRD could strengthen the effectiveness of the CCRP by implementing financial strategies that enable communities, District Councils for Disaster Risk Management (CDGRDs), and Municipal Councils for Disaster Risk Management (CMGRDs) to equitably address the needs of displaced and vulnerable groups.

RECOMMENDATIONS

To support UNGRD and a strategic approach to disaster risk reduction, the following activities are recommended:

- Promote collaboration between UNGRD, CDGRD, CMGRD, the Department of Social Prosperity, and the National Planning Department to support the IOM CCRP.
- Provide technical assistance for building resilience into affordable housing programs.
- Increase access to social protection mechanisms and systematically integrate support for low-income households and vulnerable/displaced persons.
- Continue to engage international, national, and local key stakeholders in planning for vulnerable and displaced populations.
- Increase financial support for International Organization for Migration (IOM) projects to ensure successful implementation and sustainability.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

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

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

SDGs
5, 6, 9, 10, 11, 13, 15, 16, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.3,1.4,1.7,1.11), 2, 3(3.2-3,7, 3.9), 4

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

ENABLING ENVIRONMENT

STRATEGIES

FINDINGS

Municipal Associations (MA) in Colombia present an opportunity for more efficient and effective disaster risk reduction and emergency response. There is a long history of cooperation among municipalities; some associations have been in place for over 25 years. However, this coordination mechanism is greatly underutilized. Without established MAs amongst those who share the same hazard zones and other anticipated risks, there is an opportunity cost in inefficient responses to emergencies and the ability to mitigate risk.

Municipal associations that bring together communities with shared hazard zones and similar risks will improve risk management and response operations through better coordination and collaboration. By joint planning, implementing shared policies, and developing collaborative response strategies, the associations will benefit all communities within an affected region.

RECOMMENDATIONS

To support Colombia and a strategic approach to disaster risk reduction, the following activities are recommended:

- Encourage municipalities to establish associations based on hazard zones that share the same risks.
- Facilitate cooperation and coordination via joint working groups and committees that support local authorities in community development planning and policy implementation.
  - Ensure roles and responsibilities are clearly outlined.
  - Establish formal mechanisms for sharing information, coordinating planning, and responding to disasters through a joint and mutual response with neighboring municipalities.
- Provide technical assistance for building community resilience and risk mitigation programs that can be implemented throughout neighborhoods that share hazard zones.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

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

SDGs
3, 6, 9, 11, 13, 15, 16, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1,1.3,1.6-1.9), 2, 3(3.1,3.5-3.9), 4(4.1,4.2,4.4-4.6)

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

ENABLING ENVIRONMENT

CONFIDENCE AND SUPPORT

FINDINGS

Recent public relations challenges at UNGRD (National Unit for Disaster Risk Management) have influenced public perception of disaster management (DM) across all levels of government.

The effects of public relations challenges extend beyond immediate perceptions and influence the long-term success of DM initiatives. If the community feels that DM does not prioritize their interests, it can decrease participation at all levels of government. To rebuild trust, it's essential to engage the community in disaster planning and response efforts while ensuring transparent information communication. Additionally, enhancing trusted communication channels, developing clear communication strategies, and implementing a culture of transparency can improve public perception, making citizens feel informed and prepared.

This approach can cultivate a more resilient society better equipped to handle emergencies.

RECOMMENDATIONS

To improve public perception in DM, the following activities are recommended:

- Provide clear and timely communication to media regarding emergencies and how they will impact the community.
  - Continuously assess public perception and community needs to refine engagement strategies.
- Reaffirm the UNGRD's core values, commitment to the community, and mission of supporting national and local DM.
  - Involve local residents in disaster planning through workshops and training sessions.
  - Collaborate with NGOs and trusted community groups to strengthen DM efforts.
  - Highlight past successes of UNGRD and focus on future initiatives.
- Make UNGRD leaders visible and involved in press releases and on social media platforms.
  - Provide situational updates through leaders who project confidence and will motivate the public to be informed and prepared.
  - Develop a clear communication strategy emphasizing transparency and clarity to combat misinformation.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action

1, 2, 3, 4

Global Targets

A, B, D, E

Guiding Principles

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

SDGs

4, 9, 10, 11, 13, 16

Andean Strategy: Thematic Axes + Lines of Intervention

1(1.5-1.8), 3(3.1), 4(4.1,4.5)

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

ENABLING ENVIRONMENT

CONFIDENCE AND SUPPORT

FINDINGS

Recent public relations challenges at UNGRD (National Unit for Disaster Risk Management) have impacted effective disaster management (DM) across national, departmental, and municipal levels.

Clear communication among UNGRD, CDGRDs, and CMGRDs is needed to educate the public about ongoing preparedness activities and disseminate timely safety information during emergencies. By providing ongoing collaboration opportunities for UNGRD, CDGRDS, and CMGRDS, DM can leverage the necessary skills to communicate more effectively with the public during disasters.

The success of emergency operations is contingent upon DM communication strategies prioritizing clarity, inclusivity, and responsiveness. Focusing on these principles will build better relationships within DM and ensure communities are protected to the best of their ability.

RECOMMENDATIONS

To support UNGRD in achieving better support, the following activities are recommended:

- Establish clear communication guidelines among UNGRD, CDGRDs, and CMGRDs for timely information sharing.
  - Develop a plan outlining steps to disseminate information during emergencies.
  - Leverage technology, such as mobile apps and social media, to enhance real-time information.
  - Evaluate and update guidelines periodically to incorporate new technologies and address the changing needs and risks of DM.
- Utilize a centralized platform for DM to access up-to-date disaster preparedness resources.
  - Create a comprehensive repository that includes case studies, best practices, and lessons learned from past emergencies and incorporate improvements into T&E Programs.
- Promote coordination between UNGRD, CDGRDs, and CMGRDs through regular meetings, trainings, workshops, and technical working groups.
  - Develop programs that focus on crisis communication strategies for all levels of staff within UNGRD, CDGRDs, and CMGRDs.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action

2, 4

Global Targets

A, B, E

Guiding Principles

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

SDGs

5, 11, 13, 16

Andean Strategy: Thematic Axes + Lines of Intervention

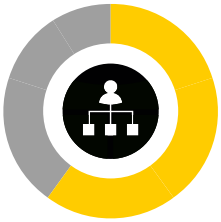
1, 2, 3(3.5,3.6,3.8,3.9), 4(4.1-4.5)

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

ENABLING ENVIRONMENT

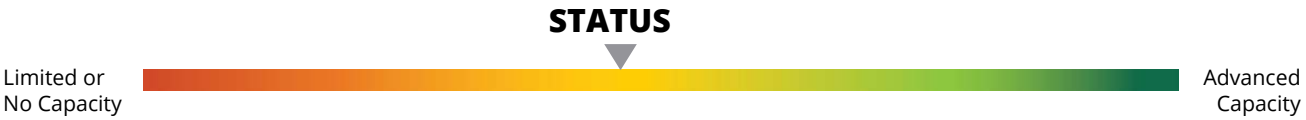
THE DMA

INSTITUTIONAL ARRANGEMENTS



INSTITUTIONAL ARRANGEMENTS

Findings indicate Colombia's Institutional Arrangements show achievement with significant limitations.



SUBTHEME STATUS

Organizational Structures

Leadership Arrangements

Mechanisms for Stakeholder Engagement

The organizational and institutional structures through which disaster management capacity develops are indications of Colombia's institutional arrangements. Examining the organization and composition of diverse agencies and individuals that constitute a nation's disaster management capacity—detailing the relationships and collaboration between them—reveals tangible opportunities for increased effectiveness. The DMA examined the existing disaster management Organizational Structures, Leadership Arrangements, and Mechanisms for Stakeholder Engagement.

INSTITUTIONAL ARRANGEMENTS

MECHANISMS FOR STAKEHOLDER ENGAGEMENT

FINDINGS

Law 1523/2012 establishes a strategic framework for coordinating disaster management (DM). As such, technical committees led by the National Council for Disaster Management (CNGRD) guide the National System for Disaster Risk Management (SNGRD) policy and action. In the context of anticipatory risk, strategies focusing on resilience and adaptation measures will ensure that the technical committees, CNGRD and SNGRD, are equipped to handle future DM needs effectively.

As DM evolves to address new hazard landscapes, establishing a formal process for prioritizing annual goals, objectives, and outcomes will minimize redundancies, promote accountability, and enable strategic implementation of goals that prioritize the anticipatory risk agenda. Defining stakeholder roles and implementing policy actions focused on anticipatory risk will strengthen DM and communities' resilience to predicted risks.

