



# ARGENTINA

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## NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT

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





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# LIST OF ACRONYMS

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**ANAC** = National Civil Aviation Organization of Brazil

**ANB** = National Firefighter Academy

**CABA** = Ciudad Autónoma de Buenos Aires/  
Autonomous City of Buenos Aires

**CAME** = Emergency Alert and Monitoring Center

**CCA** = Climate Change Adaptation

**CD** = Capacity Development

**CEMEC** = Mobile Center for Training of Confined Spaces

**CENAGIR** = National Information Center on Integral Risk Management

**CENARRID** = National Center for Disaster Risk Reduction

**CENOC** = National Center of Community Organizations

**CNCPS** = National Council for the Coordination of Social Policies

**COG** = Continuity of Government

**CONAE** = Argentine Space Agency

**CONAMI** = National Microcredit Commission

**COOP** = Continuity of Operations

**COP** = Common Operating Picture

**DIMAE** = Ministry of Defense Director of Emergency Assistance

**DM** = Disaster Management

**DMA** = Disaster Management Analysis

**DRM** = Disaster Risk Management

**DRR** = Disaster Risk Reduction

**DSiyAH** = Directorate of Information Systems and Hydrological Alert

**EDAN** = Damage and Needs Assessment

**ENACOM** = National Communications Entity

**EOC** = Emergency Operations Center

**FBA** = Argentine Firefighters Foundation

**FONAE** = National Emergency Fund

**FONGIR** = National Fund for Comprehensive Risk Management

**GADE** = Cabinet of the National Council for the Integral Management of Risk and Civil Protection

**GETI** = The Global Education and Training Institute

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

**GI-P** = Information Sharing Protocols

**GIRCyT** = Network of Scientific-Technical Organizations for Comprehensive Risk Management

**HAZMAT** = Hazardous Materials

**HFA** = Hyogo Framework for Action

**ICAO** = International Civil Aviation Organization

**ICS** = Incident Command System

**IFTS** = Institute of Higher Technical Training

**IGN** = National Geographic Institute

**IMPRES** = National Institute of Seismic Prevention

**INA** = National Water Institute

**INDEC** = National Institute of Statistics and Census

**INET** = National Institute of Technological Education

**INPRES** = National Institute of Seismic Prevention

**INSARAG** = International Search and Rescue Advisory Group

**IUGNA** = University Institute of National Gendarmerie

**KSAR** = Canine Search and Rescue Association

**MINCYT** = Ministry of Science, Technology and Innovation

**MINSEG** = Ministry of Security

**MSN** = Ministry of Health

**NAP** = National Action Plan

**NDPBA** = National Disaster Preparedness Baseline Assessment

**NGO** = Non-governmental Organization

**PAHO** = Pan American Health Organization

**PDC** = Pacific Disaster Center

**PISEC** = Inclusive Plan for Emergency and/or Disaster Situations

**PLANGIR** = National Plan for Comprehensive Risk Management

**PNFM** = National Fire Management Plan

**PNNRD** = National Plan for Disaster Risk Reduction

**POAGIR** = National Operational Plan for Critical Risk Management

**PPPs** = Public Private Partnerships

**RVA** = Risk and Vulnerability Assessment

**SD** = Sustainable Development

**SEGEMAR** = Mining and Geological Service

**SIFEM** = Federal System of Emergency

**SIISA** = Integrated Health Information System of Argentina

**SIMATH** = Integrated System of Hydro-environmental Monitoring and Early Warning

**SINAGIR** = National System for Integral Risk Management and Civil Protection

**SINARAME** = National Meteorological Radar System

**SINDAP** = National Public Data Registry System

**SMN** = National Meteorological Service

**SNBV** = National Volunteer Firefighter System

**SPC** = Secretaría de Protección Civil/Secretariat of Civil Protection

**UN OCHA ROLAC** = UN Office for the Coordination of Humanitarian Affairs Regional Office for Latin America and the Caribbean

**UNASUR** = Union of South American Nations

**UNDESA** = United Nations Province of Economic and Social Affairs

**UNDP** = United Nations Development Programme

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

**UNEP** = United National Environment Programme

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

**UNISDR** = UN Office for Disaster Reduction

**USAR** = Urban Search and Rescue

**WASH** = Waster, Sanitation, and Hygiene

**WRI** = World Resources Institute

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**NDPBA**

# **EXECUTIVE SUMMARY**

**ARGENTINA**



# OVERVIEW

The Pacific Disaster Center (PDC) completed the Argentina National Disaster Preparedness Baseline Assessment (NDPBA) in partnership with Argentina's Civil Protection. Hazard-based risks, vulnerabilities, resilience, and disaster management capabilities were researched and analyzed to produce scientific data that can be used in the decision-making process during all phases of disaster management. The results are based on data made available by in-country partners and includes recommendations that will increase disaster-management readiness for supporting stakeholders. The NDPBA provides stakeholders with analytical tools, scientific data, and evidence-based practices that allow the disaster-management community in Argentina to reduce disaster risk and support response efforts. The NDPBA methodology and associated recommendations are in alignment with United Nations Development Goals and the Sendai Framework for Disaster Risk Reduction 2015-2030.

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

**The full report presents the data collected, the results of our modeling, analysis of these results, and the recommendations for closer alignment with the Sendai Framework. The following paragraphs and points summarize these findings for executive review.**



## SUMMARY OF FINDINGS

Despite multiple economic crises in the past two decades, Argentina has made significant progress understanding existing risks and creating an environment that has allowed the disaster management community to prepare the foundation for reducing disaster risk and increasing capabilities. Although progress has been made, there is much work to be done.

Argentina has an extensive territory, being the ninth largest country in the world with an area of 2.8 million square kilometers, stretching 3,700 km from north to south and 1,400 km from east to west. Its southern-most point is only 5,500 km from Antarctica, and its landscape profile provides an environment where nearly all types of natural hazards exist. For this assessment we identified floods, earthquakes, landslides, volcanos, wildfires, drought, and extreme heat as the hazards that Argentina's population is most exposed to.

Exposure to multiple hazards is compounded by socioeconomic vulnerabilities in Argentina. Historical volatility in economic growth has hampered the country's development. Exacerbated by the COVID-19 pandemic and subsequent social isolation, urban poverty increased to 41 percent and child poverty to 56 percent in the first quarter of 2020. During the second quarter, the national GDP

### NATURAL HAZARD EXPOSURE

**800,000** **180**

people affected by  
natural disasters  
(2010 - 2019)

lives claimed by  
natural disasters  
(2010 - 2019)



Earthquakes



Volcanos



Wildfires



Landslides



Flooding



Drought



Extreme  
Heat



Exposure to natural hazards in Argentina is compounded by **socioeconomic vulnerabilities**. Historical volatility in economic growth has hampered the country's development.



declined by 16 percent, the largest drop ever recorded . These economic pitfalls result in uneven and interrupted development, reducing equity in infrastructure, health care, access to information, and overall economic capacity to prepare for, respond to, and recover from disasters.

Consequently, Argentina is at increased risk to disaster from natural hazards. From 2010 to 2019, natural disasters affected over 800,000 people and claimed over 180 lives (EM-DAT, 2020). Recent major disasters are linked primarily to climate-sensitive hazards, including drought, heavy rain, and flooding. Severe drought in 2018 was responsible for Argentina's costliest disaster on record, claiming \$3.4 billion (USD) in economic losses.

In the face of these challenges, we found that the Government of Argentina has taken many steps to provide for the safety of its citizens.

## RECENT MAJOR DISASTERS

# 2019

Drought, Heavy  
Rain, Flooding

# 2018

Severe  
Drought

# \$ 31.65 million

Total economic losses of the 2017 landslide

In 2016, Argentina began the transformation of its disaster management capacity by passing a comprehensive civil protection law (Law 27/287). This law created the National System for Integral Risk Management (SINAGIR) and established the Secretariat of Civil Protection. These actions strengthen Argentina’s institutional structures and intersectoral coordination by establishing national and federal representative councils and increased interagency integration and subnational participation.

Law 27/287 coupled with subsequent laws and decrees also established a national emergency management system, line-item budgetary and contingency funds, defines disaster declaration processes, and formalizes domestic military support. Strategic guidance is provided by the National Plan for Risk Reduction and Civil Protection (PLANGIR) and corresponding annual Operational Programs for Risk Management and Civil Protection (POAGIR).

Coordination also has improved significantly since the creation of the National Council and



construction of a new national Emergency Operations Center (EOC). The National Council, composed of the directors of the Provincial Civil Protection agencies, meets regularly to synchronize and coordinate preparedness, mitigation, and response and recovery efforts.

# RECOMMENDATIONS

## ARGENTINA



As highlighted in the Summary of Findings above, a great deal of work has been accomplished, by the Government of Argentina, and much progress has been made. However, many additional actions can be taken by the Government and its partners to further build capacity for disaster resilience and response

In light of our findings, PDC makes the following recommendations:

- ✓ Advance nationwide adherence to SINAGIR
- ✓ Strengthen national incident coordination systems and structures
- ✓ Integrate national thematic platforms
- ✓ Strengthen the basis of DRR statutory development
- ✓ Advance ministerial continuity of operations (COOP) planning efforts
- ✓ Strengthen FONAE and establish explicit FONAE access requirements
- ✓ Expand catastrophic risk insurance markets
- ✓ Expand and formalize access to microloans and low-interest disaster loans
- ✓ Strengthen donations and volunteer management systems
- ✓ Operationalize the new national EOC
- ✓ Identify and formalize partnerships with NGOs
- ✓ Expand NGO/private sector role in ex-ante/ex-post disaster management activities
- ✓ Assess and track business and household preparedness
- ✓ Develop avenues for information exchange between DM organizations and the public

# RECOMMENDATIONS

## ARGENTINA



- ✓ Incorporate public feedback into DM planning process
- ✓ Establish competency requirements for key SINAGIR staff positions
- ✓ Increase the scope of disaster management knowledge and skills addressed in fire academies and in institutions of higher education
- ✓ Increase participation in and support of regional and international training programs
- ✓ Improve the quality and coverage of and access to risk assessment data
- ✓ Harness emerging technologies
- ✓ Expand risk communication and warning reach and effectiveness
- ✓ Strengthen emergency services access
- ✓ Develop and institutionalize a standard national exercise program
- ✓ Increase community surge capacity
- ✓ Close community emergency shelter coverage gaps and address shelter resource shortages
- ✓ Promote economic stability
- ✓ Reduce gender disparities
- ✓ Increase communications capacity
- ✓ Update the NDPBA

# AN --- **INTRODUCTION**

## **TO PDC'S NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT (NDPBA)**

The NDPBA uses a collaborative, stakeholder-driven approach, PDC worked to integrate national priorities and stakeholder feedback throughout every step of the process. The NDPBA for Argentina included a Risk and Vulnerability Assessment (RVA) which examined several components of risk including exposure to hazards, vulnerability, coping capacity, and existing disaster management capabilities. The findings of the RVA were further reviewed through the lens of PDC's unique Disaster Management Analysis (DMA). The DMA contextualizes the RVA and guides recommendations designed to increase resilience and reduce disaster risk. Findings of this analysis were compiled into a Disaster Risk Reduction (DRR) Plan offering practical actions to be taken over a five-year period.

To receive access to the findings, recommendations and data (tabular and spatial) used to conduct the Argentina NDPBA analysis please visit the Pacific Disaster Center's DisasterAWARE platform and request access, visit [emops.pdc.org](https://emops.pdc.org).





# ARGENTINA NDPBA

## APPLYING ASSESSMENT RESULTS

The Pacific Disaster Center's (PDC) National Disaster Preparedness Baseline Assessment (NDPBA) is more than just an assessment, it is a sustainable system for accessing, understanding, updating, 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 at the national, subnational, and local level.



## STRENGTHEN PARTNERSHIPS

- + Use the NDPBA as a decision-support tool to create a transparent and efficient process for disaster risk reduction efforts within the context of Argentina.
- + Provides necessary tools and data for disaster monitoring to promote risk-informed decision making and sustainable development.
- + Allows team members to conceptualize risk as a function of data, measuring the social, cultural, and economic drivers of risk.



## SUPPORT SENDAI COMMITMENTS

By participating in the NDPBA process, Argentina significantly enhances its capacity to meet Sendai Framework commitments under each of these Priority Areas:

- + **Priority 1** - Understanding Disaster Risk
- + **Priority 2** - Strengthening Disaster Risk Governance to Manage Disaster Risk
- + **Priority 3** - Investing in Disaster Risk Reduction for Resilience
- + **Priority 4** - Enhancing Disaster Preparedness for Effective Response and to "Build Back Better" in Recovery, Rehabilitation and Reconstruction



## INCREASE RESILIENCE

- + Align in areas where partner capacity development efforts overlap.
- + Improve resilience at the subnational level and reduce potential impacts to the population.
- + Rely on trusted and proven data-driven tools.



**NDPBA**

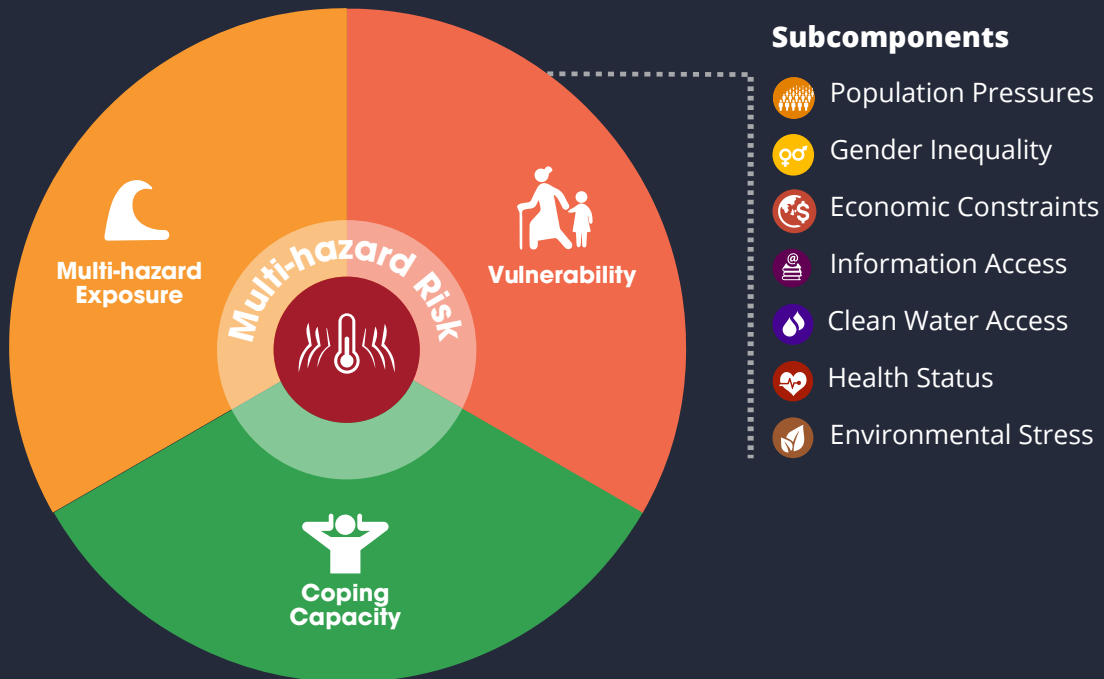
# METHODOLOGY AND OBJECTIVES

**OVERVIEW**

# RVA METHODOLOGY

## MEASURING RISK

### COMPONENTS OF RISK



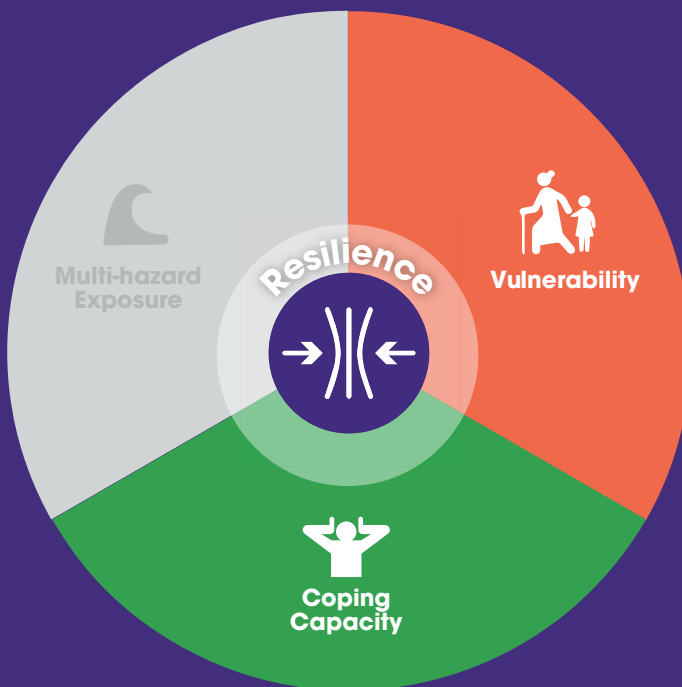
The NDPBA methodology is based on a composite index approach and investigates the underlying conditions that lead to increased risk. The assessment combines several components of risk which include multi-hazard exposure, coping capacity, and vulnerability. Individual components are comprised of subcomponents used to assess the status of thematic areas either as a sum or individually. Additional information on the assessment methodology can be found at: <https://pdc.org/methodology>.