RECOMMENDATIONS

To enhance resilience, the following activities are recommended:

- Review current policies and priorities, ensuring alignment with a focus on anticipatory risk in each phase of DM.
  - Develop a formalized framework to prioritize annual goals, objectives, and outcomes related to DM and predictive risk.
  - Include criteria for current and emerging hazards to ensure efficient resource allocation.
- Identify areas of duplication and consolidate platforms to maximize the effectiveness of the SNGRD strategy.
- Leverage the outcomes of the committees to enhance coordination efforts at the national and sub-national levels.
  - Establish regular forums and workshops for DM stakeholders to share knowledge, best practices, and lessons learned.
  - Create outreach programs to educate and engage communities on anticipatory risk measures.
- Conduct a review of the national and sub-national district, department, and municipal committees to ensure accurate mirroring and effective linking of anticipatory risk initiatives.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action

1, 2, 3, 4

Global Targets

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

Guiding Principles

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

SDGs

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

Andean Strategy: Thematic Axes + Lines of Intervention

1(1.2,1.3,1.6-1.11), 2(2.2-2.4), 3(3.3,3.5-3.9), 4(4.1,4.2)

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

INSTITUTIONAL ARRANGEMENTS

MECHANISMS FOR STAKEHOLDER ENGAGEMENT

FINDINGS

The government's approach to seeking public feedback on policy measures through town hall meetings and online forums demonstrates the value of community input in shaping effective strategies. Similarly, adopting a structured community engagement process for disaster risk management (DRM) and disaster management (DM) would strengthen partnerships and efforts.

Involving communities in hazard assessments and planning ensures strategies are more inclusive, informed, and tailored to unique needs and vulnerabilities. Additionally, a community-based planning approach, including neighborhood training and educational opportunities focused on shelter logistics, evacuation routes, and personal preparedness, will empower residents to develop effective risk-prevention measures. Leveraging indigenous knowledge and resources in disaster planning will further improve neighborhood resilience.

RECOMMENDATIONS

To support Colombia and a strategic approach to disaster risk reduction, the following activities are recommended:

- Develop formal mechanisms for the public to provide input on hazard and risk assessments:
  - Use common communication platforms for information sharing to coordinate strategies and response efforts better.
  - Ensure public input drives updates to policy measures to enhance community resilience.
- Encourage community-driven resilience programs that consider local and indigenous needs/vulnerabilities.
- Explore the benefits of expanding public-private partnerships (PPP) in conducting and sharing community risk assessments and information.
- Provide incentives, funding, and resources to support stakeholders and assist with expanding capacity-building initiatives.
  - Leverage national financial instruments to invest in local strategies and bolster community response and recovery capacity.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action

1, 2, 3, 4

Global Targets

A, B, D, E

Guiding Principles

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

SDGs

1, 6, 8, 9, 10, 11, 13, 15, 16

Andean Strategy: Thematic Axes + Lines of Intervention

1(1.1,1.3,1.5-1.11), 2, 3, 4(4.1,4.2,4.4, 4.6)

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

THE DMA

DISASTER GOVERNANCE MECHANISMS

DISASTER GOVERNANCE MECHANISMS

Colombia's Disaster Governance Mechanisms show substantial progress with some limitations.

SUBTHEME STATUS

Plans and Processes

Command, Control, and Coordination Systems

Emergency Operations Centers

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

DISASTER GOVERNANCE MECHANISMS

PLANS AND PROCESSES

FINDINGS

Greater collaboration is needed among UNGRD and key public and private stakeholders to improve disaster response and strengthen business continuity strategies. By prioritizing business continuity planning, UNGRD can better integrate the public and private sectors into the broader DM frameworks, leading to a better understanding of local vulnerabilities and pinpointing critical resource gaps.

UNGRD can actively support organizations through targeted continuity planning and capacity-building programs. Through UNGRD integration into continuity training and exercises at the national and local levels, stakeholders can gain essential skills for effective response.

Together these partnerships will better prepare communities for emergencies and ensure their sustainability.

RECOMMENDATIONS

To support business continuity planning within the public and private sectors, the following activities are recommended:

- Establish formal partnerships and working groups with NGOs, community organizations, businesses, and the private sector to integrate business continuity into broader disaster response strategies.
  - Ensure integration into formalized national and local disaster planning and recovery operations.
- Encourage the development of continuity plans and identifying/safeguarding critical resources.
  - Provide resources, such as business continuity templates and incentives to businesses and NGOs for developing and implementing resilience plans.
- Integrate into national and local disaster training and exercises.
  - Offer training and capacity-building programs to strengthen organizations' business continuity plans.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
2, 4

Global Targets
B, C, D, E

Guiding Principles
(a), (b), (e), (f), (h), (i), (k), (m)

SDGs
6, 7, 8, 9, 11, 12, 13, 15, 16

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.2,1.3,1.6), 2(2.1-2.3), 3(3.1,3.4,3.6,3.8), 4(4.1,4.2,4.4,4.5)

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

DISASTER GOVERNANCE MECHANISMS

PLANS AND PROCESSES

FINDINGS

The critical lack of affordable and accessible housing, combined with outdated or nonexistent land use plans, contributes to burgeoning informal settlements that house more than 5 million people in Colombia. This creates complex challenges for disaster management (DM), especially in the most densely populated areas.

Most municipalities lack current land use plans, largely due to the absence of updated cadastral information. To address this challenge, updating cadastral data and land use plans is essential to identify and visualize considerations for vulnerable populations more effectively and utilize DM, DRR, and anticipatory risk strategies more efficiently.

These efforts will produce safer, more resilient communities facing disaster risks.

RECOMMENDATIONS

To support Colombia in reducing risk and increasing resilience, the following activities are recommended:

- Update and revise cadastral data and land use plans to improve community resilience.
  - Utilize to draft effective policies for development and building code enforcement.
  - Facilitate the sharing of plans among DM stakeholders to promote plan integration, allocate limited resources, and enhance collaboration and decision-making processes.
- Utilize data from risk assessments to drive land use and development plan updates that reflect current community resources and needs.
- Utilize data from this NDPBA to support sustainable development and land-use planning.
  - Leverage RVA resources, including hazard mapping for population exposures, critical infrastructure locations, and evacuation/shelter identification, to drive sector-based community plans and updates and profile informal settlements and vulnerable groups for focused planning/resource efforts.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

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

SDGs
5, 9, 10, 11, 13, 16

Andean Strategy: Thematic Axes + Lines of Intervention
1, 2, 3, 4

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

DISASTER GOVERNANCE MECHANISMS

PLANS AND PROCESSES

FINDINGS

There is a need for a centralized repository and a formalized approach to manage municipal disaster management (DM), land use, and water management plans. Inconsistent information, fragmented disaster management (DM), and disaster risk reduction (DRR) planning create significant gaps in preparedness and response efforts. A centralized repository can serve as a consistent resource that breaks down institutional silos and encourages open communication amongst subnational and local stakeholders.

This collaborative approach enables the identification of common risks, the sharing of best practices, and the development of comprehensive strategies focused on addressing community vulnerabilities. Providing stakeholders with access to reliable and standardized information promotes informed and tailored decision-making, leading to a more resilient community capable of withstanding and recovering from disasters.

RECOMMENDATIONS

To support DM and DRR collaborative planning, the following activities are recommended:

- Develop and implement a formal framework for collaborative DM and DRR planning to ensure the centralized repository is used consistently and effectively across municipalities and departments.
- Establish a centralized national repository that houses all municipal DM, land use, and water management plans.
  - Promote data sharing among government entities, NGOs, and academics to strengthen coordination with regional and international stakeholders.
- Harmonize DM and DRR plans from the local to national level to maintain critical services and support preparedness, response, and recovery operations for greater national resilience.
- Develop and implement targeted public campaigns to promote resources, ensuring the public knows where to find trusted information.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E, F

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

SDGs
5, 6, 7, 9, 11, 13, 14, 15, 16, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.5,1.7,1.8), 2(2.1-2.3), 3(3.6,3.8), 4(4.1,4.4,4.5)

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

DISASTER GOVERNANCE MECHANISMS

THE DMA

CAPABILITIES AND RESOURCES

CAPABILITIES AND RESOURCES

The country's current Capabilities and Resources show achievement with significant limitations.

SUBTHEME STATUS


Dedicated Facilities and Equipment


Human Resources


Inventory of Commodities and Supplies


Targeted Functional Capabilities

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

CAPABILITIES AND RESOURCES

DEDICATED FACILITIES AND EQUIPMENT

FINDINGS

A strengthened emergency response capacity in Colombia will better meet the needs of communities by providing a timelier delivery of resources. For example, Bogotá has a critical shortage of fire stations. These stations serve as vital response and recovery hubs for communities and enable life-saving aid. The shortage of facilities, resources, and equipment within hazard-prone areas delays response times and delivery of relief items.

An enhanced logistical program, including but not limited to additional fire station facilities, is needed to support operations during disasters. Logistical hubs should be positioned to serve densely populated regions best and serve as transfer points for disaster relief supplies.