### OBJECTIVE

Form a foundation for long-term data sharing and monitoring to support disaster risk reduction. Enhance decision making through improved access to temporal and spatial data.

# RVA METHODOLOGY MEASURING RESILIENCE

## RESILIENCE



### Hazard Independent



Components of resilience are independent of natural hazard exposure. This type of measure helps rank countries based on their likelihood of experiencing a disruption outside of a naturally occurring event. The measure of resilience includes vulnerability and coping capacity components, including their subcomponents.

## OBJECTIVES

Use vulnerability and coping capacity indicators to determine initiatives and engagements that will decrease vulnerability and reduce disaster risk by increasing the resiliency of the population.

# RVA METHODOLOGY

## KEY CONCEPTS

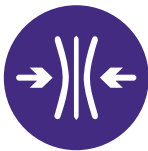
### EXAMPLES AND DEFINITIONS



**VULNERABILITY:** Provides visibility into the underlying socioeconomic and societal factors that predispose areas to disasters. A vulnerability analysis measures the physical, environmental, social, and economic conditions and processes that increase susceptibility of communities and systems to the damaging effects of hazards. Multiple factors influencing disaster outcomes, including those linked to poverty and development, are considered in the analysis.



**COPING CAPACITY:** Provides visibility into the status of governance and capacity within each district. A coping capacity analysis measures the systems, means, and abilities of people and societies to absorb and respond to disruptions in normal function. It considers a range of factors that contribute to the ability of an impacted population to limit the likelihood or severity of the damaging effects of hazards and to manage disruptions that do arise.

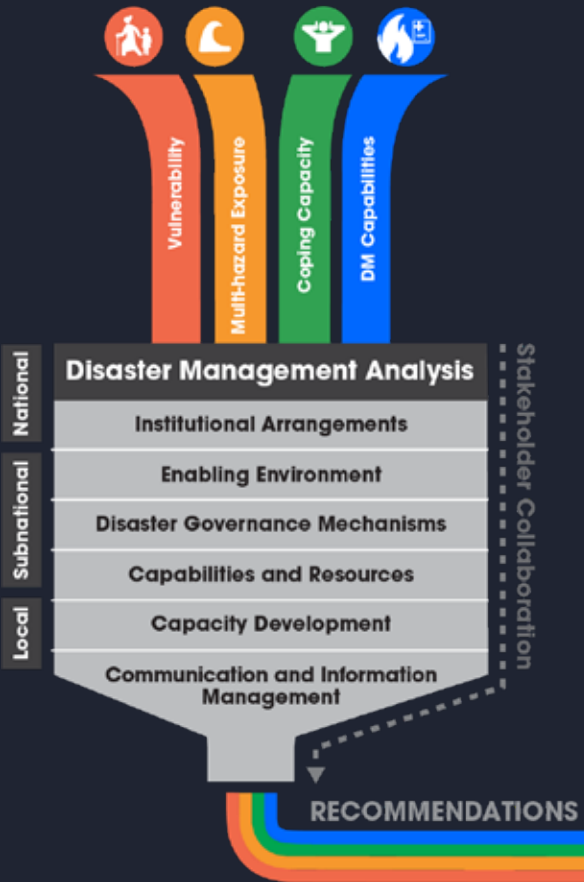


**RESILIENCE:** Provides an overall measure of the ability of a district to withstand shocks and disruptions to normal function. For instance, districts with lower resilience may also exhibit a decrease in the ability of a population to mitigate the negative impacts of a disaster and return to normal function. This measure is the combination of the vulnerability and coping capacity components.

# DMA METHODOLOGY

## DISASTER MANAGEMENT ANALYSIS

### RISK AND VULNERABILITY RESULTS



### ANALYSIS OBJECTIVE

Increase resilience and reduce disaster risk through disaster management capacity development initiatives.

The Disaster Management Analysis (DMA) identifies, codifies, and characterizes capacity implementation needs given risks identified in the RVA and a country's risk reduction goals. The analysis looks at the capabilities, resources, and systems that have been developed or

implemented to reduce disaster risk, to address unmet needs that arise from a subsequent disaster event, and to facilitate long-term recovery of people, economies, and societies.

# DISASTER MANAGEMENT THEMES

The DMA aims not only to limit hazard risk as assessed, but also address the anticipated response and recovery needs of hazard-exposed populations, economies, and societies. The manner in which unmet capacity is identified, qualified, and quantified supports a sharper focus on cost-effective investment planning. It also helps support long-term development in a manner that directly reflects the Sendai Framework and Sustainable Development Goals. The analysis considers needs in relation to multi-hazard risk, and is based on sector-defined capacity standards. Associated themes are listed below with examples of the data and information that help to inform the analysis.



**Institutional  
Arrangements**



**Enabling  
Environment**



**Disaster Governance  
Mechanisms**



**Capabilities  
and Resources**



**Capacity  
Development**



**Communication and  
Information Management**

# COUNTRY OVERVIEW

## ARGENTINA

### GEOGRAPHY

**Location:** The Argentine Republic occupies most of the southern part of South America covering an area of 2.8 MI square kilometers. It is the 9th largest country in the world and the 2nd largest in South America, after Brazil. It borders Chile (6,691 sq. km) to the west; Bolivia (942 sq. km) and Paraguay (2,531 sq. km) to the north and Brazil (541 sq. km), Uruguay (541 sq. km) and the Atlantic Ocean to the east (International Trade Centre, n.d.).

**2,780,400 sq km** **4,989 km** **11,968 km**

Total Area

Coastline

Total Area

#### Major regions

- Cuyo
- Nordeste
- Noroeste
- Pampas/Central
- Patagonia

**23**

Provinces

#### Neighboring countries

Chile, Bolivia, Paraguay, Brazil, Uruguay

#### Land Boundaries

Total: 11,968 km

Chile: 6,691 km, Bolivia: 942 km, Paraguay: 2,531 km, Brazil: 1,263 km, Uruguay: 541 km



### GEOLOGY AND CLIMATE

**Geology:** Argentina complex climate ranges from Tropical to Arid, and Cold/Polar to Hot/Dry regions. Precipitation ranges from 150 mm in dry areas to over 2,000 mm in other areas while mean annual temperatures range from 5 degrees C in the southern part of the country to 25 degrees C in the northern region.



**4.1 million (9%)**

People Exposed to Floods



**36 million (81%)**

People Exposed to Drought



**7.7 million (17%)**

People Exposed to Landslides



**31.2 million (70%)**

People Exposed to Extreme Heat



**10.5 million (23%)**

People Exposed to Wildfires

#### Climate:



Floods



Landslides



Severe storms



Sea level rise



Water borne diseases



Extreme temperature



Drought



Food Insecurity







## DEMOGRAPHICS

**44.49 million**

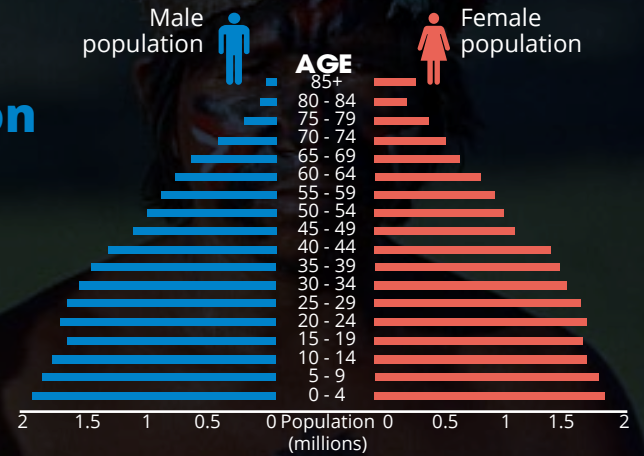
Total population

**109th**

Socioeconomic vulnerability in the world

**1.01%**

Avg annual population growth



**Age 76.7**

Average life expectancy



**9.2**

Infant Deaths per 1,000 live births



**98.13%**

Adult Literacy



**39.6**

Doctors per 10,000 people



**42.1**

Nurses per 10,000 people



**50**

Hospital beds per 10,000 people



## ECONOMY

**\$449.7 billion \$**

Gross domestic product (GDP) 2019

**-0.265%**

Average annual growth in GDP (2015-2019)

**32%**

People living below national poverty line (2018)



**Statement on Economic Impacts of COVID-19:**

COVID-19 exacerbated already volatile economic growth for Argentina. In 2020, national GDP declined by 16 percent, the largest drop ever recorded.

### Key exports



Food Industry  
Waste and  
Animal Fodder



Cereals



Vehicles



Animal/  
Vegetable fats,  
oils, waxes



Oil  
Seeds

### Major industries (% of GDP)

**7.2%**

Agriculture

**23.13%**

Industry

**53.63%**

Services

# (COUNTRY OVERVIEW CONTINUED)

## ARGENTINA

### KEY INFRASTRUCTURE

Argentina's overall infrastructure capacity is relatively high in comparison to other Latin American countries. Buenos Aires and most major cities have extensive public transportation systems, and are connected by rail line, in addition to the road network. However, access to transportation networks and emergency services are more limited in rural areas, where infrastructure improvements are needed to increase connectivity of population, services, and resources.

#### Transportation

**1,237**  
Airports

**1**  
Large Airports

**72**  
Medium Airports

**1,164**  
Small Airports

**41**  
Main Ports

**1**  
Large ports

**2**  
Medium Ports

**10**  
Small Ports

**28**  
Very Small Ports



**39,931.3 km**  
Roads



**99%**  
Access to Electricity



**83.9%**  
Access to Improved Water

#### Emergency services

**2,334**  
Police Stations

**669**  
Fire Stations

**34,432**  
Firefighters

**3,502**  
Firefighting vehicles

**805**  
Search and Rescue Teams



### DISASTER MANAGEMENT

#### Major capacity improvements / milestones (past 10 yrs)

- Law 27/287 created the National System for Integral Risk Management (SINAGIR) and established the Secretariat of Civil Protection.
- Established the National Emergency Management System with declaration processes, budgetary and contingency funds.
- Created the National Plan for Risk Reduction and Civil Protection (PLANGIR) and Operational Programs for Risk Management and Civil Protection (POAGIR) to provide strategic guidance.
- Created the Civil Protection National Council composed of provincial Civil Protection agencies
- Built a new National Emergency Operations Center.

#### Major disaster impacts (2010-2020)

**Buenos Aires City  
Torrential Rains and  
Flood (2013)**  
Deaths **52** Affected  
**350,000**

**Buenos Aires and  
Santa Fe province  
Heavy Rains and  
Floods (2015)**  
Death **3** Affected  
**50,000**

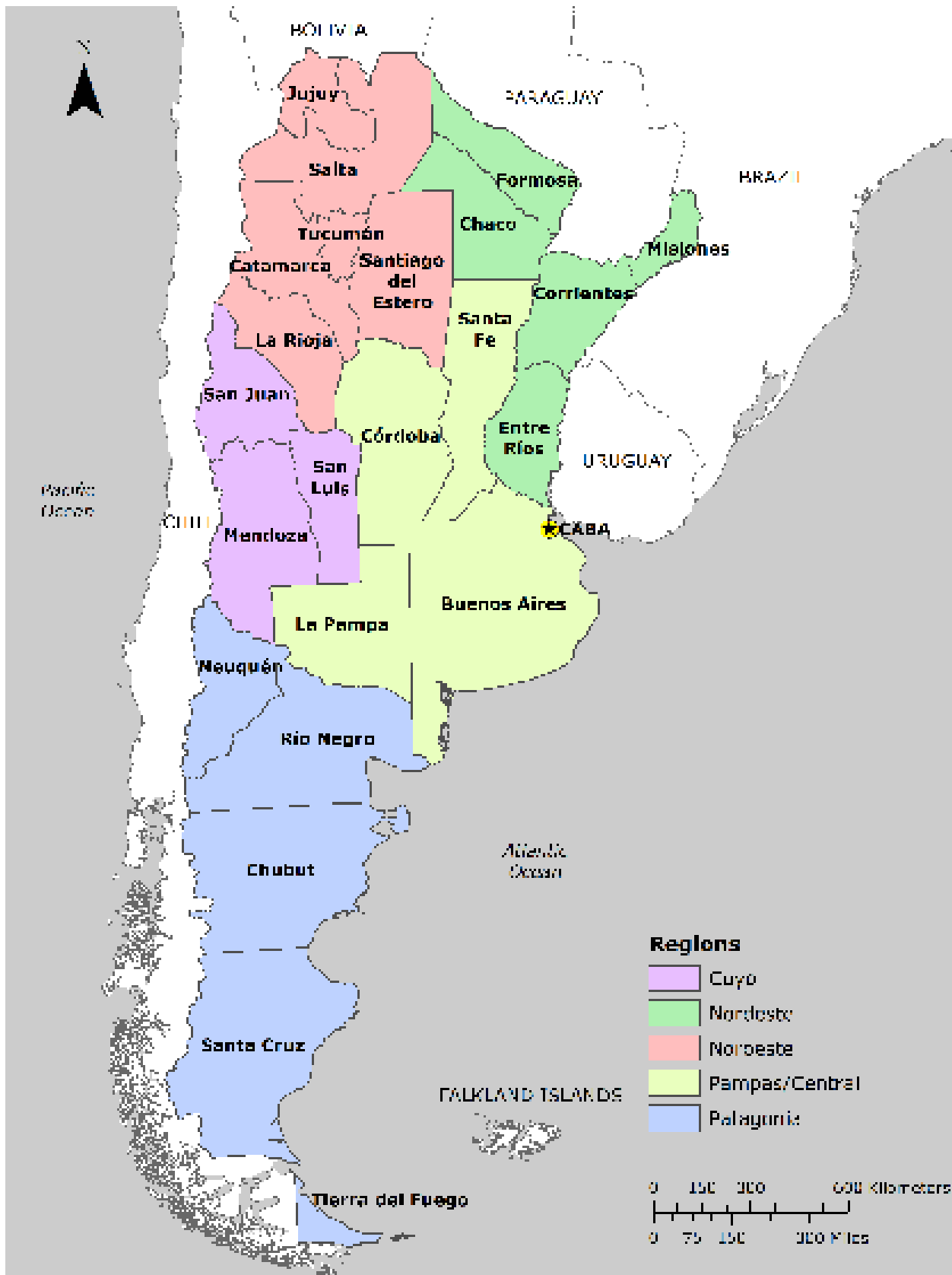
**Entre Rios, Corrientes,  
Santa Fe, Chaco,  
Formosa, Santiago del  
Estero, Buenos Aires and  
Cordoba Excessive rains  
and Floods (2016)**  
Deaths **0** Affected **72,119**

**Entre Rios and Corrientes  
Provinces Floods (2015)**  
Deaths **6** Affected **76,133**

**Chaco region Floods  
(2018)**  
Death **0** Affected **45,000**



# REGIONS OF ARGENTINA





**THE RVA**

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# **RISK AND VULNERABILITY**

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**ASSESSMENT RESULTS**

## THE RVA

# RISK AND VULNERABILITY ASSESSMENT RESULTS

Provided in this section are the results of the Risk and Vulnerability Assessment (RVA) conducted by the Pacific Disaster Center as part of the Argentina National Disaster Preparedness Baseline Assessment. For details on the methodology and data sets used see Appendix A.

## ARGENTINA DISTRICTS



## ARGENTINA BACKGROUND

Argentina's vast and varied geography is coarsely grouped into five regions: Cuyo, Nordeste, Noroeste, Pampas/Central, Patagonia. Argentina is further subdivided into 23 provinces and one autonomous city (Ciudad Autónoma de Buenos Aires). The RVA compares data at the provincial level.

## COMPONENTS OF RISK



**Vulnerability**



**Coping Capacity**



**Multi-hazard Exposure**



**THE RVA** 

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**MULTI-HAZARD EXPOSURE**

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**RESULTS BREAKDOWN**

## THE RVA

# MULTI-HAZARD EXPOSURE

Argentina's expansive geography is host to a wide range of climates, from subtropical to sub-Antarctic, with environmental conditions giving rise to numerous natural hazards. To the west, the Andes Mountains line the border with Chile, containing a long chain of active volcanoes. Steep mountainous regions to the west and northwest are susceptible to landslides. The area surrounding Mendoza in the Andes is subject to seismic hazards, as are parts of Salta and Jujuy provinces to the north and Tierra del Fuego in the southeast. Drought is common in the northeast region, with seasonal zones of extreme heat extending through the center of the country and southward along the Atlantic coast. Wildfires occur commonly in the Chaco region to the north and the Dry Pampas toward central Argentina, and violent windstorms affect the Pampas and northeast regions. Over the past two decades, estimated losses due to floods exceeded \$3 billion per year. In the province of Buenos Aires, repeated flooding creates challenges for poverty alleviation, economic development, and transit. Combined with increasing temperatures, rising sea levels, and more frequent extreme weather events, Argentina's risk of disaster from natural hazards is increasing due to climate change.

### Global Multi-Hazard Exposure Rank

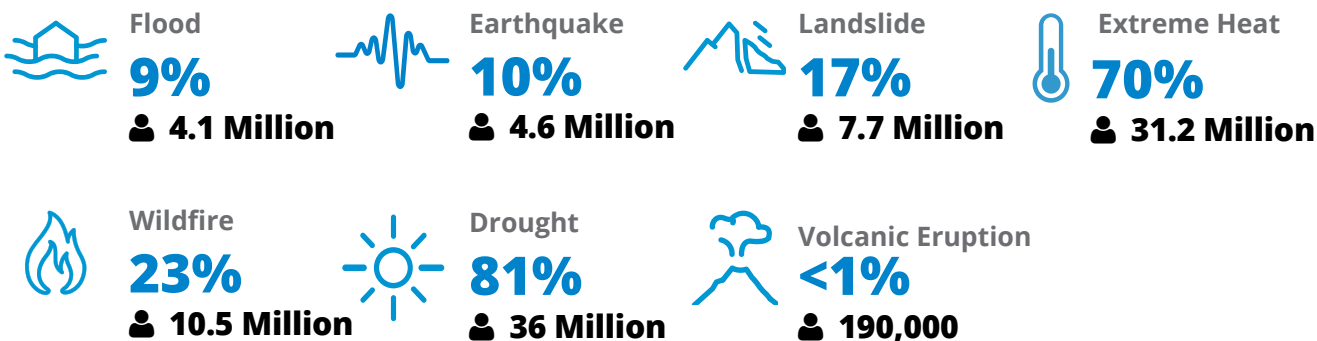
**88** OF 207 COUNTRIES

### Argentina's rank among South American countries

**8** OF 12 COUNTRIES

## ARGENTINA ESTIMATED POPULATION AND CAPITAL EXPOSURE

Multi-hazard exposure, including both population and economic exposure, was assessed at the province level by combining components of flood, earthquake, landslides, volcano, wildfire, drought, and extreme temperature hazards.

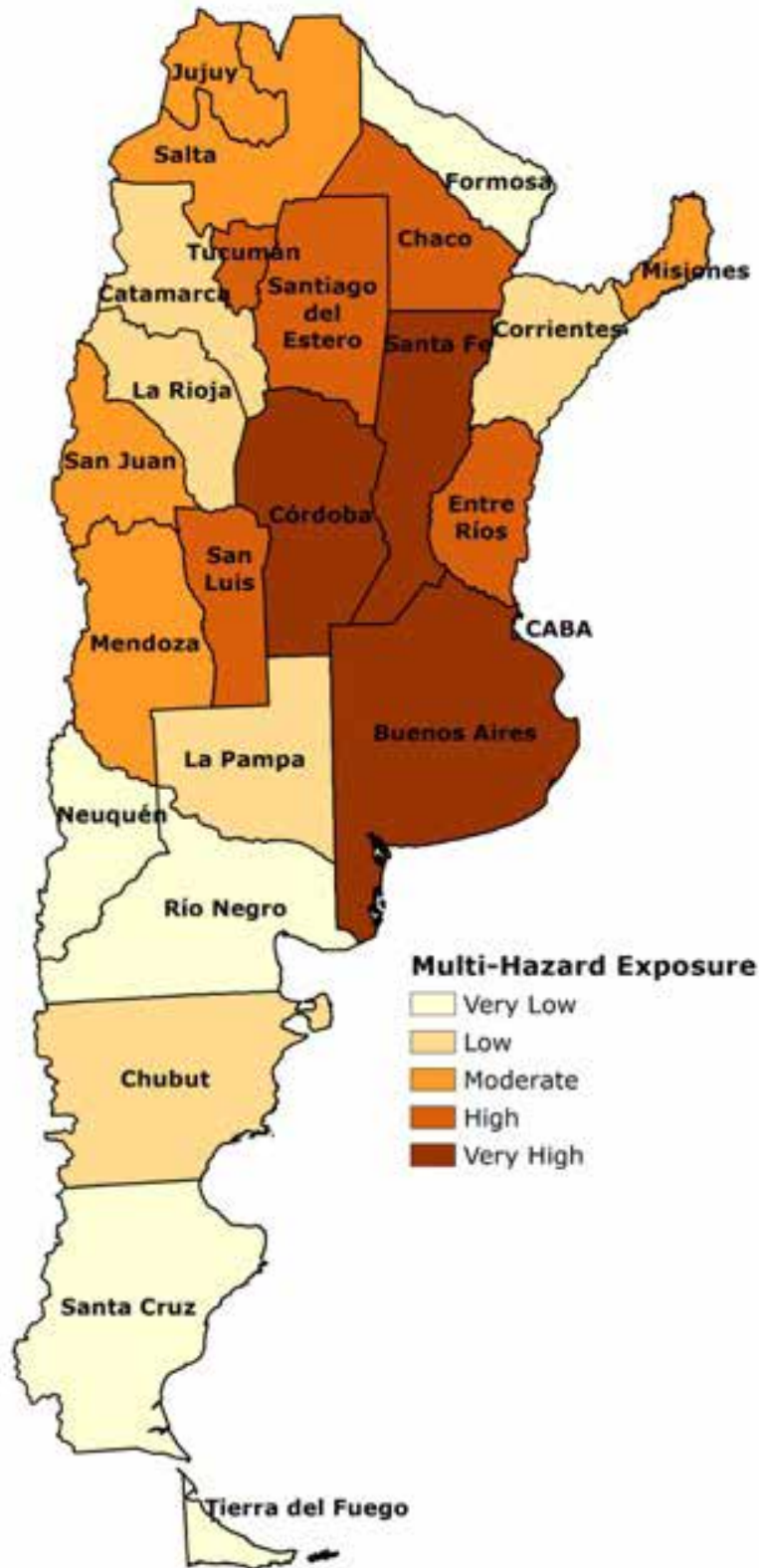


## MULTI-HAZARD EXPOSURE BY PROVINCE

	RANK	PROVINCE	INDEX SCORE
VERY HIGH	1	Buenos Aires	0.901
	2	CABA	0.854
	3	Córdoba	0.771
	4	Santa Fe	0.757
HIGH	5	Tucumán	0.734
	6	Santiago del Estero	0.635
	7	Entre Ríos	0.622
	8	Chaco	0.592
	9	San Luis	0.556
MEDIUM	10	Mendoza	0.519
	11	San Juan	0.504
	12	Salta	0.492
	13	Jujuy	0.478
	14	Misiones	0.47
LOW	15	Corrientes	0.446
	16	Catamarca	0.384
	17	La Pampa	0.345
	18	La Rioja	0.339
	19	Chubut	0.311
VERY LOW	20	Río Negro	0.277
	21	Tierra del Fuego	0.253
	22	Neuquén	0.247
	23	Formosa	0.247
	24	Santa Cruz	0.037



### MULTI-HAZARD EXPOSURE BY PROVINCE





THE RVA 

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**VULNERABILITY**

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**RESULTS BREAKDOWN**

## THE RVA

# 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 are designed to capture the multi-dimensional nature of poverty, the inequality in access to resources due to gender, and the ability of a given area to adequately support the population. In coordination with stakeholders, the following indicators were selected to measure vulnerability subcomponents in Argentina. 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

**109** OF 160 COUNTRIES

### Argentina's rank among South American countries:

**8** OF 12 COUNTRIES

## VULNERABILITY SUBCOMPONENTS AND INDICATORS



#### Population Pressures

Average Annual Total Population Change



#### Gender Inequality

Female-to-Male Unemployment Rate  
Female Judiciary Seats



#### Information Access Vulnerability

Illiteracy Rate (Age 10+)  
Secondary Education Completion Rate  
School Enrollment Rate  
Education Investment Per Capita



#### Economic Constraints

Economic Dependency Ratio  
Unemployment Rate  
Poverty Rate



#### Vulnerable Health Status

Life Expectancy at Birth  
Infant Mortality Rate  
Maternal Mortality Ratio  
Disability  
HIV Incidence  
TB Incidence



#### Clean Water Access Vulnerability

Households without Piped Water  
Households without Sewage Services



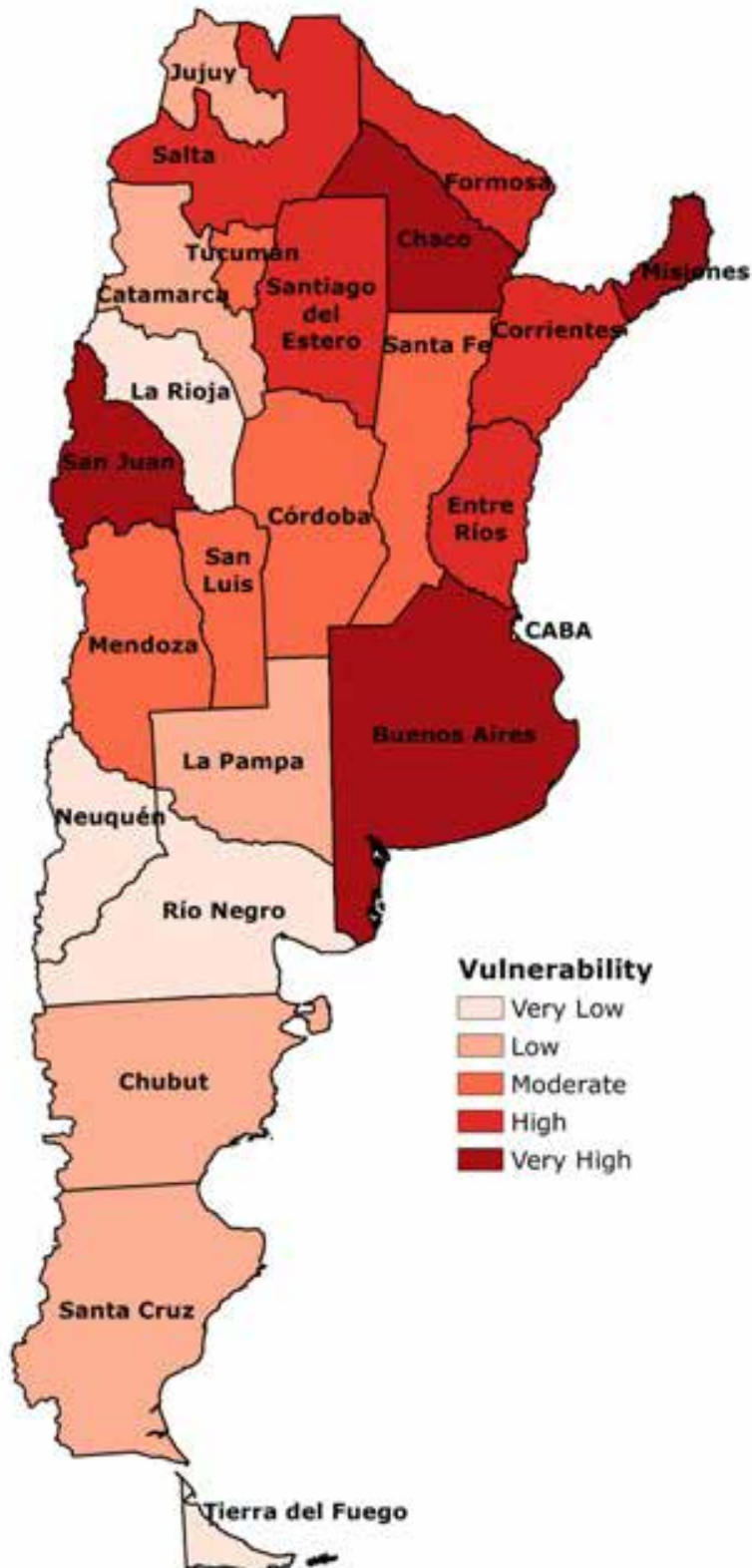
#### Environmental Stress

Land Degradation  
Wildfire Affected Areas

## VULNERABILITY BY PROVINCE

	RANK	PROVINCE	INDEX SCORE
VERY HIGH	1	Misiones	0.623
	2	Chaco	0.622
	3	Buenos Aires	0.616
	4	San Juan	0.587
HIGH	5	Corrientes	0.573
	6	Formosa	0.563
	7	Salta	0.563
	8	Entre Ríos	0.559
	9	Santiago del Estero	0.555
MEDIUM	10	Tucumán	0.546
	11	Córdoba	0.545
	12	Santa Fe	0.541
	13	Mendoza	0.525
	14	San Luis	0.512
LOW	15	Catamarca	0.489
	16	Jujuy	0.485
	17	La Pampa	0.473
	18	Santa Cruz	0.466
	19	Chubut	0.451
VERY LOW	20	Río Negro	0.449
	21	La Rioja	0.433
	22	Neuquén	0.432
	23	Tierra del Fuego	0.411
	24	CABA	0.167

### VULNERABILITY BY PROVINCE





THE RVA

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# COPING CAPACITY

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## RESULTS BREAKDOWN

## THE RVA

# COPING CAPACITY

Coping capacity describes the ability of people, organizations, and systems, using available skills and resources, to face and manage adverse conditions, emergencies, or disasters.