RECOMMENDATIONS

To support Colombia in reducing risk and increasing resilience, the following activities are recommended:

- Advocate for constructing fire stations to accommodate the immediate communities they serve.
  - Increase budget allocations from UNGRD to augment essential community services.
  - Identify inventory supply and logistic gaps for targeted funding.
  - Expand educational opportunities and recruitment strategies for firefighting personnel and fill staffing shortages.
- Expand and maintain pre-positioned National Stockpiles
  - Develop an inventory of supplies and identify gap areas for targeted funding to acquire additional resources.
- Include the health sector in planning to anticipate the healthcare needs of exposed populations during disasters.
- Expand the Colombian Civil Air Patrol (PAC) concept to facilitate access to specialized and emergent health resources in remote and vulnerable regions.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action

1, 2, 3, 4

Global Targets

A, C, D, F

Guiding Principles

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

SDGs

3, 11, 17

Andean Strategy: Thematic Axes + Lines of Intervention

1(1.9,1.10), 2(2.1, 2.4), 3, 4(4.1,4.4-4.6)

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

CAPABILITIES AND RESOURCES

THE DMA

CAPACITY DEVELOPMENT

CAPACITY DEVELOPMENT

Colombia's Capacity Development shows achievement with significant limitations.

SUBTHEME STATUS

CD Plans and Strategies

Training and Education Programs & Facilities

Monitoring and Evaluation Processes and Systems

Colombia's ability to advance disaster management strategies that achieve risk reduction and resilience goals ultimately depends on its ability to support capacity development. From training and education that supports the advancement of knowledge and skills to the institutionalization of appropriate attitudes and cultures, capacity development requires the continuous advancement of assessments, strategic plans, programs, facilities, and many other sub-themes. The DMA looks at resources and opportunities for all stakeholders and all sectors, from individuals and special-needs groups to government responders. Sub-themes examined include Capacity Development Plans and Strategies; Training and Education Programs and Facilities; and Capacity Development Monitoring and Evaluation.

CAPACITY DEVELOPMENT

Plans and Strategies

FINDINGS

Urban and rural informal settlements are often in high-hazard locations with limited baseline access to resources and facilities. When disaster strikes, these conditions are compounded, with devastating humanitarian consequences.

Programs to retrofit infrastructure in vulnerable and hazard-prone areas would provide life-saving benefits and long-term economic savings. Sustainable land-use practices, water management systems such as rainwater catchments, and WASH programs and services would also make these communities less vulnerable to disaster.

It is important for Colombia to incorporate WASH and infrastructure improvements in informal settlements and vulnerable areas to reduce the burden faced by these communities, especially those located in high-hazard-prone regions.

RECOMMENDATIONS

To strengthen informal settlement capacity and capabilities, the following activities are recommended:

- Improve water and sanitation infrastructure, focusing on piped water, toilet facilities, and wastewater containment and treatment to reduce the burden of water collections, reduce exposure to disease, and increase resilience.
  - Strengthen collaboration to fulfill the advancement of the IOM's 2024 Crisis Response Plan for humanitarian assistance while promoting long-term recovery and resilience through essential services, capacity-building initiatives, and data-driven strategies.
  - Ensure adequate funding resources to support ongoing WASH projects and shelter considerations in communities affected by armed conflict and natural hazards.
- Improve housing conditions by retrofitting current infrastructure.
- Identify high-priority needs, conduct risk assessments, and compile disaster data for focused capacity development planning and initiatives.
- Strengthen cooperation with CDGRDs and CMGRDs.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E, F

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h) (l)

SDGs
1, 3, 4, 5, 6, 7, 8, 10, 11, 13, 16

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1-1.4,1.6-1.11), 2, 3(3.2-3.5, 3.7,3.9), 4(4.1,4.2,4.4, 4.5)

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

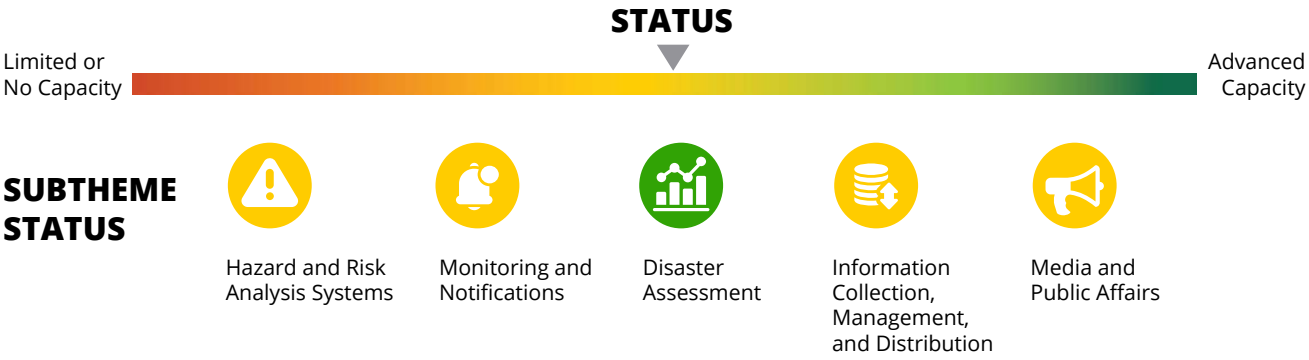
CAPACITY DEVELOPMENT

THE DMA

COMMUNICATION AND INFORMATION MANAGEMENT

COMMUNICATION AND INFORMATION MANAGEMENT

Colombia's Communication and Information Management capacity shows achievement with significant limitations.



Disaster management is a risk-based endeavor, and as such, the capacity of stakeholders to generate, manage, and share risk and incident-related information is critical. This analysis looked at the systems, processes, and procedures established in Colombia to inform pre- and post-disaster activities: Hazard and Risk Analysis Systems; Monitoring and Notification; Disaster Assessment; Information Collection, Management, and Distribution; and Media and Public Affairs.

COMMUNICATION AND INFORMATION MANAGEMENT

Hazard and Risk Analysis

FINDINGS

Nearly 5 million people live in informal settlements in Colombia, which is critical to understanding the country's risk profile. Inadequate infrastructure and limited access to basic services leave them vulnerable to natural disasters.

The size and dynamic nature of informal settlements require updated risk assessments to allocate resources better and implement targeted disaster management (DM) strategies that prevent these populations from further hardships. DM can target interventions that enhance resilience by integrating current data on the vulnerabilities and incorporating resource gaps into planning initiatives.

Protecting the most at-risk populations ensures that national risk management strategies are comprehensive and effective.

RECOMMENDATIONS

To support vulnerable populations through targeted intervention strategies, the following activities are recommended:

- Conduct comprehensive and updated risk assessments within informal settlements.
  - Consider population density, infrastructure quality, and exposure to high-hazard zones to identify needs, resource allocation, and DM strategies.
- Enhance basic WASH services and improve infrastructure through targeted initiatives and programs.
- Involve community members in the DM planning process to ensure their unique needs and knowledge are considered.
  - Create platforms where residents can voice concerns or offer suggestions leading to more tailored and effective interventions.
- Implement specialized DM preparedness and response training and resources for residents in informal settlements.
  - Include workshops on DRR, create and train on evacuation plans, and maintain community-based support networks to assist and strengthen efforts.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, D, E

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

SDGs
1,3, 4, 5, 6, 7, 8, 10, 13, 16

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.3-1.4,1.6,1.8-1.11), 2, 3(3.3-3.7, 3.9), 4

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

COMMUNICATION AND INFORMATION MANAGEMENT

MONITORING AND NOTIFICATION

FINDINGS

The Bello Oriente community in Medellin participated in a prototype landslide early warning system (LEWS) from 2020-2022. This successful landslide mitigation project was part of an effort to address the increased risk and associated fatalities throughout Colombia due to increased volcanic and seismic activity, intensified rainfall events, and environmental mismanagement.

It is important for Colombia to continue to engage the LEWS system and to extend it to communities that have a heightened risk of landslide events. Giving these communities access to systems such as the LEWS will save lives, minimize the impact of disasters, and increase the resilience of neighborhoods throughout Colombia.

RECOMMENDATIONS

To support Colombia in reducing risk and increasing resilience, the following activities are recommended:

- Continue upgrading and investing in LEWS monitoring and communications technology, expanding coverage and targeted infrastructure, and translating data into comprehensive EWS capabilities.
- Hire subject-matter experts for installation and expansion of the LEWS model to similar areas, stakeholders, and researchers who want to modify, use, and replicate the system.
- Customize LEWS to meet the specific demographic needs of communities and establish marked evacuation routes throughout high-risk neighborhoods.
- Promote community engagement by involving members in the planning, training, and decision-making processes of LEWS, fostering ownership and resilience at the local level.
- Conduct regular evaluations of the notification processes and LEWS to identify areas for improvement and ongoing effectiveness.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, G

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

SDGs
9, 10, 11, 13,15, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1-1.7,1.9-1.11), 2, 3(3.1, 3.2,3.3), 4(4.1, 4.3, 4.4,4.5)

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

COMMUNICATION AND INFORMATION MANAGEMENT

MONITORING AND NOTIFICATION

FINDINGS

Strengthening multi-hazard early warning systems (MHEWS) requires investments in advanced communication technologies and expansion to underserved and rural areas. Partnerships with organizations like the International Telecommunication Union (ITU), and Global System for Mobile Communications Association (GSMA), can improve connectivity and support disaster management (DM) efforts in developing national alert systems for timely public warnings, ensuring vulnerable and rural communities receive critical information.

A tailored approach is necessary to address MHEWS needs in these communities. Implementing localized MHEWS solutions that prioritize community-centered strategies will better meet the specific demographic needs of diverse populations. Additionally, providing targeted messaging and evacuation planning for marginalized and rural groups will help ensure equitable access to life-saving information.

RECOMMENDATIONS

To strengthen MWEHS capabilities, the following activities are recommended:

- Invest in advanced communication technology to address challenges in underserved areas and to expand accessibility in rural areas.
  - Enlist the International Telecommunication Union (ITU) and the Global System for Mobile Communications Association (GSMA) for technical support and possible grant funding.
  - Partner with GSMA's Mobile for Humanitarian Innovation (M4H) programme to support and improve mobile-enabled services.
- Customize MWEHS to meet specific demographic needs of communities and targeted messaging for diverse populations.
- Identify locations of vulnerable populations/informal settlements that may need additional time or assistance for evacuation.
  - Identify locations where hazard impacts may interfere with ingress and egress routes.
- Utilize and expand the Landslide Early Warning Systems (LEWS) concept in settlements.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, G

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

SDGs
9, 10, 11, 13,15, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1-1.7,1.9-1.11), 2, 3(3.1, 3.2,3.3), 4(4.1, 4.3, 4.4,4.5)

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

COMMUNICATION AND INFORMATION MANAGEMENT

INFORMATION COLLECTION AND MANAGEMENT

FINDINGS

The UNGRD Digital Library and Documentation Catalogue Center, located on the UNGRD website, was offline to the public for six months in 2024. When it is available, it is somewhat unorganized and challenging to navigate. This inaccessibility can contribute to a perception of limited transparency, leading to public dissatisfaction and a sense of distrust towards the government.

In today's digital landscape, information hubs provide valuable content and engage users, becoming powerful tools for communicating and community building. To fulfill UNGRD's commitment to public information and access rights, the Digital Library and Documentation Catalogue should be reorganized for functionality and ease of access to the public.

Maintaining the website and resource platforms will allow the government to serve the public more effectively, create an atmosphere of transparency, and rebuild trust in UNGRD.

RECOMMENDATIONS

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

- Harmonize UNGRD's overarching digital agenda to ensure platform consistency and compatibility.
- Restructure UNGRD Digital Library's website and resources to make them accessible and user-friendly.
- Develop and implement a schedule for maintaining platforms, updating documents, and adding new materials.
- Integrate feedback channels into platforms to incorporate user feedback on experiences with digital platforms, allowing for continuous improvements based on public input.
- Launch campaigns to inform the public about resources and available platforms for disaster risk management.
  - Highlight the importance of these resources for the public and how to access them.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action

1, 2, 3, 4

Global Targets

A, B, C, D, E

Guiding Principles

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

SDGs

5, 8, 9, 10, 11, 13, 16, 17

Andean Strategy: Thematic Axes + Lines of Intervention

1(1.4,1.5,1.7,1.8), 2(2.1), 3(3.1), 4(4.1,4.2,4.5)

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

COMMUNICATION AND INFORMATION MANAGEMENT

MEDIA AND PUBLIC AFFAIRS

FINDINGS

Opportunities for gathering input are essential to promoting public participation in disaster management (DM). Methods such as town hall meetings, focus groups, and surveys are valuable platforms for collecting feedback. Incorporating this input into UNGRD, CDGRD, and CMGRD planning will lead to a more comprehensive approach to improving DM preparedness and recovery efforts.

In addition, prioritizing consistent communication of critical DM information will strengthen the effectiveness of local organizations, community emergency response teams, and volunteer brigades. Adopting a whole-of-society approach to engagement and transparency for joint DM initiatives will ensure the sustainability of national and local DM efforts to improve community resilience to disasters.

RECOMMENDATIONS

The following activities are recommended to be implemented to support DM at the national and local levels in fulfilling their mandates.

- Develop a public engagement action plan that identifies various means of gathering knowledge from the public and sharing DM information with them.
  - Implement regular opportunities for community input, such as town hall meetings and surveys, to gather feedback that informs DM planning and increases public participation.
- Establish and sustain consistent communication and knowledge-sharing between UNGRD, CDGRD, CMGRD and community groups, neighborhood watch or planning groups, community emergency response teams, and volunteer brigades.
  - Offer training and workshops and incorporate them into national/local T&E programs.
- Engage with local stakeholders and non-governmental agencies to contribute to mapping, disaster planning, and decision-making processes.
  - Develop joint initiatives that focus on transparency and efficiency.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

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

SDGs
4, 5, 10, 11, 13, 16

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1-1.3,1.5-1.11), 2, 3(3.1,3.2,3.5-3.9), 4

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

COMMUNICATION AND INFORMATION MANAGEMENT

MEDIA AND PUBLIC AFFAIRS

FINDINGS

UNGRD has experienced high leadership turnover in recent years. This, combined with recent public relations challenges involving leadership, has created a public image of instability.

UNGRD has launched a focused public information campaign that is a commendable step toward reclaiming its image as a trustworthy, committed organization capable of managing and mitigating future disaster risks.

The continuing campaign will additionally provide an avenue for relationship-building with consistent communication about future internal changes. This transparency will help address public concerns and reassure them that changes will be managed to minimize disruption to the essential programs and services they rely on.

RECOMMENDATIONS

To address leadership changes and improve the public image of UNGRD, the following actions are recommended:

- Develop a clear and specific communication plan for sharing internal changes with the public.
  - Include key messaging, developing scripts where appropriate.
  - Frequently update social media platforms to share timely and consistent information.
  - Use multiple communication channels to reach the public and ensure that information is accessible and tailored to meet different audience needs.
  - Deliver prompt and timely updates to prevent misinformation and reduce public anxiety.
- Highlight continuity of service and emphasize specific steps to ensure that programs and services continue uninterrupted.
  - Provide information on how the organization manages changes and how continued quality service will be delivered.
- Maintain media relationships to communicate more effectively and leverage accurate and positive coverage to help shape public perception.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action

1, 2, 3, 4

Global Targets

A, B, D, E

Guiding Principles

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

SDGs

4, 9, 10, 11, 13, 16

Andean Strategy: Thematic Axes + Lines of Intervention

1(1.5-1.8), 3(3.1), 4(4.1,4.5)

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

THE NDPBA

COMMENDATIONS FOR BEST PRACTICES

COMMENDATIONS FOR BEST PRACTICES

BEST PRACTICES COMMENDATION

The Promise of Landslide Early Warning Systems (LEWS): Medellín

Landslide Early Warning Systems (LEWS) represents a groundbreaking approach to disaster risk reduction, especially in vulnerable informal settlements. The innovative implementation of LEWS in Medellín, Colombia, is a pioneering test case demonstrating how technology, community engagement, and environmental resilience can converge to address pressing safety concerns.

The system has demonstrated its promise of saving lives through proactive monitoring and response. By integrating real-time data from sensors that track environmental triggers such as rainfall and ground deformation, LEWS offers early warnings that enable timely evacuations. In Medellín's Bello Oriente neighborhood—home to over 4,600 residents, nearly half of whom live in high-risk zones—this test case highlights how tailored, community-driven approaches can make a life-saving difference.

Socially, the Medellín LEWS exemplifies a model for community-centered disaster preparedness. By involving residents in hazard mapping, sensor installation, and evacuation planning, the system fosters trust and ownership among stakeholders. This integration transforms a technical tool into a socially embedded framework, where local knowledge enhances system functionality and acceptance.

Economically, this test case underscores the cost-effectiveness of LEWS compared to large-scale infrastructure projects or resettlements. The system's low-cost, open-source design—complete with accessible manuals and designs—ensures its replicability in other high-risk areas worldwide. The system's novel approach of combining advanced technology with community participation further enhances its appeal as a model for disaster-prone regions.

The Medellín LEWS test case illustrates the transformative potential of an integrated, community-driven early warning system. As a pioneering example, it offers invaluable lessons for building resilience and fostering preparedness in vulnerable communities worldwide. This test case is an experiment and a beacon for sustainable and inclusive disaster risk reduction strategies.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

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

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

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1,1.10), 2(2.1, 2.2), 3(3.8), 4(4.1,4.2,4.3, 4.4)

Gamperl, M.; Singer, J.; Garcia-Londoño, C.; Seiler, L.; Castañeda, J.; Cerón-Hernandez, D.; Thuro, K. Recommendations for

COMMENDATIONS FOR BEST PRACTICES

BEST PRACTICES COMMENDATION

Highlighting Colombia's Commitment to Nature-Based Solutions: Medellín's Corredores Verdes

Colombia is leading the way in addressing future risk. One notable achievement is the Corredores Verdes in Medellín, which established green corridors throughout Medellín to mitigate air pollution and increasing temperatures exacerbated by the heat island effect of urban areas.

The Corredores Verdes project, begun in 2016, connects green corridors with parks, waterways, and vertical gardens. It has won several awards and become known worldwide as a successful resilience-building measure in a world of rising temperatures. Corredores Verdes has also reduced air pollution, preserved ecosystems, and increased biodiversity. Studies have shown that it has reduced the average city temperature by an astounding 2°C.