In coordination with stakeholders, the following indicators were selected to measure coping capacity subcomponents in Argentina. Breaking down each coping capacity subcomponent to the indicator level allows users to identify the key drivers of coping capacity to support risk reduction efforts and policy decisions.

### Global Coping Capacity Rank

**67** OF 176 COUNTRIES

### Argentina's rank among South American countries

**3** OF 12 COUNTRIES

## COPING CAPACITY SUBCOMPONENTS AND INDICATORS



#### Economic Capacity

Exports per Capita  
Work Insurance Coverage  
Tax Distribution



#### Governance

Crime Prevalence  
Voter Participation



#### Environmental Capacity

Protected Area  
Forest Cover



#### Healthcare Capacity

Hospital Beds per 10,000 Persons  
Physicians per 10,000 Persons  
Health Insurance Coverage  
Average Distance to Nearest Hospital



#### Transportation Capacity

Roads Density  
Average Distance to Airport  
Improved Roads



#### Communications Capacity

Households with Internet Access  
Households with Television Access



#### Energy Capacity

Households with Electricity  
Households with Gas



#### Emergency Service Capacity

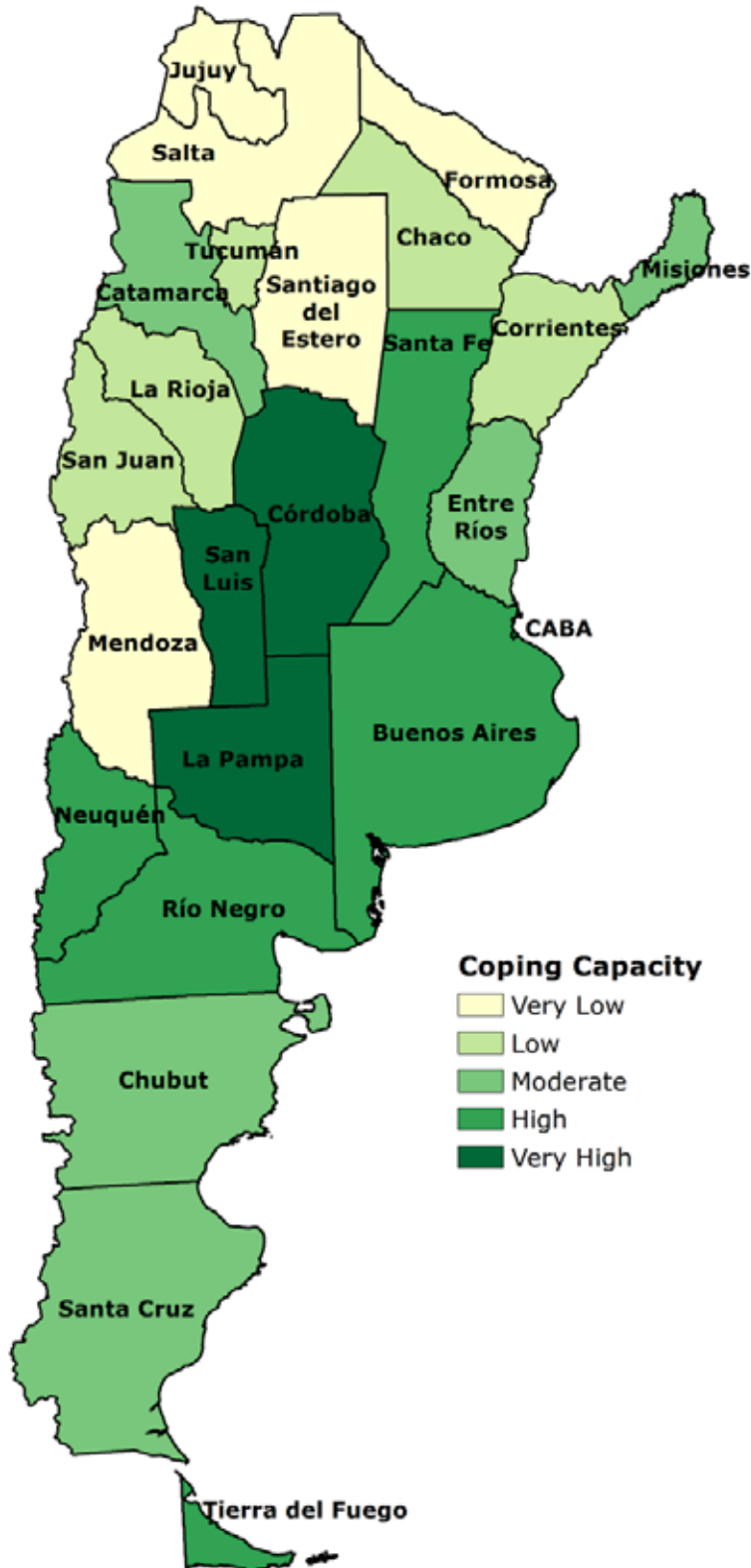
Distance to Fire Station  
Shelters per 100,000 Persons  
Radio Base Access

## COPING CAPACITY BY PROVINCE

	RANK	PROVINCE	INDEX SCORE
VERY HIGH	1	Córdoba	0.564
	2	La Pampa	0.548
	3	CABA	0.547
HIGH	4	San Luis	0.543
	5	Buenos Aires	0.524
	6	Santa Fe	0.52
	7	Neuquén	0.502
	8	Río Negro	0.495
	9	Tierra del Fuego	0.494
MEDIUM	10	Catamarca	0.48
	11	Entre Ríos	0.468
	12	Chubut	0.465
	13	Misiones	0.464
	14	Santa Cruz	0.455
LOW	15	Tucumán	0.443
	16	San Juan	0.442
	17	Corrientes	0.437
	18	La Rioja	0.436
	19	Chaco	0.4
VERY LOW	20	Mendoza	0.395
	21	Santiago del Estero	0.369
	22	Jujuy	0.35
	23	Formosa	0.333
	24	Salta	0.3



### COPING CAPACITY BY PROVINCE





THE RVA 

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# RESILIENCE

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## RESULTS BREAKDOWN

## THE RVA

# RESILIENCE

Resilience represents the combination of susceptibility to impact with the relative ability to absorb, respond to, and recover from short-term disaster impacts. Resilience provides an indication of current socioeconomic and disaster management conditions on the ground, independent of hazard exposure.

### Global Resilience Rank






**56** OF 155 COUNTRIES

### Argentina's rank among South American countries

**3** OF 12 COUNTRIES

## APPLYING RESILIENCE DATA

### Resilience data can be used to:

-  Prioritize response and recovery efforts during hazard events.
-  Identify the social, cultural, and economic factors that influence disaster risk and vulnerability.
-  Provide the necessary justification to support policy decisions that will protect lives and reduce losses resulting from disasters.
-  Establish a provincial-level foundation for monitoring risk and vulnerability over time.
-  Enhance decision making for disaster risk reduction initiatives.

## RESILIENCE COMPONENTS

Resilience in Argentina was calculated by averaging vulnerability and coping capacity. Results are displayed across each province below, while the four main drivers of resilience with detailed recommendations are provided in the individual province profiles.



### Vulnerability

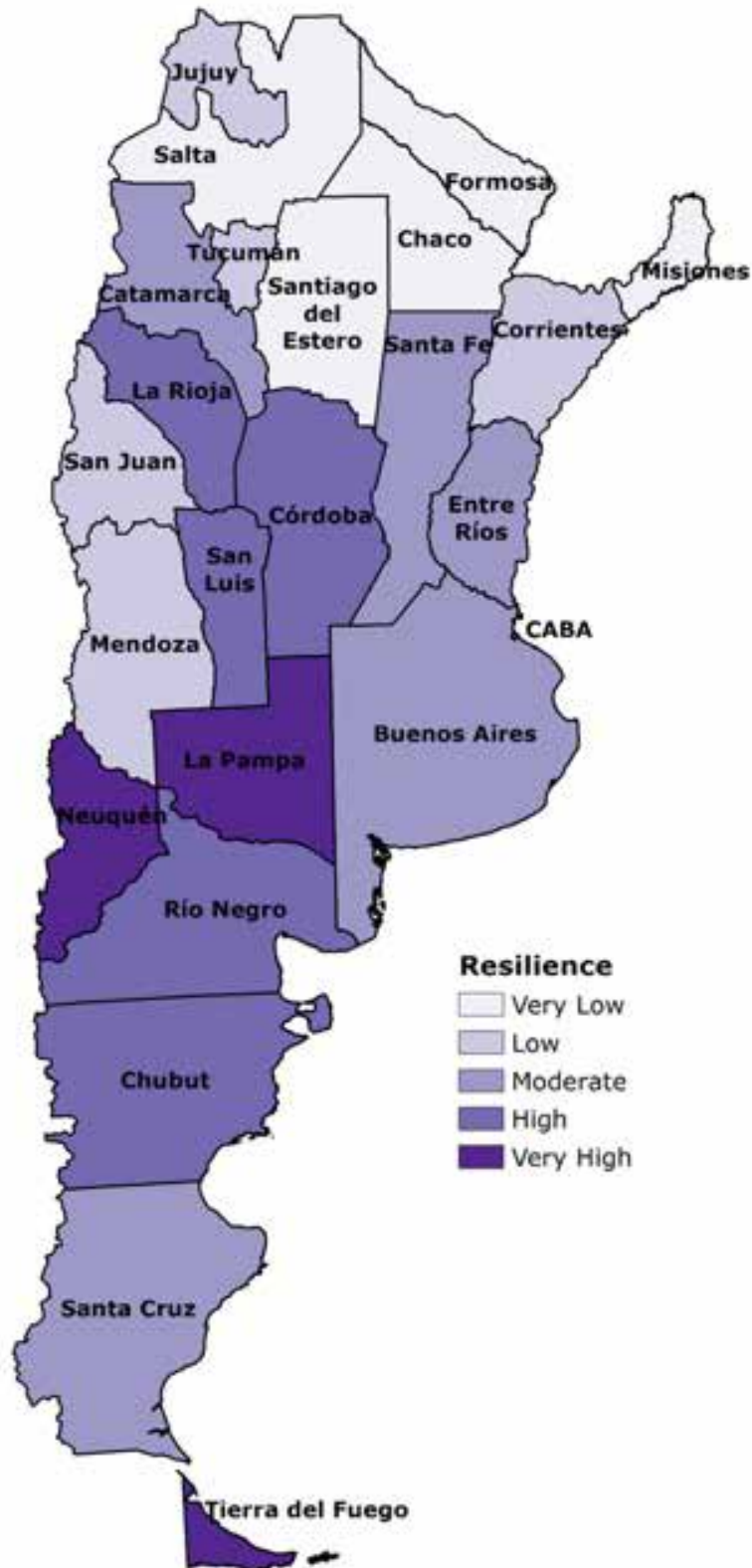


### Coping Capacity

## RESILIENCE BY PROVINCE

	RANK	PROVINCE	INDEX SCORE
VERY HIGH	1	CABA	0.69
	2	Tierra del Fuego	0.542
	3	La Pampa	0.537
HIGH	4	Neuquén	0.535
	5	Río Negro	0.523
	6	San Luis	0.515
	7	Córdoba	0.509
	8	Chubut	0.507
	9	La Rioja	0.501
MEDIUM	10	Catamarca	0.496
	11	Santa Cruz	0.494
	12	Santa Fe	0.49
	13	Entre Ríos	0.455
	14	Buenos Aires	0.454
LOW	15	Tucumán	0.448
	16	Mendoza	0.435
	17	Jujuy	0.433
	18	Corrientes	0.432
	19	San Juan	0.427
VERY LOW	20	Misiones	0.421
	21	Santiago del Estero	0.407
	22	Chaco	0.389
	23	Formosa	0.385
	24	Salta	0.368

## RESILIENCE BY PROVINCE





THE RVA

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# HAZARD-SPECIFIC RISK

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RESULTS BREAKDOWN






## THE RVA

# HAZARD SPECIFIC RISK

Hazard-specific risk examines individual hazard exposure in combination with a province's resilience to provide a clear understanding of risk drivers for each hazard type. Hazard-specific risk provides a tool for disaster managers to anticipate, plan for, and mitigate outcomes of specific hazard events across Argentina.

### APPLYING HAZARD SPECIFIC RISK DATA

**Hazard-specific risk data can be used to:**

-  Examine socioeconomic and cultural factors that make certain populations more susceptible to negative outcomes from a specific hazard.
-  Anticipate potential impacts of a specific hazard on a province's population.
-  Enhance national and subnational multi-hazard planning.
-  Prioritize national and district-level hazard-specific mitigation actions.time.
-  Provide necessary justification to enhance hazard monitoring and implement early warning systems.