Medellín is developing a new green corridor between the Exposiciones and San Diego roundabouts, covering 783 square meters with nine planters. This project transforms the central separator's hard surface into a soft, green space. The initiative, part of a $480 million investment, includes civil works and planting in five sections.

Urban Connectivity: This concept integrates wildlife crossings, green walls, and repurposed pedestrian bridges to balance urban and environmental functions.

Employment: The project, part of the Medellín Te Quiere 2024-2027 Development Plan, will employ approximately 700 gardeners.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, D, E, F

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

SDGs
3, 6, 7, 9, 11,13,15, 16, 17

Andean Strategy: Thematic Axes + Lines of Intervention

1(1.3,1.6,1.9,1.10), 2(2.2,2.3,2.4), 3(3.1,3.2,3.3, 3.5,3.6,3.8), 4(4.1)

COMMENDATIONS FOR BEST PRACTICES

BEST PRACTICES COMMENDATION

Enhancing Community Resilience in Colombia: Recognition of Resilience Hubs

Medellín has undergone a remarkable transformation from a city associated with violence to a global leader in urban resilience. This change is attributed to infrastructure projects like the MetroCable system and significant investments in education, public spaces, and transportation networks. The city's focus on promoting social inclusion, reducing crime rates, and committing to a safer and more equitable future for residents has played a crucial role in achieving designation as a Resilient Hub under Making Cities Resilient 2030.

Medellín partners with cities and global organizations through its Resilience Hub designation to strengthen disaster risk reduction (DRR) efforts. One notable collaboration with Barcelona has focused on identifying and prioritizing the city's risk while forming meaningful partnerships with public officials, academia, the private sector, and the community.

Medellín's program initiatives strengthen collaboration and partnerships to improve resilience capacity. The city has developed knowledge exchange programs through sister cities, created training courses on building damage assessment, and provides technical support at local, metropolitan, and departmental levels.

Medellín's contributions demonstrate effective collaboration, embrace innovative strategies for DRR, and tackle proactive solutions posed by predicted risks. This positions the city as a leading model in Latin America, inspiring communities worldwide.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, D, E, F

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

SDGs
1, 3, 7, 9, 10, 11,13,17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1,1.4,1.6,1.8,1.10,1.11), 2, 3(3.1,3.6,3.7,3.8), 4

COMMENDATIONS FOR BEST PRACTICES

BEST PRACTICES COMMENDATION

Scaling up Resilient Water Management Practices: La Mojana, Colombia.

The Scaling up Resilient Water Management Practices in La Mojana is a groundbreaking approach to transforming water management strategies by understanding how predicted risks affect water availability. This initiative improves watershed health, increases rural communities' water access, and introduces new technologies, such as solar energy and rainwater harvesting, while actively involving local institutions, communities, and vulnerable groups in adapting to anticipated risks and developing community resilience.

Beyond improved water management, the initiative paves the way for innovative plans that promote the region's long-term sustainability. This includes maintaining infrastructure and the natural flood protection of the area. As extreme weather becomes more frequent, La Mojana focuses on strengthening the capacity of local governance and early warning systems. By providing communities with the necessary tools to prepare for floods, droughts, and other disasters a safety net is established to protect against unpredictable events. Furthermore, implementing resilient agricultural practices assists farmers in adapting to the changing weather patterns and improves food security.

This initiative is a transformative approach to sustainable living in rural communities and benefits over 400,000 La Mojana residents. It creates a strategic path forward that can equip rural communities with the blueprint for resilience to survive and thrive in the face of adversity.

SENDAI FRAMEWORK, SDGS, AND ANDEAN STRATEGY FOR DRM ALIGNMENTS

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, D, E, F, G

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

SDGs
1, 2, 6, 7, 9, 10, 11,12, 13, 15, 16, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1-1.8,1.10,1.11), 2, 3, 4

COMMENDATIONS FOR BEST PRACTICES

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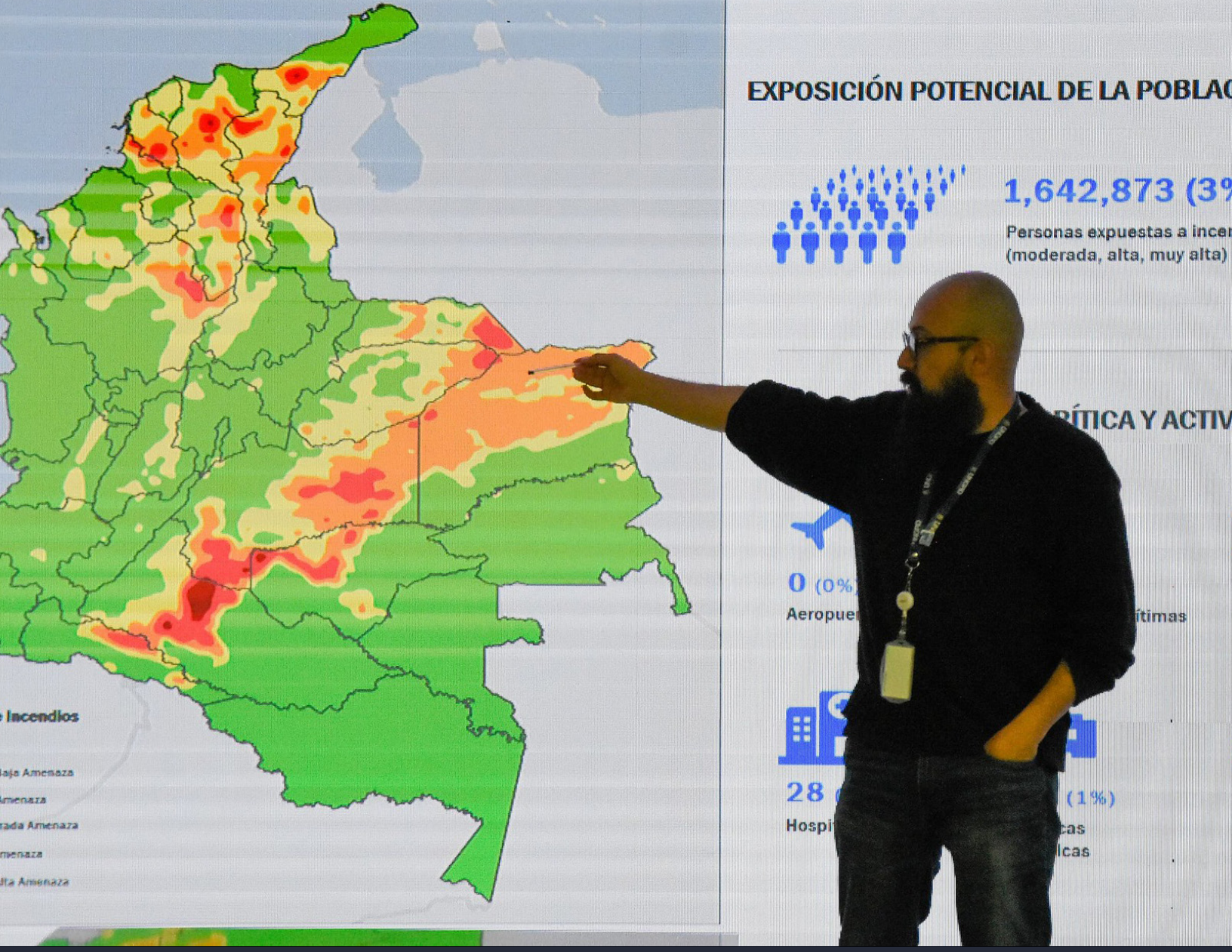

THE NDPBA

NATIONAL RECOMMENDATIONS

THE NDPBA
NATIONAL RECOMMENDATIONS

1 EXPAND HAZARD AND RISK MAPPING FOR SUBNATIONAL AND LOCAL AREAS, ESPECIALLY IN AREAS WHERE CONCENTRATIONS OF INFORMAL HOUSING SETTLEMENTS ARE IN HAZARD ZONES, TO FACILITATE RESILIENCE-BUILDING MEASURES AND PLANNING EFFORTS.

- Incorporate GIS-based data, research, and mapping into preparedness and disaster risk reduction plans
    - Strengthen sharing and information mechanisms between UNGRD, District Councils for Disaster Risk Management (CDGRD), and Municipal Councils for Disaster Risk Management (CMGRD) to conduct and incorporate risk assessments into disaster risk reduction efforts.
    - Consider potential impacts on critical infrastructure and agricultural production.
- Develop hazard zones for manmade hazards, including oil spills (offshore and on land), mining-related accidents, and water contamination, to anticipate potential impacts on population and environmental health and support evidence-based mitigation efforts.
- Refine and customize hazard modeling to anticipate and address the needs of local communities and vulnerable populations, ensuring that local disaster management plans include hazard exposure.
- Include vulnerability data on informal settlements, including access to WASH, electricity, internet, and transportation infrastructure.
- Identify locations where hazard impacts may interfere with ingress and egress routes.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3

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

Global Target (s)
A, B, C, D, E

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.3-1.4,1.6,1.8-1.11), 2, 3(3.3-3.7, 3.9), 4

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

2 STRENGTHEN ALL-HAZARDS MONITORING, COMMUNICATIONS SYSTEMS, AND DATA TRANSLATION INTO COMPREHENSIVE MULTI-HAZARD EARLY WARNING SYSTEMS (MHEWS) AND CAPABILITIES.