### HAZARD RISK COMPARED



**Flood**



**Earthquake**



**Landslide**



**Volcano**



**Wildfire**

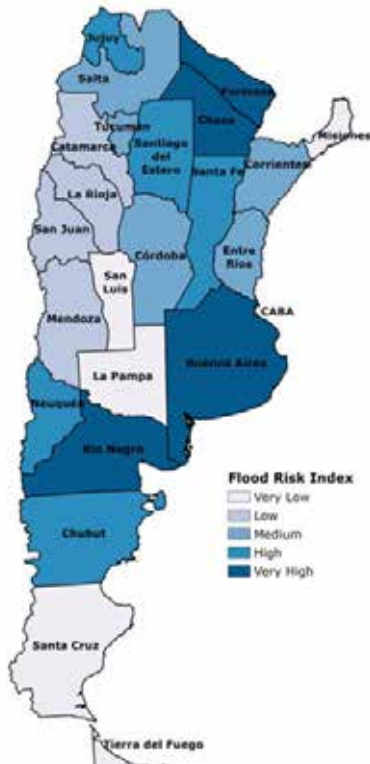


**Extreme Heat**

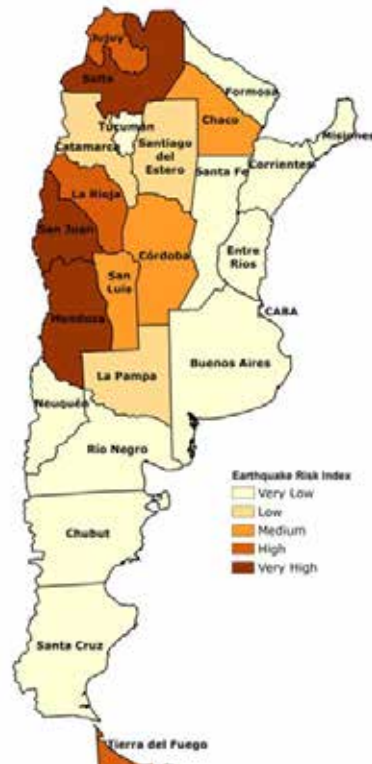


**Drought**

**FLOOD RISK**



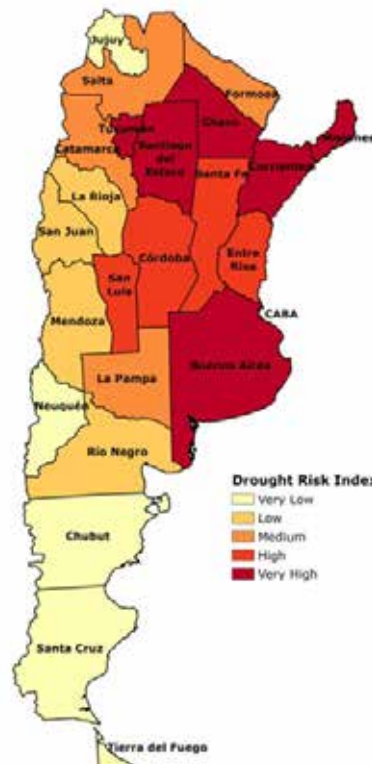
**EARTHQUAKE RISK**



**LANDSLIDE RISK**

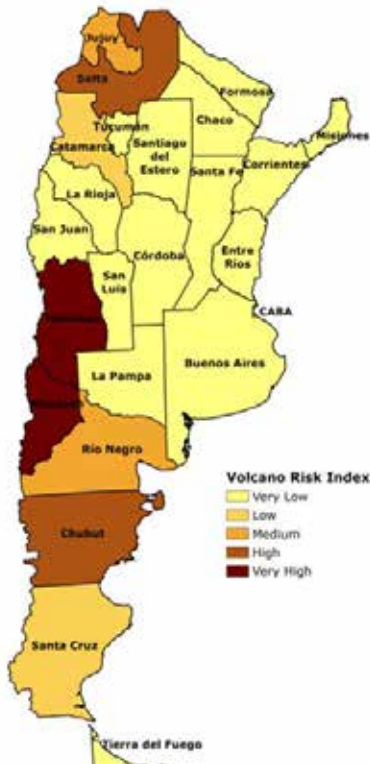


**DROUGHT RISK**

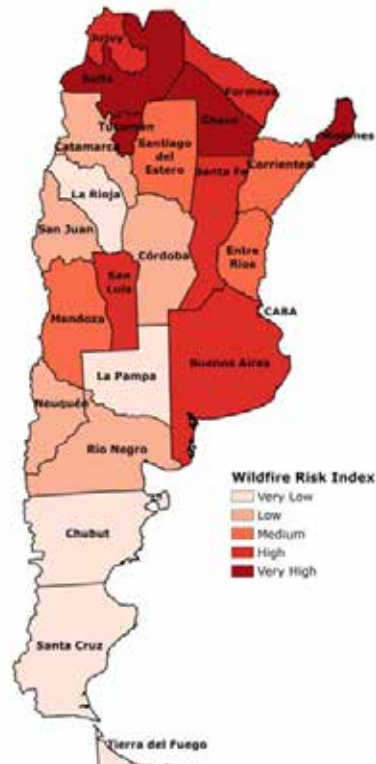




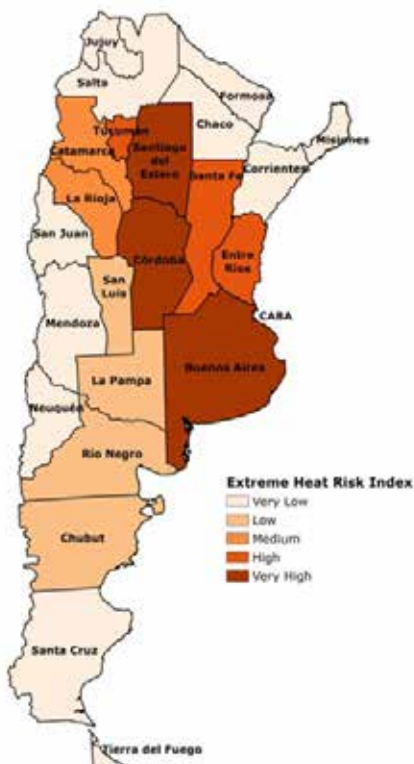
### VOLCANO RISK



### WILDFIRE RISK



### EXTREME HEAT RISK





**THE RVA** 

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**MULTI-HAZARD RISK**

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**RESULTS BREAKDOWN**

## THE RVA

# 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 province may be affected by hazard 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.

### Global Multi-hazard Risk Rank

**93** OF 155 COUNTRIES

### Argentina's rank among South American countries

**8** OF 12 COUNTRIES

## MULTI-HAZARD RISK COMPONENTS

Multi-hazard risk in Argentina was calculated by averaging multi-hazard exposure, vulnerability and coping capacity. Results are displayed across each province below, while additional detail on province-level risk is provided in the individual province profiles.



**Multi-hazard Exposure**



**Vulnerability**

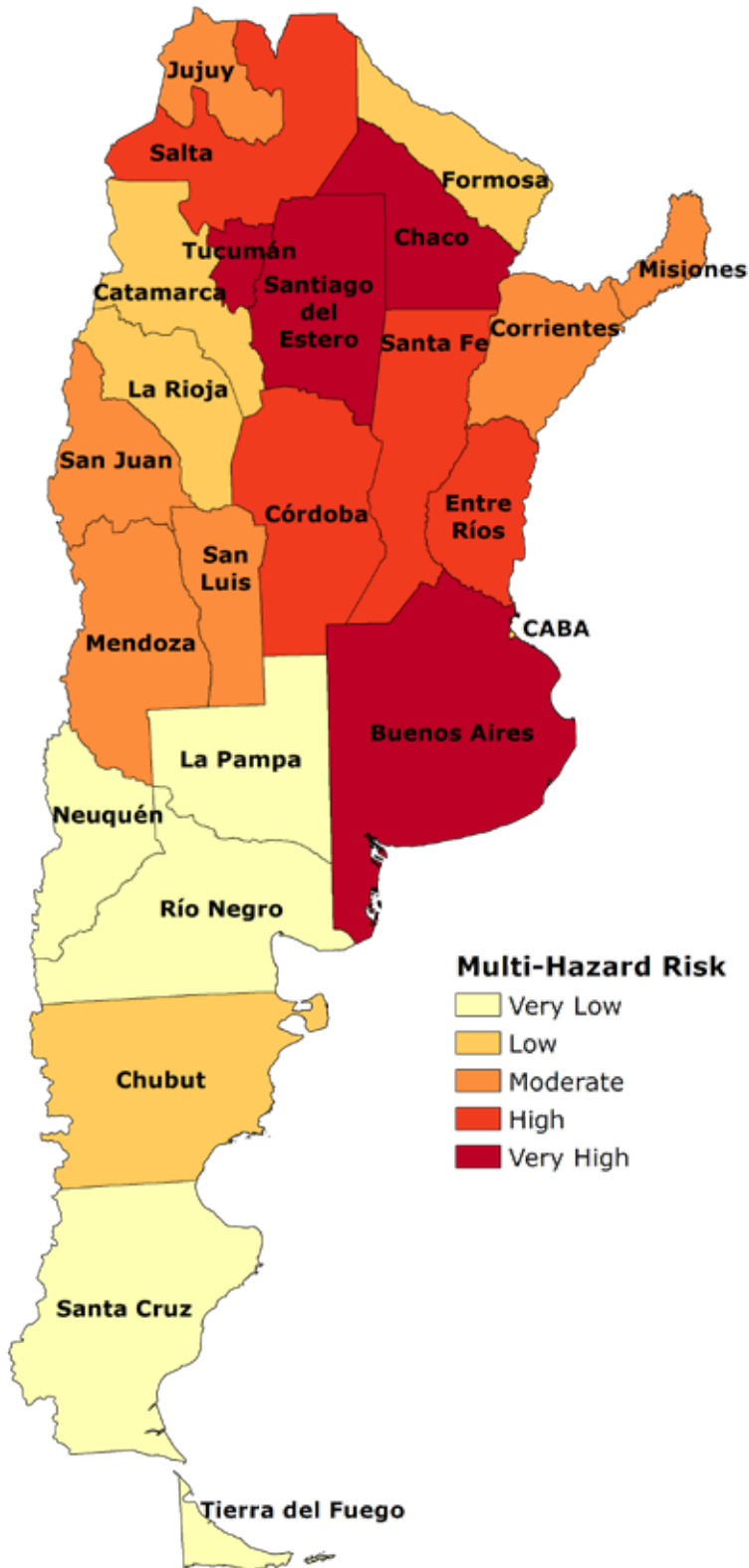


**Coping Capacity**

## MULTI-HAZARD RISK BY PROVINCE

	RANK	PROVINCE	INDEX SCORE
VERY HIGH	1	Buenos Aires	0.664
	2	Tucumán	0.612
	3	Santiago del Estero	0.607
HIGH	4	Chaco	0.605
	5	Santa Fe	0.592
	6	Salta	0.585
	7	Córdoba	0.584
	8	Entre Ríos	0.571
MEDIUM	9	Mendoza	0.55
	10	San Juan	0.55
	11	Misiones	0.543
	12	Jujuy	0.537
LOW	13	Corrientes	0.528
	14	San Luis	0.509
	15	Formosa	0.492
	16	CABA	0.491
	17	Catamarca	0.464
	18	La Rioja	0.446
	19	Chubut	0.432
VERY LOW	20	La Pampa	0.423
	21	Río Negro	0.41
	22	Neuquén	0.392
	23	Tierra del Fuego	0.39
	24	Santa Cruz	0.35

### MULTI-HAZARD RISK BY PROVINCE





THE DMA

# DISASTER MANAGEMENT ANALYSIS

FINDINGS AND RECOMMENDATIONS

# THE DMA

## DISASTER MANAGEMENT ANALYSIS FINDINGS AND RECOMMENDATIONS

Provided in this section are the results of the Disaster Management Analysis (DMA) that was conducted as part of the Argentina National Disaster Preparedness Baseline Assessment. The outcome of the DMA enables more effective prioritization of risk-reduction and resilience-building initiatives. Considering diverse community needs, operational successes and barriers, the DMA results enable decision makers and communities to prioritize actions for disaster risk reduction and disaster governance at all levels. The following section summarizes key findings in six broad areas of analysis: Institutional Arrangements; Enabling Environment; Disaster Governance Mechanisms; Capabilities and Resources; Capacities; and Communications and Information Management.

### DISASTER MANAGEMENT ANALYSIS THEMES AND SUB-THEMES



**Institutional Arrangements**  
Organizational Structures  
Leadership Arrangements  
Mechanisms for Stakeholder Engagement



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



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



**Capacity Development**  
Capacity Development Plans and Strategies  
Training and Education Programs and Facilities  
Certification Programs  
After-action Reporting  
Monitoring and Evaluation Processes and Systems



**Disaster Governance Mechanisms**  
Plans  
Standard Operating Procedures  
Emergency Operations Centers  
Command, Control, and Coordination Systems



**Communication and Information Management**  
Hazard and Risk Analysis Systems  
Disaster Assessment  
Media and Public Affairs  
Information Collection, Management, and Distribution



# INSTITUTIONAL ARRANGEMENTS

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



The organizational and institutional structures through which disaster management capacity forms is an indication of country’s institutional arrangements. By examining the organization and composition of diverse agencies and individuals that constitute a nation’s disaster management capacity—detailing the relationships and collaboration between them—tangible opportunities for increased effectiveness are often revealed. The DMA analyzes sub-themes that characterize institutional arrangements.

## CURRENT STATUS



### Argentina’s institutional arrangements have made substantial progress, with some limitation.

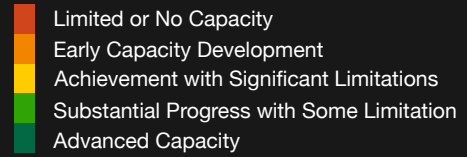
Argentina’s disaster management capacity began in earnest in 2016 with the passage of a compressive civil protection law. During this time the National System for Integral Risk Management (SINAGIR) was established, and the Secretariat of Civil Protection was realized. These two key entities have helped to consolidate institutional structures and strengthen intersectoral coordination at all levels of government. National and Federal representative councils established and empowered to increase interagency integration and subnational participation have been key to advancing the SINAGIR mission. Formalized integration of domestic military support has succeeded in expanding overall civil response capacity, and while provisions exist to do the same with NGO and private sector partners, substantial work remains. Advancement of climate change adaptation, disaster risk reduction, and sustainable development policy has been pursued with mixed success through the efforts of dedicated yet disparate national thematic platforms and should be a focus moving forward.





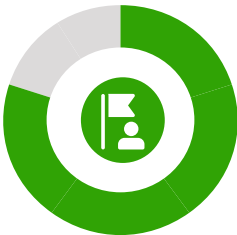
## INSTITUTIONAL ARRANGEMENTS

### SUB-THEME STATUS



### Organizational Structures

- Organization of disaster management functions
- Organization of governmental disaster management offices
- Engagement with bilateral, international and other humanitarian actors
- Regionalized disaster management capacity
- National platform/office to manage Disaster Risk Reduction (DRR) and Sendai Framework implementation
- National platform/office to manage Climate Change Adaptation (CCA)
- National platform/office to manage Sustainable Development (SD) 2030 agenda
- Integration of military into civil disaster manage structure
- Integration of DRR, CCA and SD
- Political Support
- Attitudes and Experience



### Leadership Arrangements

- Disaster management leadership arrangements
- Percentage of leadership positions filled
- Requirements for job-specific competencies for disaster management leadership
- Linkage of disaster management leadership to political leadership
- Leadership structure during major disaster response events
- Disaster management committee structure to support response and recovery operations
- Special disaster risk management policy-making committees
- Diversity of stakeholder groups represented in committees



## INSTITUTIONAL ARRANGEMENTS

### SUB-THEME STATUS

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



### Mechanisms for Stakeholder Engagement

- Nongovernmental stakeholders represented in governmental disaster management structure
- Public-private partnerships
- Inventory of NGO and private-sector disaster management capabilities
- Capacity of nongovernmental stakeholders engaged in disaster management
- Engagement of private sector entities in disaster management
- Organizational arrangements used by NGOs to support disaster management efforts
- Involvement of academia in disaster management efforts
- Relationship between national governments, regional entities and global disaster management organizations

### Actions needed to achieve advanced capacity:



Ensure there is a clear policy that identifies a dedicated entity with the explicit purpose of integrating DRR, CCA and DS across the whole of government.



Refinement and full implementation of procedures and policies that explicitly define leadership authority to ensure incident-specific proxy leadership during major disasters to ensure centralized leadership is maintained during concurrent incidents.



Further integration and formalization of nongovernmental, private sector and academic stakeholders in governmental disaster management structure.

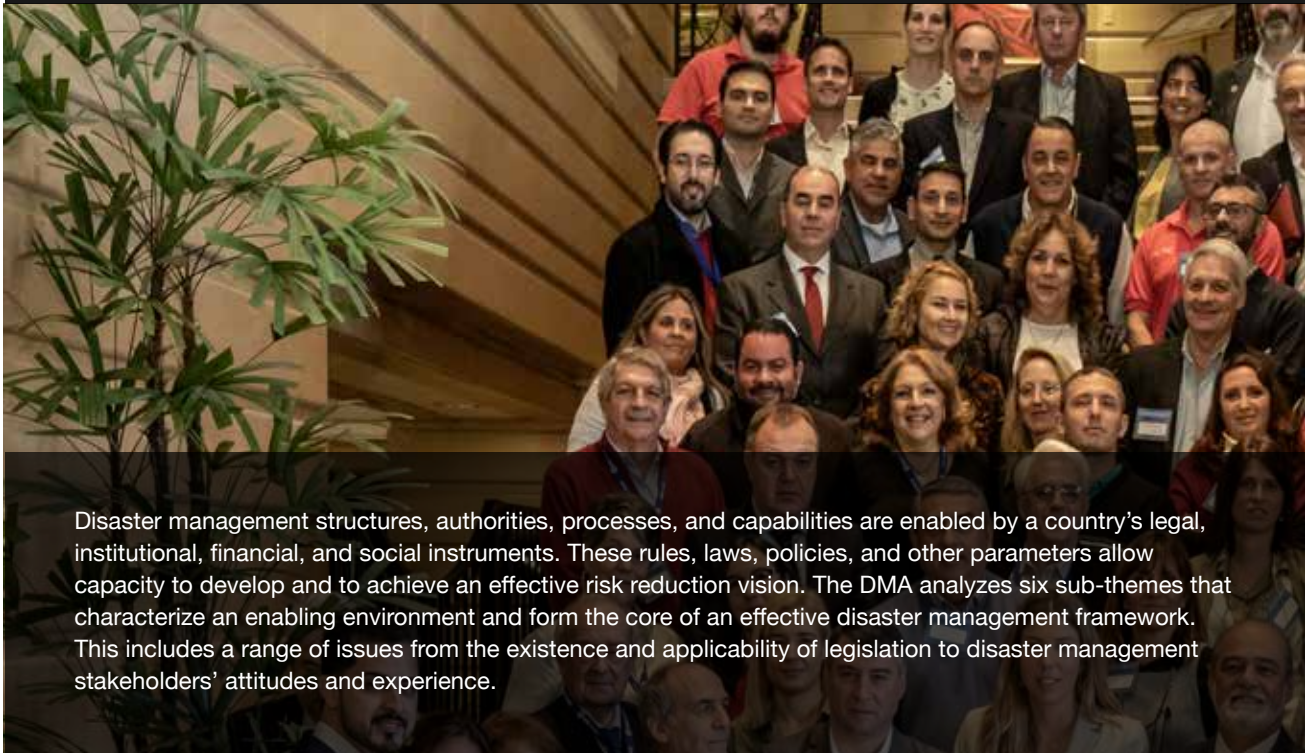


Implement a robust academic community of practitioners that actively contribute to the official disaster management efforts through R&D, training using structurally integrated arrangements.



## ENABLING ENVIRONMENT

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



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 parameters allow capacity to develop and to achieve an effective risk reduction vision. The DMA analyzes six sub-themes that characterize an enabling environment and form the core of an effective disaster management framework. This includes a range of issues from the existence and applicability of legislation to disaster management stakeholders’ attitudes and experience.

### CURRENT STATUS

Limited or No Capacity



Advanced Capacity

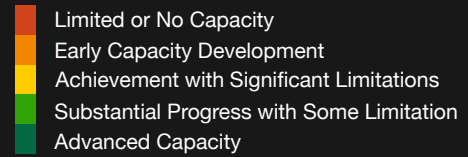
### Argentina’s current disaster management enabling environment has clear achievements with significant limitations.

Law 27/287 establishes a statutory basis for Argentina’s national emergency management system. Coupled with subsequent laws and decrees, the country’s legal framework defines component structures, creates line-item budgetary and contingency funding streams, defines disaster declaration processes, and formalizes domestic military support, among other purposes. Statutory language that is vague at times has left noticeable gaps inclusive of procedures for expediting foreign assistance, risk reduction enforcement measures, and more effective intergovernmental socialization of the law. Strategic direction is provided by the National Plan for Risk Reduction and Civil Protection (PLANGIR), which serves as the national strategy, and corresponding annual Operational Programs for Risk Management and Civil Protection (POAGIR). Access to contingency funding and occasional grant programs exists as an incentive for subnational and local jurisdictions to finalize SINAGIR adherence by the planned 2023 deadline. Disaster financing remains a challenge, due to incomplete funding of contingency budgets, shallow insurance penetration, and poor access to affordable disaster loans.



## ENABLING ENVIRONMENT

### SUB-THEME STATUS



### Legal Instruments

- Legal arrangements for disaster management requirements
- Legislate completeness to support all phases of disaster management
- National basis for disaster management legislative process
- Implementation schedule for legislation
- Legal foundation for the establishment of disaster management institutions
- Legal establishment of disaster management budgets
- Level of socialization of disaster management legislation throughout government
- Formalized legislative process, cooperation mechanisms and means to acquire human and material resources during disasters.
- Scope of legislative requirements related to a State of Emergency declaration
- Legal requirements for disaster management structures at sub-national levels of government
- Legislative guide and support to disaster risk reduction activities and requirements
- Legal authority of military in support of disaster management activities
- Legal foundation of international and cross-border disaster management engagement to include participation in regional and international disaster management frameworks



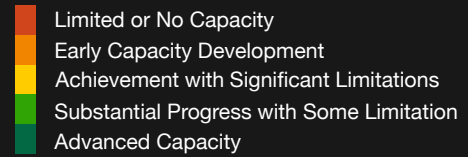
### Financial Resources

- Budget arrangements for disaster management
- Compliance with disaster management funding and legislate targets
- Scope of the disaster management budget
- Role of grant programs to support preparedness and disaster risk reduction programs at all sub-national and local levels of government
- Inclusion of training, education, and research and development in the disaster management budget
- Inclusion of funding to support capacity development at lower jurisdictional levels
- Existence of a dedicated emergency or contingency funds
- Current level of disaster management budget support
- Existing disaster reserve fund restrictions

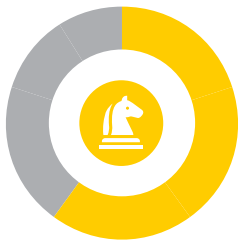


## ENABLING ENVIRONMENT

### SUB-THEME STATUS

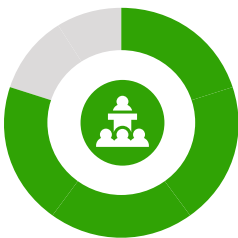


- Status of a catastrophic risk insurance market
- Role of the public sector to regulate the insurance market to address market solvency
- Availability of low-interest loan availability to support households, business, or NGO recovery
- Government support for disaster microfinance
- Guidelines for the provision of disaster relief funds to impacted jurisdictions.



## Strategies

- Existence of disaster management and disaster risk reduction strategic plans and policies
- Engagement of disaster management stakeholders in the development of strategic plans
- Level of guidance and oversight provided to disaster management stakeholders
- Policy support for the integration of disaster risk reduction
- Integration of disaster risk reduction and disaster management policies across government
- Integration of mitigation planning into DRR policy instruments
- Inclusion of gender and vulnerable groups in DM and DRR strategies and policies



## Public Confidence and Political Support

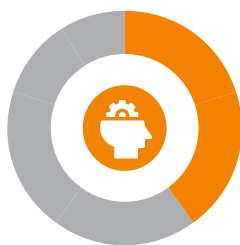
- Level of support from top government officials for disaster management and disaster risk reduction efforts
- Existing committees to address disaster management and disaster risk reduction
- Integration of inter-agency and multi-stakeholder input into legislative process
- Public support for disaster risk reduction provisions
- Public confidence in disaster management agencies' capabilities
- Influence of political approval ratings on disaster management decisions



## ENABLING ENVIRONMENT

### SUB-THEME STATUS

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



### Attitudes and Experience

- Practical disaster management experience at the individual, subnational and national level
- Level of public engagement with disaster management efforts
- Private sector participation in disaster management efforts
- Assessments of household preparedness

### Actions needed to achieve advanced capacity:



Work to overcome implementation obstacles related to budget support for capacity development at lower-level jurisdictions to include training, education, and research and development.



Implement a formalized and comprehensive arrangement and structure to ensure appropriate support for microfinance credit and expedited remittances.



Refinement of strategy documents to ensure a whole of government approach to DM and DRR that address the most vulnerable populations and comprehensively addresses gender inequality. during concurrent incidents.



Strengthen engagement by the public in disaster management efforts at all jurisdictional levels.



## DISASTER GOVERNANCE MECHANISMS

### SUB-THEME STATUS

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



Disaster management efforts are most effective when guided by standard, formalized systems and procedures that dictate how and by whom activities are conducted. The effectiveness of all disaster management phases, including disaster preparedness, hazard mitigation, response, and recovery, is dependent on the establishment and documentation of such mechanisms. The DMA analyzes each of these mechanisms, or sub-themes, within the context of Argentina, including governance infrastructure which focuses primarily on emergency operations and incident coordination centers.

#### CURRENT STATUS

Limited or No Capacity



Advanced Capacity

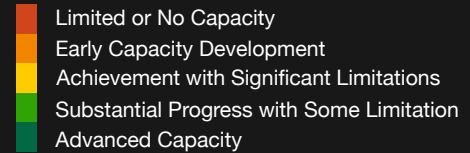
### Argentina’s current disaster governance mechanisms have clear achievements with significant limitations.

Disaster response operations are well established and guided by the SINAGIR Operations Plan. Recovery and other elements of the disaster management cycle are under review and expected to be addressed in a forthcoming framework. Existing plans provide guidance on key requirements including the disaster declaration processes and the provision of national support to impacted subnational jurisdictions. Efforts are underway to address a lack of standardized incident command which currently negatively impacts coordination among and between agencies and organizations – to include communications interoperability and responder training and credentialing. Consistency between plans at each administrative level, a requirement of SINAGIR adherence, remains incomplete and disjointed despite progress towards 2023 targets. Coordination has improved significantly with the implementation of the new National Council and the construction and operationalization of a new National Emergency Operations Center (EOC) within the office of the Secretariat of Civil Protection (SPC). Further improvements are expected once staffing and operational procedures are completed. While rarely invoked, mutual aid agreements are common among local and provincial governments. SINAGIR adherence is designed to formalize universal mutual assistance through the Federal Council. Since this tool is not often used, exercising the process will support effective execution when needed during times of disaster.



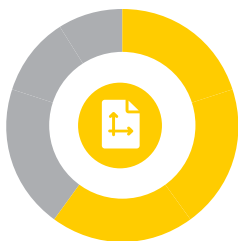
## DISASTER GOVERNANCE MECHANISMS

### SUB-THEME STATUS



### Plans and Standard Operating Procedures

- Inclusion of all phase of disaster management in plans and procedures
- Level of coordination across government to support disaster management plans
- Inclusion of Continuity of Operations and Continuity of Government in plans and procedures
- Clarity of roles and responsibilities in existing plans and procedures
- Level of accessibility of plans and SOPs
- Coordination and crosswalk of minimum disaster management requirements at every level of government.
- Adoption and implementation of formalized mutual aid agreements at all levels of government to support disaster management efforts
- Clarity in process and protocols to activate and integrate external disaster assistance
- Clarity and functioning of existing protocols to process, accept, and utilize donated goods and volunteer resources



### Command, Control, and Coordination Systems

- Operationalization of existing incident command systems in response to disaster operations
- Existence of explicit legal and planning instrument to define the incident command and management systems and structures
- Clarity of plans and procedures on the roles and responsibilities including decision-making authorities and reporting hierarchies of the incident coordination system
- Adoption of a functional approach to planning, coordination and response support
- Facilitation of interagency coordination during all phases of disaster management





## DISASTER GOVERNANCE MECHANISMS

### SUB-THEME STATUS

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



## Emergency Operations Centers

- Support for and existence of jurisdictional sole-use, purpose-build EOCs
- Existence of dedicated EOC facilities
- Minimum standards for EOC equipment and operationalization
- Policy and practice for minimum time to full EOC activation
- Duration of EOC operations with existing, staff, equipment, and resources
- Mitigation protection implemented for primary EOC from known hazards
- Accessibility of the national EOC to key government officials
- Existence of primary and secondary EOCs
- Establishment of field-level coordination centers
- Establishment and clarity of plans and procedures to support long-term community recovery
- Communications interoperability that has been established and validated across all of government
- Existence of a training and credentialing system that allows for the tracking and easy notification of human resources so they may be called upon during times of disaster.

### Actions needed to achieve advanced capacity:



Expand current policy and plans to more explicitly integrate continuity of operations (COOP) and continuity of government (COG) initiatives across all sectors, ensuring quick recovery of critical services needed for the functioning of society and ensuring security.



Ensure incident coordination is guided by a standardized incident management system that has been implemented at all levels of government and enables transparent and expedited integration of necessary DM partners.



Establishment of backup emergency operations centers and expand capability for the establishment of field-level coordination centers.



## CAPABILITIES AND RESOURCES

### SUB-THEME STATUS

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



The nature and extent of skills, knowledge, supplies, resources, equipment, facilities, and other capacity components dedicated to meeting disaster management needs is an indication of a country’s overall capabilities and resources. The DMA examines these sub-themes which include the source and size of surge capacities available in times of disaster, and broad array of disaster-focused functional capabilities like search and rescue, sanitation, and security.

#### CURRENT STATUS



### Argentina’s current disaster management capabilities and resources have clear achievements with significant limitations.

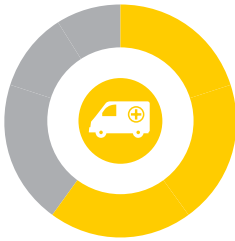
Front-line disaster response resources, including staff, facilities, and equipment, are sufficient in most communities to meet day-to-day needs but remain generally below what will be required in major disasters. Supplemental (surge) staffing capacity, drawn primarily from the military and Cascos Blancos but supplemented by volunteer and other sources, is integrated through statutory provisions, and is considered to be at sufficient levels. The capacity to acquire additional resources, on the other hand, is not fully understood but generally regarded as inadequate. A national inventory of disaster relief and response facilities includes both dedicated and shared-use facilities. Distribution of such facilities is inconsistent and, in many locations, inadequate, including emergency shelters (maintained at the subnational and local levels and which are not generally pre-equipped for emergency use) and warehouses (typically shared-use facilities maintained by either the Federal Police or the Ministry of Health and Social Welfare). Commodities stockpiles, maintained primarily in Ministry of Health and Social Welfare Reference Centers and Argentine Red Cross warehouses, are also inconsistently distributed but seen to meet minimum need currently. Hazardous materials (HAZMAT) response, search & rescue, and agriculture are areas of functional strength, while safety and security, WASH (water, sanitation, and hygiene), evacuation, and psychosocial recovery remain capacity development priorities.



## CAPABILITIES AND RESOURCES

### SUB-THEME STATUS

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



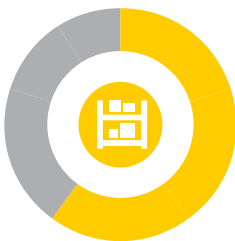
### Dedicated Facilities and Equipment

- Capacity of jurisdictional emergency services facilities
- Status of maintained material resources designated to effectively respond to known emergency and disasters in the given jurisdiction
- Access requirements to supplemental disaster management resources
- Maintenance and active management of disaster management inventories
- Status of shelter operations (suitability, maintenance, access and equipment)



### Human Resources

- Dedicated emergency management staff
- Dedicated disaster/catastrophe planning and civil protection staff
- Plan and process for integrating surge/supplementary disaster management staffing
- Existing surge staffing sources and levels
- Accessible and updated list of critical post-impact professionals (e.g. building inspectors, engineers, debris removal, etc.)
- Mechanisms to easily activate disaster-related technical staff



### Inventory of Commodities and Supplies

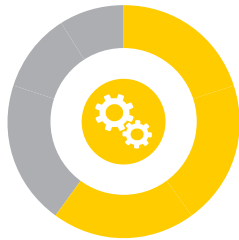
- Process and methods for generating post-disaster commodity need estimates
- Maintenance of commodity stockpiles
- Location of commodity stockpiles
- Policy and process for distribution of commodities across service areas
- Current practice and maintenance of emergency contracts with providers for critical management-related commodities
- Policy for keeping disaster management resource and supply inventories
- Update frequency of disaster management resource and supply inventories
- Disaster management and supply inventory ownership and responsibility
- Status of a national disaster logistics program



## CAPABILITIES AND RESOURCES

### SUB-THEME STATUS

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



### Targeted Functional Capabilities

- Support for psychosocial recovery
- National governments capacity to support evacuations
- Current policy and capabilities to address post-disaster water, sanitation, and hygiene (WASH) needs
- Management of safety and security for disaster affected populations
- HAZMAT response capacity
- National level search and rescue capabilities
- Agricultural preparedness, response, and recovery

### Actions needed to achieve advanced capacity:



Comprehensive modernization to shelter operations:

- Identify and equip shelters with the necessary material and human resources to function at minimum standards.
- Integrate advanced technology to better track real time shelter capacity.
- Ensure partnership with government, nongovernmental and private sector entities to meet shelter needs.