- Invest in advanced communication technology to address challenges in underserved areas and to expand accessibility in rural areas.
    - Support national telecommunication companies' efforts to expand mobile data connectivity and internet accessibility outside municipal areas. Partner with them to invest in a National Wireless Emergency Alert System for public alert and warning that can be used at the national, district, or municipal level as the emergency dictates.
    - Enlist the International Telecommunication Union (ITU) and the Global System for Mobile Communications Association (GSMA) for technical support and possible grant funding.
- Partner with GSMA's Mobile for Humanitarian Innovation (M4H) programme to support and improve penetration of life-saving mobile-enabled services for preparedness, response, and recovery, especially in underserved areas.
    - Maximize opportunities for public-private partnerships for effective early warning systems facilitated by GSMA in its mandate to support the United Nations Early Warnings for All (EW4All) Initiative
    - Customize MHEWS to meet specific demographic needs of communities.
    - Include considerations for targeted messaging for diverse parts of the affected populations, such as the elderly, women and girls, children and youth, indigenous people, non-Spanish speaking groups, and persons with disabilities.
- Identify locations of vulnerable populations/informal settlements that may need additional time or assistance for evacuation.
- Utilize and expand Landslide Early Warning Systems (LEWS) concept in settlements.
    - Ensure community involvement during assessments to improve data collection and raise awareness.
    - Install sensors in public spaces - integrate into everyday life through multi-purpose structures like benches, which remind of landslide risks and protect sensors from vandalism.
    - Replicate protocol for knowledge sharing by hosting open-source manuals, designs, and data on a publicly accessible wiki to encourage replication and adaptation of the LEWS in other regions.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

SDGs
6, 9, 10, 11, 13

Global Target (s)
A, B, C, D, E

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1,1.10), 2(2.1, 2.2), 3(3.8), 4(4.1,4.2,4.3, 4.4)

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

3

PROMOTE COMPREHENSIVE STRATEGIES TO MONITOR, ADDRESS, AND MITIGATE THE IMPACTS OF WILDFIRES, FLOODING, AND LANDSLIDES.

- In coordination with other government agencies and academic institutions, develop staff training to enhance data collection and analysis capabilities, including hazard mapping and modeling.
- Invest in high-resolution imagery for the development of a digital elevation model (DEM) to increase the accuracy and precision of flood mapping and monitor shoreline changes.
- Leverage indigenous communities' knowledge of local hazards, including observations, experiences, and mitigation efforts.
- Provide incentives for homeowners, residents, businesses and industry for implementation of hazard mitigation measures. Include non-structural enhancements that improve drainage, reduce soil erosion, and protect vegetated slopes.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3

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

Global Target (s)
A, B, C, D, E

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.3,1.4, 1.6, 1.8-1.11), 2, 3(3.3-3.7, 3.9), 4

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

NATIONAL RECOMMENDATIONS

4 DEVELOP A COMPREHENSIVE STRATEGY TO FOCUS ON DISASTER RISK REDUCTION (DRR) AND RESILIENCE-BUILDING MEASURES FOR INFORMAL HOUSING SETTLEMENTS IN DISASTER-PRONE AREAS.

- Engage communities in pre-disaster planning to identify challenges and proactive solutions.
    - Include local and indigenous expert knowledge.
    - Facilitate collaboration between rural and urban communities to plan collectively based on hazard zones with similar risks.
- Establish a multi-stakeholder pathway for systematically inspecting existing infrastructures, starting with the most critical ones, to identify retrofitting opportunities.
- Collaborate with UNGRD, CDGRDs, and CMGRDs to ensure disaster management (DM) plans consider the complexities and potential cascading impacts during emergencies in densely populated communities and urban areas.
- Engage public transportation companies in pre-disaster planning to identify proactive solutions for evacuation/sheltering transportation needs and continued access to goods and services.
    - Establish formal arrangements to help disaster-affected populations with transportation needs related to evacuation and sheltering.
- Amplify engagement with the Department of Social Prosperity, the National Planning Department, and international organizations such as IOM, UNHCR, UNDP, and UN-Habitat to integrate support for vulnerable populations.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 4

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

Global Target (s)
A, B, C, D

Andean Strategy: Thematic Axes + Lines of Intervention
1, 2, 3, 4

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

5 MONITOR POPULATION DYNAMICS TO ANTICIPATE HOW DEMOGRAPHIC CHANGES MAY IMPACT LOCAL HAZARD EXPOSURE, DISASTER RISK, AND POTENTIAL CONFLICT.

- Track migration patterns and monitor population growth at the local level to anticipate potential resource shortages and capacity gaps that could result in increased risk or conflict.
- Monitor and map informal settlements to assess disaster preparedness strategies that consider the increased vulnerability, fragility, lack of infrastructure, and social isolation of informal communities.
- Identify causal effects of migration and informal settlement to reduce the impact of population pressures on disaster risk.
- Ensure that mass care and emergency service resources are regularly reviewed and realigned to support areas of high vulnerability and low coping capacity.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3

SDGs
2, 3, 6, 9, 11, 13, 15

Global Target (s)
A, B, C, D, E

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.3, 1.4), 2(2.3), 3(3.3-3.7), 4(4.1,4.2)

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (h), (i)

6 ENSURE THAT MUNICIPAL DISASTER MANAGEMENT PLANS CONSIDER THE COMPLEXITIES AND POTENTIAL CASCADING IMPACTS OF RESPONSE TO EMERGENCIES IN DENSELY POPULATED COMMUNITIES AND URBAN AREAS.

- Identify in advance locations with an influx of migrant and/or vulnerable populations that will require more time and assistance with evacuations during an emergency.
    - Ensure plans identify locations where hazards may interfere with ingress and egress routes.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

SDGs
5, 9, 10, 11, 13, 16

Global Target (s)
A, B, C, D, E

Andean Strategy: Thematic Axes + Lines of Intervention
1, 2, 3, 4

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

7 PROMOTE THE USE OF EXISTING FRAMEWORKS TO ESTABLISH INTER-MUNICIPAL ASSOCIATIONS TO STRENGTHEN CAPACITY BUILDING, PLANNING, LOGISTICS COORDINATION, AND DISASTER RESPONSE MANAGEMENT BASED ON SHARED HAZARD ZONES.

- Promote collaboration amongst CDGRDs and CMGRDs to implement joint planning, policy, and response strategies that benefit all communities within the affected area.
    - Collaborate with the Department of Social Prosperity and the National Planning Department for additional resources.
- Capitalize on untapped opportunities within the National Disaster Risk Management Fund or the National Adaptation Fund.
    - Establish guidelines and assistance mechanisms for municipal associations to appeal to the funds for resilience-building projects
    - Assist with technical resources and equipment needed for projects.
- Engage Municipal Associations in the International Organization for Migration (IOM) Colombia, UNHCR, UNDP, and UN-Habitat's ongoing efforts to maximize access to data, funding, and planning resources.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

SDGs
3, 6, 9, 11, 13, 15, 16, 17

Global Target (s)
A, B, C, D, E

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1,1.3,1.6-1.9), 2, 3(3.1,3.5-3.9), 4(4.1,4.2,4.4-4.6)

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

8

UPDATE AND REVISE CADASTRAL DATA AND LAND USE PLANS AT THE MUNICIPAL LEVEL TO SUPPORT DRR AND COMMUNITY RESILIENCE.

- Utilize data from risk assessments to drive land use and development plan updates that reflect current community resources and needs.
- Utilize data from this NDPBA to support sustainable development and land-use planning.
    - Leverage RVA resources, including hazard mapping for population exposures, critical infrastructure locations, and evacuation/shelter identification, to drive sector-based community plans and updates and profile informal settlements and vulnerable groups for focused planning/resource efforts.
- Facilitate the sharing of plans among DM stakeholders to promote plan integration, allocate limited resources, and enhance collaboration and decision-making processes.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

SDGs
5, 9, 10, 11, 13 16

Global Target (s)
A, B, C, D, E

Andean Strategy: Thematic Axes + Lines of Intervention
1,2,3,4

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

9

PROMOTE EVIDENCE-BASED DECISION-MAKING AND KNOWLEDGE SHARING BY CREATING A CENTRALIZED NATIONAL REPOSITORY THAT STORES ALL MUNICIPAL DISASTER MANAGEMENT, LAND USE, AND WATER MANAGEMENT PLANS.