Expand disaster management surge capacity by developing, training and effectively equipping a reserve team that can seamlessly integrate into operations. Reservists can and should represent a diverse group of stakeholders and can come from nongovernmental organizations, other government agencies and/or developed through temporary employment of citizens.



Established and agreed upon process for generating estimates of post-disaster commodity needs that is well-documented, transparent, and consistent with international doctrine.



Enhance policies, plans and procedures to ensure that critical functions necessary for a high performing disaster management organization are identified and the fully implemented. (Example: safety and security, WASH (water, sanitation, and hygiene), evacuation, crosscutting psychosocial support.)



## CAPACITY DEVELOPMENT SUB-THEME STATUS

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



The ability of nations to advance disaster management strategies that achieve risk reduction and resilience goals is ultimately dependent on their 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 analyzes these sub-themes, looking at resources and opportunities for all stakeholders and all sectors, from individuals and special-needs groups to government responders.

### CURRENT STATUS

Limited or No Capacity



Advanced Capacity

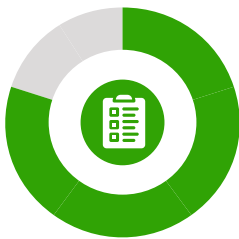
### Argentina’s current disaster management capacity has succeeded in achieving substantial progress with some limitations.

National standards and training and education facilities exist to support staff disaster management knowledge and competency development, but these are largely focused on operational requirements (e.g., firefighting and search and rescue). The new legislative framework mandates the expansion of technical, financial, and other resources to support development of more comprehensive disaster management capacity development under SINAGIR. These requirements include the ongoing creation of a new National Center for Disaster Risk Reduction (CENARRID), which will address a much broader scope of pre- and post-disaster emergency management topics once completed. Subnational and local jurisdictions are currently receiving financial and technical resources to support exercise planning and facilitation, but this is sporadic and programs vary in quality and scope as the local agencies are tasked with development and facilitation. National level exercises are intermittently held. Informational support is provided to better integrate disaster prevention and preparedness lessons within the national curriculum, but there are no associated requirements to better drive action. Higher-education programs remain in their infancy.



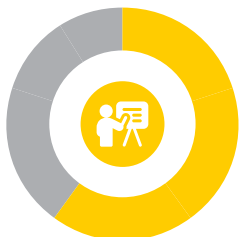
## CAPACITY DEVELOPMENT SUB-THEME STATUS

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



### Capacity Development Plans and Strategies

- Formalized and established training and exercise requirements
- Formalized and established position-specific competency requirements
- Coordination process for the development of disaster management capacity
- Existing disaster management and disaster risk reduction capacity plans
- Process for assessment of disaster management and disaster risk reduction capacity resources
- Coordination of disaster management and disaster risk reduction efforts with regional and global efforts
- Inclusion of disaster management and disaster risk reduction in the national science and technology agenda



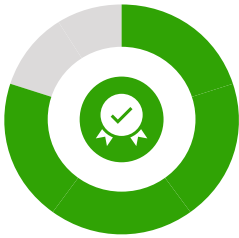
### Training and Education Programs and Facilities

- Jurisdictional disaster management/disaster risk reduction training
- Scope of disaster management/disaster risk reduction training and education
- Standard training delivery methods
- Existence of training schedule and/or catalog
- Maintain training records
- Level of exercise program implementation and staffing
- Exercise evaluation standards
- Structured annual exercise schedule
- National-level exercises
- National support for provincial and regional exercise efforts
- Participation of government agencies with disaster management functions in the exercise process
- Disaster management stakeholder involvement in training and disaster exercises
- Higher-education support for disaster management
- Higher-education offerings
- National support for public preparedness through a established disaster management curriculum
- Existence of a formalized public awareness and resilience building programs



## CAPACITY DEVELOPMENT SUB-THEME STATUS

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



### Monitoring and Evaluation Processes and Systems

- Procedures to guide the evaluation and revisions of plans, strategies, and SOPs
- Established review periods plans, strategies, and SOPs
- Established process to review and update of disaster management legislation
- Requirements for post-disaster review and evaluation
- Incorporation of evaluations into plans, policies, and SOPs

### Actions needed to achieve advanced capacity:



Development and full implementation of a disaster management and disaster risk reduction training and exercise program for all staff and partners including leadership, technical staff/partners and media.



Establishment of standards and policy that clearly designate authorities to ensure oversight and minimum standards of operational readiness.




Increase resourcing for training, exercises and advanced education to build an elite team of emergency managers prepared to address new and emerging threats facing Argentina. Focus on:

- Dedicated training and exercise teams
- Established training and exercise standards
- Annual training and exercises at national and sub-national level
- Inclusion of all government and nongovernmental agencies with DM functions




Update and full implementation of standards to guide the evaluation and revision of strategies, policies, and plans.



## COMMUNICATION AND INFORMATION MANAGEMENT

### SUB-THEME STATUS

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



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

**CURRENT STATUS**



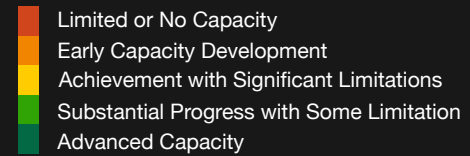
**Argentina’s achievements in communication and information management have significant limitations.**

Risk management activities have expanded under SINAGIR despite significant challenges to include poor socialization of risk management requirements and provisions, a lack of adequate skills training, decentralization of data collection and current risk reporting systems. Risk mapping is a notable weakness despite its strategic prioritization. Hazard monitoring effectiveness and coverage varies considerably by hazard. Relevant agencies are tasked with monitoring for individual hazards, while coordination of monitoring data and reporting is managed by the new Center for Alert and Monitoring under the National Emergency Alert and Monitoring System (SINAME). Notification and warnings lack a comprehensive approach and are despite expansion in coverage are provided through a blend of methods to include landline phones and mass media. Implementation of a standard disaster assessment methodology has been proposed but full implementation remains ongoing.



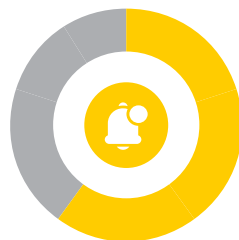


## COMMUNICATION AND INFORMATION MANAGEMENT SUB-THEME STATUS



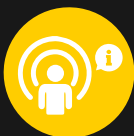
### Hazard and Risk Analysis Systems

- Risk assessment processes and standards
- Requirements for risk assessments for disaster management and disaster risk reduction planning efforts
- Skilled staff and necessary resources to manage risk assessment needs
- Vulnerability inclusion in risk assessments
- Climate change inclusion in risk assessments
- Local and indigenous knowledge inclusion in risk assessments
- Risk assessment reporting systems
- Risk mapping requirements
- Risk mapping capacity
- The current relationship between risk assessment and development decision-making



### Monitoring and Notification

- Hazard monitoring
- Coordination of hazard monitoring
- Population coverage of hazard monitoring
- Doppler Radar coverage
- Responsibilities for hazard monitoring activities
- Methods and technologies for hazard monitoring efforts
- Designated agency for the consolidation and notification of early warning communication
- Standard procedure for notification and early warning
- Communication of early warnings
- Risk-targeted early warning capabilities
- Early warning system coverage
- Testing protocols of early warning systems
- Education and training of populations served by early warning systems
- Inclusion of vulnerable populations in early warning system notification



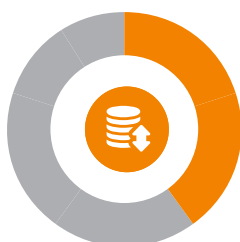
## COMMUNICATION AND INFORMATION MANAGEMENT SUB-THEME STATUS

- Limited or No Capacity
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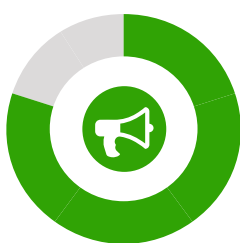
### Disaster Assessment

- Disaster assessment capabilities
- Inclusion of disaster assessment requirements in the declaration process
- National assessment methodology
- Capacity to conduct assessments in the aftermath of major events
- Outcomes-driven incident action plan
- Engagement of all relevant disaster management stakeholders in assessments



### Information Collection, Management, and Distribution

- Data collection and storage standards
- Data format
- Data sharing
- Use of a GIS-based data management system for a common operating picture
- Linkage between disaster loss database and national statistics agency
- Disaster management information sharing

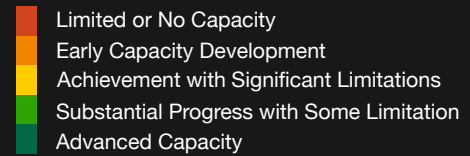


### Media and Public Affairs

- Designated Public Information Officer (PIO) position within disaster management agencies
- Documented communications strategy
- Dedicated media briefing space
- Media training for staff engaged in briefings
- Processes to obtain and disseminate public information in multiple formats and channels
- Development and deployment of pre-scripted information bulletins
- Scope of audience for public information capabilities
- Tracking of publicly generated information (social media)



## COMMUNICATION AND INFORMATION MANAGEMENT SUB-THEME STATUS



### Actions needed to achieve advanced capacity:



Ensure the institutionalization of established risk assessment standards at subnational levels through appropriate resourcing and with clear monitoring and enforcement mechanisms.



Expand hazard monitoring coverage, working towards complete national coverage at appropriate jurisdictional alerting levels to support existing authorities for preparedness and response operations.

- Enhance methods and technology to provide early warning and hazard alerting.



Develop and implement a whole of government approach to establish and implement minimum data standards for the collection, format, storage and distribution of data across all agencies.



**THE NDPBA**

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# **NATIONAL RECOMMENDATIONS**

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## THE NDPBA

# NATIONAL RECOMMENDATIONS

The following national recommendations are presented based on the findings of Argentina's National Disaster Preparedness Baseline Assessment, conducted by the Pacific Disaster Center in coordination with Protección Civil, the Ministry of Security, and other disaster management stakeholders in Argentina. The recommendations focus on strengthening the culture of disaster risk reduction through comprehensive disaster management and disaster risk governance.

Protección Civil (SPC), under the direction and guidance of the Ministry of Security (MINSEG), contributes to disaster management (DM) as a function of national security. This institutional arrangement illustrates the importance that the Government of Argentina places on the potential destabilization that could occur from any disaster and the management of disaster related risks to the nation.

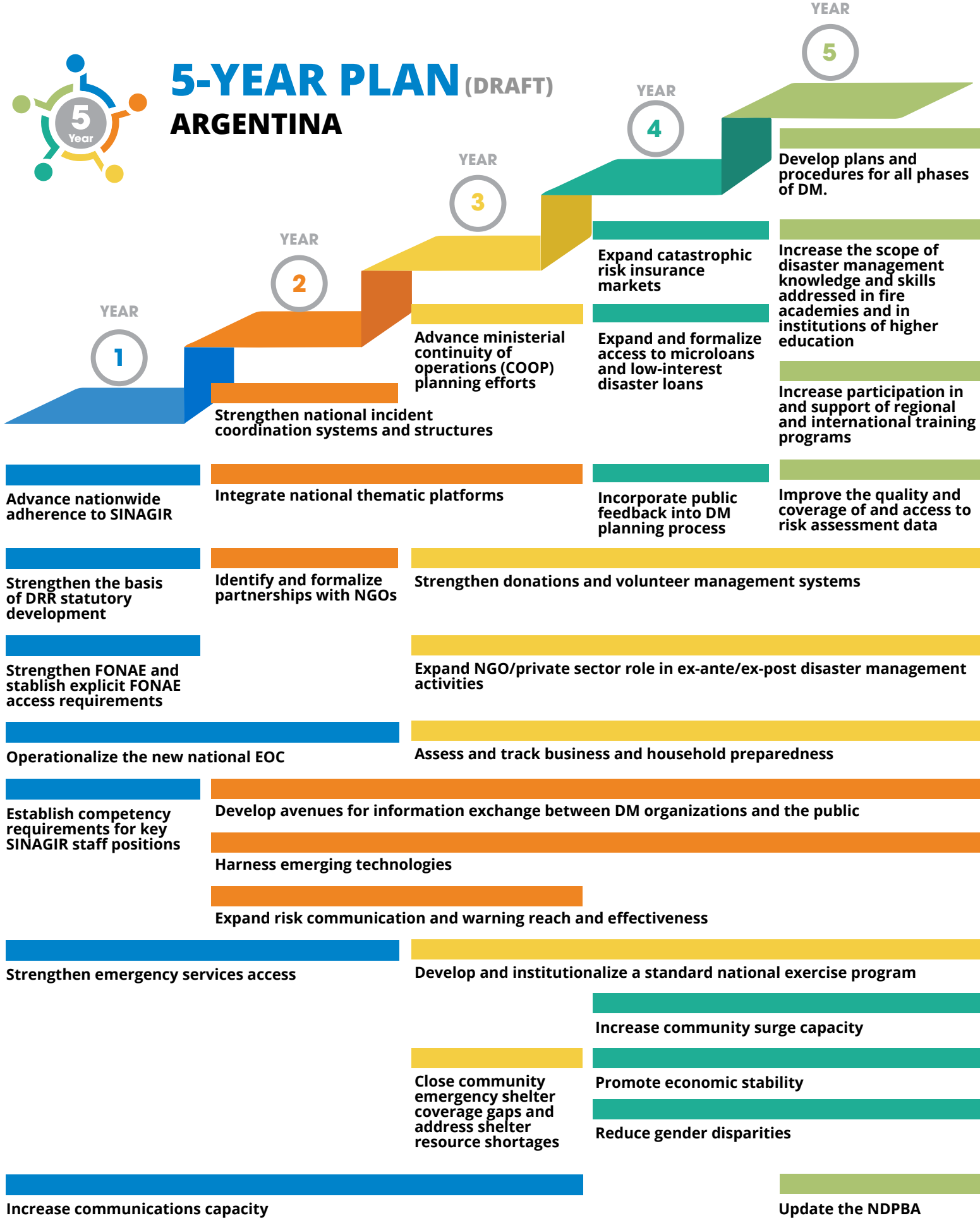
Senior-level support and effective disaster governance mechanisms at the national level allow for timely decision-making during disasters, but operationalization of DM has not been fully realized. Through the National System for Integral Risk Management and Civil Protection (SINAGIR) and its national and provincial DM stakeholders, the development of processes, plans, procedures, and protocols are underway to allow Argentina to build a safer, more disaster-resilient nation. Research findings indicate a strong legal foundation for DM and an effective institutional arrangement of DM stakeholders under SINAGIR. However, an absence of coordinated capacity development strategies and limited opportunities for training and education limit DM capacity at the national, provincial, and local levels.

These challenges have been recognized by SPC and MINSEG, and through SINAGIR and the establishment of the National Center for Disaster Risk Reduction (CENARRID), efforts are underway to strengthen DRR at all levels of governance. Honoring the foundation and the intent of the Government of Argentina to implement SINAGIR throughout the nation and improve DRR practices, the following recommendations are provided as a roadmap to further advance DM and DRR efforts. These recommendations will assist Argentina in meeting its commitment to its citizens and residents, as well as its international targets under the Sendai Framework.