- Encourage data sharing among government entities, NGOs, and academia to strengthen coordination with regional and international stakeholders.
- Harmonize DM and DRR plans from the local to national level to maintain critical services and support preparedness, response, and recovery operations to enhance national resilience.
- Develop and implement targeted public campaigns to promote resources, ensuring the public knows where to find trusted information.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

Global Target (s)
A, B, C, D, E, F

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

SDGs
5, 6, 7, 9, 11, 13, 14, 15, 16, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.5,1.7,1.8), 2(2.1-2.3), 3(3.6,3.8), 4(4.1,4.4,4.5)

10 STRENGTHEN COMMUNITY INVOLVEMENT IN DISASTER RISK REDUCTION (DRR) BY ENGAGING COMMUNITY LEADERS WITH LOCAL/TRADITIONAL/ INDIGENOUS KNOWLEDGE IN RISK ASSESSMENT, PLANNING, MITIGATION, AND RESPONSE EFFORTS.

- Actively engage representatives from vulnerable groups including indigenous and ethnic minorities, rural women and children, conflict-affected populations, displaced persons, and isolated or impoverished communities to support specific needs assessment during all phases of disaster management.
- Socialize hazard maps and risk assessment results with community leaders to enable validation with local experiences, challenges, and capacities.
    - Promote vertical sharing of risk information, from the community to national levels, to continuously refine and improve risk assessment.
    - Institutionalize risk assessment in subnational development planning to promote disaster risk reduction, hazard mitigation, and resilience.
- Confirm that subnational plans recognize local vulnerable populations and proactively anticipate barriers to health care, transportation, emergency services, energy, and clean water before, during, and after disasters.
- Advocate for community-based programs that promote disaster resilience, such as reforestation, community clean-up, water conservation and storage, sustainable agriculture, and public education.
- Promote development and empowerment of vulnerable populations through social support structures and employment opportunities, including diverse school-to-work programs and leadership academies.
- Strengthen risk communication and public hazard awareness through EWS alert and warning testing, targeted outreach campaigns, and collaboration with media, communities, schools, NGOs, disaster managers, and international partners (IOM, IFRC, CRC).
- Develop, refine, and exercise evacuation plans to ensure whole-community engagement and resilience.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

SDGs
1, 3, 5, 6, 9, 10, 11, 13, 15, 16, 17

Global Target (s)
A, B, C, D, E, F, G

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.3,1.4,1.6,1.8-1.11), 2, 3(3.3-3,7, 3.9), 4

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

11

CONDUCT A THOROUGH REVIEW OF BUILDING CODES, DEVELOPMENT REGULATIONS, AND LAND USE POLICIES AND IMPLEMENT UPDATED MEASURES TO PREVENT FURTHER EXPANSION INTO HAZARD-PRONE AREAS, ESPECIALLY INFORMAL SETTLEMENTS, TO IMPROVE DISASTER OUTCOMES.

- Enlist the Ministry of Housing, City, and Territory (MinVivienda) and municipal planning offices (Oficinas de Planeación Municipal).
- Adopt and enforce policies that regulate urban expansion and informal settlements that include:
  - Updated building codes, development regulations, and land use controls.
  - Environmental preservation measures.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

Global Target (s)
B, C, D, E

Guiding Principle(s)
(a), (b), (c), (e), (f), (g), (h), (i), (j)

SDGs
1, 3, 6, 9, 10, 11, 13, 15

Andean Strategy: Thematic Axes + Lines of Intervention
11.3. 1.4, 1.6, 1.8-1.11), 2(2.2-2.4), 3(3.3, 3.5-3.9), 4

NATIONAL RECOMMENDATIONS

12

ASSESS AND ENSURE THAT EMERGENCY COMMUNICATIONS ARE ACCESSIBLE AND ACTIONABLE IN RURAL AREAS.

- Identify gaps in education, literacy, and access to information mediums (internet, television, radio) and prioritize investments that ensure vulnerable households can receive and understand critical information, including hazard warnings, through diverse communication channels.
- Test emergency messaging systems in isolated and rural communities. Consider alternative methods of communication that do not rely heavily on household access to technology.
- Assess community awareness and response to emergency messaging to evaluate actions taken by the public upon receipt.
- Implement community outreach and education programs focused on hazard awareness, disaster preparedness, and health and safety practices to build community resilience.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3

Global Target (s)
B, C, D, E, G

Guiding Principle(s)
(a), (b), (c), (d), (f), (g), (h), (i), (j)

SDGs
4, 5, 9, 11, 13

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1,1.3,1.5,1.8, 1.10,1.11), 2(2.1), 3(3.5, 3.8, 3.9), 4(4.3, 4.5)

13

ADOPT A COMPREHENSIVE STRATEGY TO INCREASE INFRASTRUCTURE CAPACITIES IN RURAL AREAS.

- Leverage the results of the risk and vulnerability assessment to evaluate disparities in local infrastructure capacities including transportation, energy, communications, emergency services and health care.
- Work with national and subnational governments, NGOs, private hospitals and clinics, and non-traditional partners to expand the availability of skilled medical staff and resources.
- Continue efforts to expand access to telecommunications services in areas with poor penetration of information and communications technology (ICT) to facilitate timely dissemination and receipt of information.
- Support quality improvements and expansion of the transportation network. Increases in transportation capacity facilitate expansion of other infrastructure (water, energy, ICT), support sustainable economic growth through greater accessibility of goods and services, and improve response times and access to emergency services.
- Increase energy capacity through infrastructure expansion in areas with limited access to electricity or other energy sources. Increased access to electricity will facilitate access to information.
- In coordination with Colombia's national emergency service agencies (Policía Nacional, Dirección Nacional de Bomberos) map out physical and human emergency service resources to determine underserved areas. Prioritize investment or re-allocation in areas that exhibit high frequency and exposure to hazard events, and low resilience.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

Global Target (s)
A, B, C, D, E, G

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

SDGs
6, 7, 8, 9, 10, 11, 12, 13, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1-1.3, 1.5-1.7,1.10, 1.11), 2, 3(3.3, 3.5-3.9), 4(4.1,4.2,4.3, 4.5)

NATIONAL RECOMMENDATIONS

14

PRIORITIZE NATIONAL DISASTER RISK FINANCING STRATEGIES TO ENABLE RAPID FINANCIAL SUPPORT FOR AFFECTED MUNICIPALITIES DURING DISASTERS WHILE PROMOTING LONG-TERM ECONOMIC STABILITY.

- Fortify comprehensive recovery by hastening aid distribution, addressing each municipality's specific needs, and ensuring adaptability to the dynamic circumstances arising from post-disaster events.
- Ensure the establishment of formal programs for:
    - Catastrophe Insurance
    - Public Assets Financial Protection
- Establish quick access to micro-loans if the conventional loan options criteria are unmet.
- Continue to explore incentive policies offered to regional and national partners and tailor them to specific municipality needs.
- Ensure clarification of formal guidelines for expedited funding distribution that include:
    - Administrative procedures
    - Eligibility criteria
    - Defined categories of assistance

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

SDGs
11, 13

Global Target (s)
A, B, C, D, E,

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.4), 2(2.2,2.3), 3(3.1-3.4,3.6-3.9)

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

15

LEVERAGE THE FULL SCOPE OF THE NATIONAL DISASTER FUND FOR DISASTER RISK MANAGEMENT FOR TARGETED DRR INITIATIVES AT DISTRICT AND MUNICIPAL LEVELS.

- Expand UNGRD's role and responsibilities within the PNGRD, allowing for enhanced contribution to the DRR agenda and funding mechanisms.
    - Provide technical assistance and co-financing capacity to support the local level DRR efforts.
    - Allocate local and national disaster management resources for programmatic, administrative, and operational needs.
    - Ensure streamlined strategies governed by agility, equity, and focused targeting.
- Ensure timely communication and coordination mechanisms to improve cross-collaboration with CDGRDs, CMGRDs, and international partners, and to promote and support community resilience-building activities.
- Establish concrete budgetary arrangements for available and pre-determined annual funding.
- Leverage the Anticorruption Plan to establish full transparency and ensure the effective use of funds and resources for recovery and reconstruction efforts.
    - Consider implementation of a tool that allows citizens to directly report on any observed misuse of the fund's resources, creating a valuable accountability mechanism.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

Global Target (s)
A, B, C, D, E,

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

SDGs
11, 13, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.4,1.6,1.7), 2(2.2,2.3), 3(3.1-3.4,3.6-3.9), 4(4.1)

NATIONAL RECOMMENDATIONS

16

SUPPORT INTERVENTIONS THAT IMPROVE CAPACITIES TO DELIVER WATER, SANITATION, AND HYGIENE (WASH) DURING EMERGENCIES.

- Strengthen collaboration to fulfill the advancement of IOM's 2024 Crisis Response Plan for humanitarian assistance while promoting long-term recovery and resilience for affected communities through essential services, capacity-building initiatives, and data-driven strategies.
    - Ensure adequate funding resources to support ongoing projects in communities affected by armed conflict and natural hazards, including WASH and shelter considerations.
- Improve water and sanitation infrastructure to reduce the burden of water collection, reduce exposure to disease, and increase resilience.
- Strengthen cooperation with CDGRDs and CMGRDs.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

SDGs
1, 3, 4, 5, 6, 7, 8, 10, 11, 13, 16

Global Target (s)
A, B, C, D, E, F

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.1-1.4,1.6-1.11), 2, 3(3.2-3.5, 3.7,3.9), 4(4.1,4.2,4.4, 4.5)

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (g), (h), (l)

17

EXPAND NATURE-BASED STRATEGIES AND SUSTAINABLE LAND MANAGEMENT PRACTICES TO STRENGTHEN ECOSYSTEM RESILIENCE AND DELIVER LONG-TERM ENVIRONMENTAL AND SOCIOECONOMIC BENEFITS.

- Incentivize municipalities to replicate Medellín's Corredores Verdes to lower average city temperatures, reduce air pollution, preserve ecosystems, and increase biodiversity.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

Global Target (s)
A, B, C, D, F

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

SDGs
3, 11, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.9,1.10), 2(2.1, 2.4), 3, 4(4.1,4.4-4.6)

NATIONAL RECOMMENDATIONS

18

STRENGTHEN EMERGENCY RESPONSE SERVICES' CAPACITY TO EFFECTIVELY AND EFFICIENTLY MEET THE COMMUNITY'S NEEDS AND PROVIDE TIMELY DELIVERY OF LIFE-SAVING ASSISTANCE.

- Advocate to construct fire stations that can better accommodate the immediate communities they serve.
- Leverage and augment current fire station capacity and equipment needs through national and international partnerships.
- Expand and maintain pre-positioned National Stockpiles for use during emergencies.
- Acknowledge health sector capacities and challenges in disaster management plans to anticipate the health care needs of exposed populations during disasters.
- Consider expanding the Colombian Civil Air Patrol (PAC) concept to facilitate access to specialized and emergent health resources in remote and vulnerable regions.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3, 4

Global Target (s)
A, B, C, D, F

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

SDGs
3, 11, 17

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.9,1.10), 2(2.1, 2.4), 3, 4(4.1,4.4-4.6)

19

CONTINUE TO REDUCE MARGINALIZATION AND PROMOTE GENDER EQUALITY BY ENCOURAGING ACTIVE ROLES IN DISASTER MANAGEMENT.

- Strengthen efforts to reduce the marginalization of vulnerable groups and promote gender equality, including equal labor force participation and wages, political involvement, access to education, and health services.
- Actively engage marginalized groups in disaster management and community planning to appropriately address disparities, experiences, and challenges in emergency plans and protocols for women, indigenous populations, ethnic minorities, and other underserved populations.

SENDAI FRAMEWORK

Priorities for Action
1, 2, 3

SDGs
1, 3, 4, 5, 8, 11, 16

Global Target (s)
A, B, E

Andean Strategy: Thematic Axes + Lines of Intervention
1(1.5, 1.8, 1.9, 1.11), 2(2.2, 2.4), 3(3.4-3.7, 3.9), 4(4.1)

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (h), (i), (j)

20

REASSESS PROGRESS MADE TOWARD DRR AND RESILIENCE GOALS.

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

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5-YEAR PLAN

COLOMBIA NATIONAL RECOMMENDATIONS

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5

RECOMMENDATION 1

Expand hazard and risk mapping for subnational and local areas, especially in areas where concentrations of informal housing settlements are in hazard zones, to facilitate resilience-building measures and planning efforts.

RECOMMENDATION 2

Strengthen all-hazards monitoring, communications systems, and data translation into comprehensive multi-hazard early warning systems (MHEWS) and capabilities.

RECOMMENDATION 3

Promote comprehensive strategies to monitor, address, and mitigate the impacts of wildfires, flooding, and landslides.

RECOMMENDATION 4

Develop a comprehensive strategy to focus on disaster risk reduction (DRR) and resilience-building measures for informal housing settlements in disaster-prone areas.

RECOMMENDATION 5

Monitor population dynamics to anticipate how demographic changes may impact local hazard exposure, disaster risk, and potential conflict.

RECOMMENDATION 6

Ensure that municipal disaster management plans consider the complexities and potential cascading impacts of response to emergencies in densely populated communities and urban areas.

RECOMMENDATION 7

Promote the use of existing frameworks to establish inter-municipal associations to strengthen capacity building, planning, logistics coordination, and disaster response management based on shared hazard zones.

RECOMMENDATION 8

Update and revise cadastral data and land use plans at the municipal level to support DRR and community resilience.

RECOMMENDATION 9

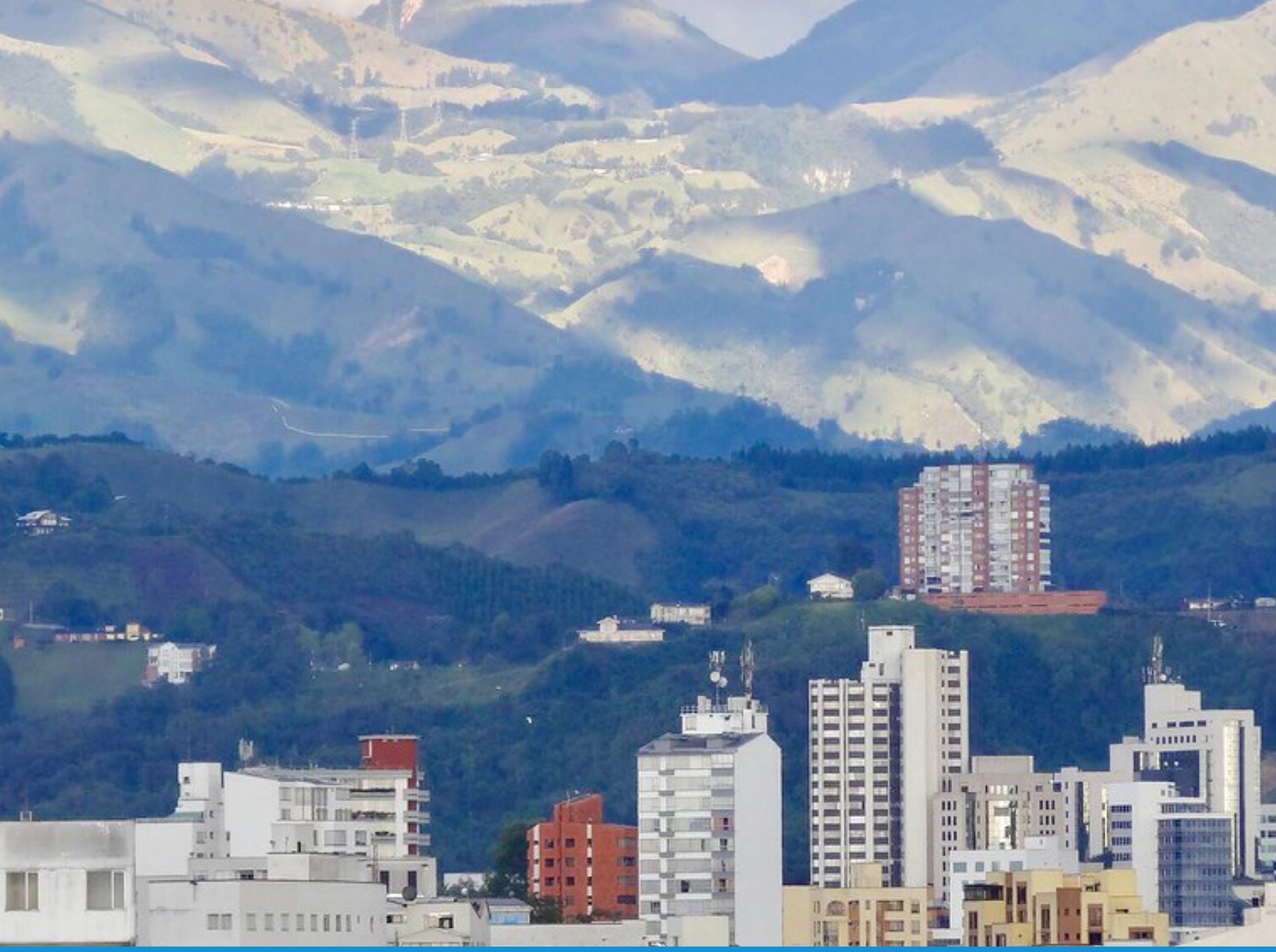
Promote evidence-based decision-making and knowledge sharing by creating a centralized national repository that stores all municipal disaster management, land use, and water management plans.

RECOMMENDATION 10

Strengthen community involvement in disaster risk reduction (DRR) by engaging community leaders with local/traditional/indigenous knowledge in risk assessment, planning, mitigation, and response efforts.

5-YEAR PLAN

COLOMBIA NATIONAL RECOMMENDATIONS



NDPBA

COLOMBIA DEPARTMENT RISK PROFILES

SUBNATIONAL ASSESSMENT RESULTS

DEPARTMENT RISK PROFILES

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

Download Here:
https://www.pdc.org/wp-content/uploads/NDPBA-COL-Department-Profiles-Merged-Final.pdf

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