# 5-YEAR PLAN (DRAFT)

## ARGENTINA



# THE NDPBA

# NATIONAL RECOMMENDATIONS

# 1

## FULLY IMPLEMENT THE NATIONAL SINAGIR AGENDA

### 1.1. Advance nationwide adherence to SINAGIR

- Through the Federal Council, conduct a review of progress towards nationwide SINAGIR adherence, with a focus on developing consensus-driven measures that better define adherence (notably where standardization of plans, incident management and command, communications, training and education, risk assessment, hazard monitoring and reporting, and mutual assistance are concerned).
- Incentivize full adherence to SINAGIR by formalizing and observing access restrictions to risk and disaster financing instruments (including FONAE and FONGIR, low-interest disaster loans, and catastrophe insurance market support), access to training and education resources, participation in national mutual assistance arrangements, access to protected data, and other means as identified.
- Clarify the authorities, roles, and responsibilities of Federal and National Council members and the relationship between these two coordination bodies in terms of decision-making requirements and responsibilities in national disaster events.

### 1.2 Strengthen national incident coordination systems and structures.

- Establish a national digital platform to better support disaster management operational coordination, including interagency information sharing.
- Clarify functional coordination procedures and chain-of-command authorities under the National Operations Plan for SINAGIR, or through development of a national incident management framework.
- Finalize the organizational structure of SPC headquarters components and socialize the roles and responsibilities of each through the National and Federal Councils.
- Strengthen SINAGIR regional support offices by decentralizing procedures (e.g., risk assessment, grants administration, coordination, declarations request, training), and advance the establishment of these offices per the SINAGIR implementation schedule.
- Establish function-based, decision-making bodies under SINAGIR, preferably in alignment with the United Nations Cluster System.

# 2

## **ELEVATE DRM AS A NATIONAL POLICY GOAL**

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### **2.1 Integrate national thematic platforms**

- Develop a consolidated national action plan (NAP) for disaster risk reduction, climate change adaptation, and sustainable development.
- Advance implementation of the 2018 National Plan for Disaster Risk Reduction (PNRRD).

### **2.2 Strengthen the basis of DRR statutory development**

- Create a standing legislative committee focused on climate change and disaster risk reduction, or establish climate change and DRR as a defined topic of focus within the portfolio of an existing committee or commission.

### **2.3 Advance ministerial continuity of operations (COOP) planning efforts**

- Develop national COOP planning guidelines focused on all-hazards resilience.
- Mandate COOP planning by all SINAGIR National Council members and recommend COOP planning among other ministries and offices.
- Plan, coordinate, and execute annual COOP exercises.



# 3

## STRENGTHEN DISASTER FINANCING MECHANISMS

### 3.1 Strengthen FONAE and establish explicit FONAE access requirements

- Calculate minimum FONAE target funding levels using both historic (moving average disaster losses) and forecast needs with a minimum level of 1 percent GDP.
- Establish minimum loss thresholds for FONAE access.
- Clarify standards of compliance that link FONAE access to DRR planning efforts, advancement of resilience programs, and achievement of disaster prevention.
- Establish disaster deductibles based on provincial fiscal capacity, provincial expenditures on DRR activities, adoption of standard risk reduction measures (e.g., building codes, preparedness campaigns).

### 3.2 Expand catastrophic risk insurance markets

- Conduct a feasibility study to determine whether a single catastrophic hazard insurance program (covering hail, flood, wind, and fire) will address ongoing challenges with adverse selection.
- Mandate insurers to offer affordable catastrophe plans where hazard likelihood exists below a defined threshold, e.g., a 1-in-50 (.02) chance of occurrence in any given year.
- Link provincial insurance penetration rates to reduced disaster deductibles.

### 3.3 Expand and formalize access to microloans and low-interest disaster loans

- Expand within SINAGIR the role of the National Microcredit Commission to better address long-term recovery needs.
- Establish a formalized low- or no-interest disaster loan program linked with a disaster declaration that enables disaster-impacted households to better address losses not covered under insurance policies or by existing disaster recovery program support.
- Develop business loan prioritization protocols focused on increasing the rate of economic recovery.

### 3.4 Strengthen donations and volunteer management systems

- Establish a donations and volunteer coordinator position within SPC headquarters or empower an NGO to assume this role with FONAE support during a declared national disaster.
- Define donations and volunteer management responsibilities for SINAGIR regional offices.
- Provide curriculum support for donations and volunteer management skills development.

# 4

## **STRENGTHEN INCIDENT COMMAND AND COORDINATION AND ADVANCE NGO/ PRIVATE SECTOR INTEGRATION**

### **4.1 Operationalize the new National EOC**

- Finalize staffing and operational procedures to enable full activation of the new National EOC.
- Conduct national-level exercises using the National EOC as the nexus of multi-agency information sharing.
- Socialize the capabilities of the National EOC among National and Federal Council members.
- Establish stakeholder representative presence within the EOC for the nongovernmental and private sectors.

### **4.2 Identify and formalize partnerships with NGOs**

- Establish a standalone national NGO/private sector engagement office within SPC linked to donations and volunteer management.
- Develop NGO/private sector certification standards focused on financial transparency and cost estimates, standards of care, staff skills and capabilities, equipment and resources, and other engagement and acquisitions factors.
- Provide a formal registration and certification system for NGO/private sector stakeholders that delineates participation at the national, regional, and provincial levels.
- Promote public-private partnerships to increase data access, advance disaster management technologies innovation, further develop capacity, address logistics and supply gaps, and for other purposes as identified.

### **4.3 Expand NGO/private sector role in ex-ante/ex-post disaster management activities**

- Delineate and clarify NGO/private sector role in the language of national and regional emergency response plans, including disaster logistics, emergency shelter operations, case management, commodities warehousing and distribution, volunteer management, long-term recovery, and other functions as appropriate.
- Expand NGO/private sector functional integration in resilience building, including community engagement, public education, exercise planning, and mitigation planning and execution.
- Advance ongoing efforts to formalize contracting and other mechanisms under FONAE that facilitate prioritized engagement or contracting during declared disasters for certified entities.
- Expand the development of NGO/private sector guidance products (e.g., hazard mitigation and COOP “how-to” guides).
- Establish permanent NGO/private sector liaison positions within the National and Federal Councils.

# 5

## SUPPORT COMMUNITY, BUSINESS, AND HOUSEHOLD RESILIENCE

### 5.1 Assess and track business and household preparedness

- Establish a program within SPC to measure national disaster preparedness and produce a National Community Preparedness Estimate.
- In collaboration with INDEC, support provincial efforts to survey household disaster preparedness.
- Engage the NGO and faith-based communities to conduct household preparedness surveys.
- In collaboration with business associations, assess small, medium, and large business preparedness (including continuity planning efforts).

### 5.2 Develop avenues for information exchange between DM organizations and the public

- Increase disaster preparedness messaging on official social media platforms.
- Engage community associations and NGOs to identify and support effective avenues for engagement with businesses and households, including direct engagement and engagement through existing and new apps.
- Include outputs of provincial risk assessments into targeted risk communication practices.
- Develop a comprehensive public education campaign for disaster risk reduction, hazard awareness, and disaster preparedness.

### 5.3 Incorporate public feedback into DM Planning processes

- Increase public access to DM plans and National DRR Agenda.
- Solicit for and incorporate public feedback into DM risk communication strategies, particularly in rural areas and for rural early warning systems.
- Mandate open access to provincial and local emergency operations and disaster risk management plans.

# 6

## **CENTRALIZE THE ROLE OF TRAINING AND EDUCATION FOR ALL-STAKEHOLDER DRM CAPACITY DEVELOPMENT**

### **6.1 Establish competency requirements for key SINAGIR staff positions**

- Identify minimum competency requirements.
- Qualify key national SINAGIR positions that require minimum competencies.
- Use competency requirements to develop a CENARRED leadership training program and an associated qualifications registry to track and report on progress.

### **6.2 Increase the scope of disaster management knowledge and skills addressed in fire academies and in institutions of higher education**

- Promote greater standardization of firefighter academies at the national, regional, and provincial levels.
- Promote the inclusion of coursework that provides an operational capacity to support community hazard mitigation, risk assessment, community preparedness, alert and warning, evacuation support, mass care sheltering, and search and rescue, among other topics.
- Establish an office of higher education within SPC that provides direction and support to institutions of higher education in their efforts to develop and offer advanced disaster risk management degrees in public policy, environment, engineering, public health, sociology, geography, geology, and other fields.
- Create an office of higher education at the national level to support professional development.

### **6.3 Increase participation in and support of regional and international training programs.**

- Promote cooperative international training and exercises with UNASUR and OAS to strengthen regional mutual assistance mechanisms and to increase opportunities to address cross-border and regional hazards.
- Coordinate with UN agencies to host national and regional training symposia for UN DRR training programs, including those offered by UNDRR, GETI, UNDESA, and UNDP.

## 7

## INCREASE RISK ASSESSMENT AND COMMUNICATION, HAZARD MONITORING, AND EARLY WARNING CAPACITIES

### 7.1 Improve the quality and coverage of and access to risk assessment data

- Institutionalize hazard monitoring and risk assessment results across SINAGIR to support disaster planning and evidence-based decision making.
- Incorporate digital data standards into the risk assessment standard.
- Centralize risk assessment data through an existing platform (e.g., INTEROPER.AR) or a new open GIS data platform, and incentivize provincial information sharing through access.
- Advance risk mapping initiatives on the Mi Argentina (argentina.gob.ar) e-government website, and advance open data efforts per Decree 117/2016 (Decree on Data Opening Plans) and Resolution 19/2018 (Implementation of the Data Interoperability Platform).
- Incorporate vulnerabilities assessment and climate change forecasting into risk assessment processes through coordination with environmental and social agencies and stakeholders.
- Transfer local risk assessment competency development efforts from SPC to the provincial level through the development of online training access and by administering training of trainer courses for provincial civil protection staff.
- Increase engagement with indigenous leaders to better incorporate indigenous knowledge in risk assessments (where applicable).
- Strengthen risk assessment standard compliance enforcement mechanisms.
- Prioritize socialization of the risk assessment standard.

### 7.2 Harness emerging technologies

- In collaboration with GIRCyT and MINCYT, conduct a science, technology, and innovation scoping and feasibility study of emerging technologies to support hazard monitoring, risk communications, and early warning (notably IoT, SMS, and mobile app-based systems; GIS analytics; Big Data; and remote sensing).
- Align modernization projects with e-governance, open data, and sustainable development strategies, as well as in support of future disaster recovery planning efforts.
- Coordinate with universities and private sector partners to conduct “hack-a-thons” focused on the identification of low-cost DRR innovations.
- Prioritize emerging technologies use as a requirement of FONAE and FONDEN support.

### 7.3 Expand risk communication and warning reach and effectiveness

- Inventory and map the geographic coverage of monitoring, risk communication, and warning capabilities.
- Coordinate with the Ministry of Social Development and the Ministry of Women, Gender, and Diversity to assess risk knowledge and perception of vulnerable populations and to identify avenues of engagement with those communities for risk communication and warning.
- Mandate periodic testing of early warning systems and link such tests to risk communication efforts and school based DRR curriculum.
- Tailor National Meteorological Service (SMN) bulletins to public user locations.

# 8

## ADVANCE LOCAL DISASTER MANAGEMENT CAPACITY

### 8.1 Strengthen emergency services access

- In partnership with the Volunteer Firefighters of Argentina, assess and map emergency services dead zones (areas where fewer than one fire station exists per 130 square km and/or fewer than one firefighter exists per 5,000 people).
- Develop public-private partnerships, work with development partners and foundations, and other means (including line-item budgeting) to support the construction of emergency services facilities and equipment purchase in emergency services dead zones.

### 8.2 Develop and institutionalize a standard national exercise program

- Establish a distinct program or office in SPC responsible for disaster management exercise policy and doctrine.
- Create a national exercise standard and comprehensive exercise program requirements.
- Incentivize exercise conduct through technical and financial assistance.

### 8.3 Increase community surge capacity

- Formalize SINAGIR surge capacity provisions to improve the delivery of mutual aid, including disasters that do not reach the level of a national declaration.
- Develop a standard national curriculum to support the training and staffing of community-based volunteer emergency teams, including courses for team administrators.
- Empower local community organizations and the Argentine Red Cross to oversee community emergency team training.
- Integrate trained surge responders into provincial exercise and training efforts.
- Formalize SINAGIR surge capacity provisions to improve the delivery of mutual aid.
- Establish and exercise responder credentialing processes and systems.

### 8.4 Close community emergency shelter coverage gaps and address shelter resource shortages.

- Link shelter supply requirements to community preparedness ratings (to better understand and meet likely sheltering requests during disaster events).
- Address emergency shelter supply acquisitions through assessment of Ministry of Health and Social Welfare warehouse inventories, public-private partnerships, and agreements with NGO partners.

# 9

## STRENGTHEN RESILIENCE BY REDUCING VULNERABILITY AND INCREASING COPING CAPACITY

### 9.1 Promote economic stability

- Continue engaging with international and I/NGO partners to identify strategies that reduce economic instability. Reducing inflation, protecting market price for consumer goods, and promoting sustainable growth in local capital markets will strengthen economic capacity in Argentina.
- Continue prioritizing social expenditures for vulnerable and low-income populations. Social benefits strengthen the social safety net and reduce economic constraints.

### 9.2 Reduce gender disparities

- Continue to promote gender equality, including equal access to education, labor participation, wages and access to credit, and political rights and representation. Reducing gender disparities empowers women and balances economic development opportunities for both men and women across Argentina.

### 9.3 Increase communications capacity

- Identify and work with partners to expand, strengthen, and secure national, provincial, and community-level communications capacities, including fixed and mobile telephone, internet, and radio communications. By ensuring equitable coverage and building redundancy into the communications network, increasing communications capacity safeguards access to critical information during disasters.

# 10

## REASSESS PROGRESS MADE TOWARD DRR AND RESILIENCE GOALS

### 10.1 Update the NDPBA

- 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 Argentina's Disaster Risk Reduction and Sustainable Development Goals for a more resilient nation.



**NDPBA**

# PROVINCE RISK PROFILES

**SUBNATIONAL ASSESSMENT  
RESULTS**

Download Province Risk profiles:  
[https://www.pdc.org/wp-content/uploads/NDPBA-ARG-Provinces-Profile\\_Merged.pdf](https://www.pdc.org/wp-content/uploads/NDPBA-ARG-Provinces-Profile_Merged.pdf)



# PROVINCE RISK PROFILES

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

Each provincial recommendation looks at one of the top four drivers of resilience through the lens of the existing national disaster management structure in Argentina. The recommendations are designed to be concise, actionable, and supported by the data.

## APPLYING RESULTS

Characterizing risk in terms of multi-hazard exposure, vulnerability, and coping capacity, the RVA provides necessary justification to support policy decisions that will protect lives and reduce losses from disasters. The RVA results allow decision makers examine the drivers of risk for each district in Argentina, providing evidence to support the identification, assessment, and prioritization of investments that will have the greatest impact on disaster risk reduction. The NDPBA RVA results establish a subnational foundation for monitoring risk and vulnerability over time and enhance the DRR decision making process through improved access to temporal and spatial data for all districts in Argentina.



NDPBA

# APPENDIX A

RVA METADATA

[Download Appendix A:  
https://www.pdc.org/ndpba-arg-appendix-a](https://www.pdc.org/ndpba-arg-appendix-a)

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