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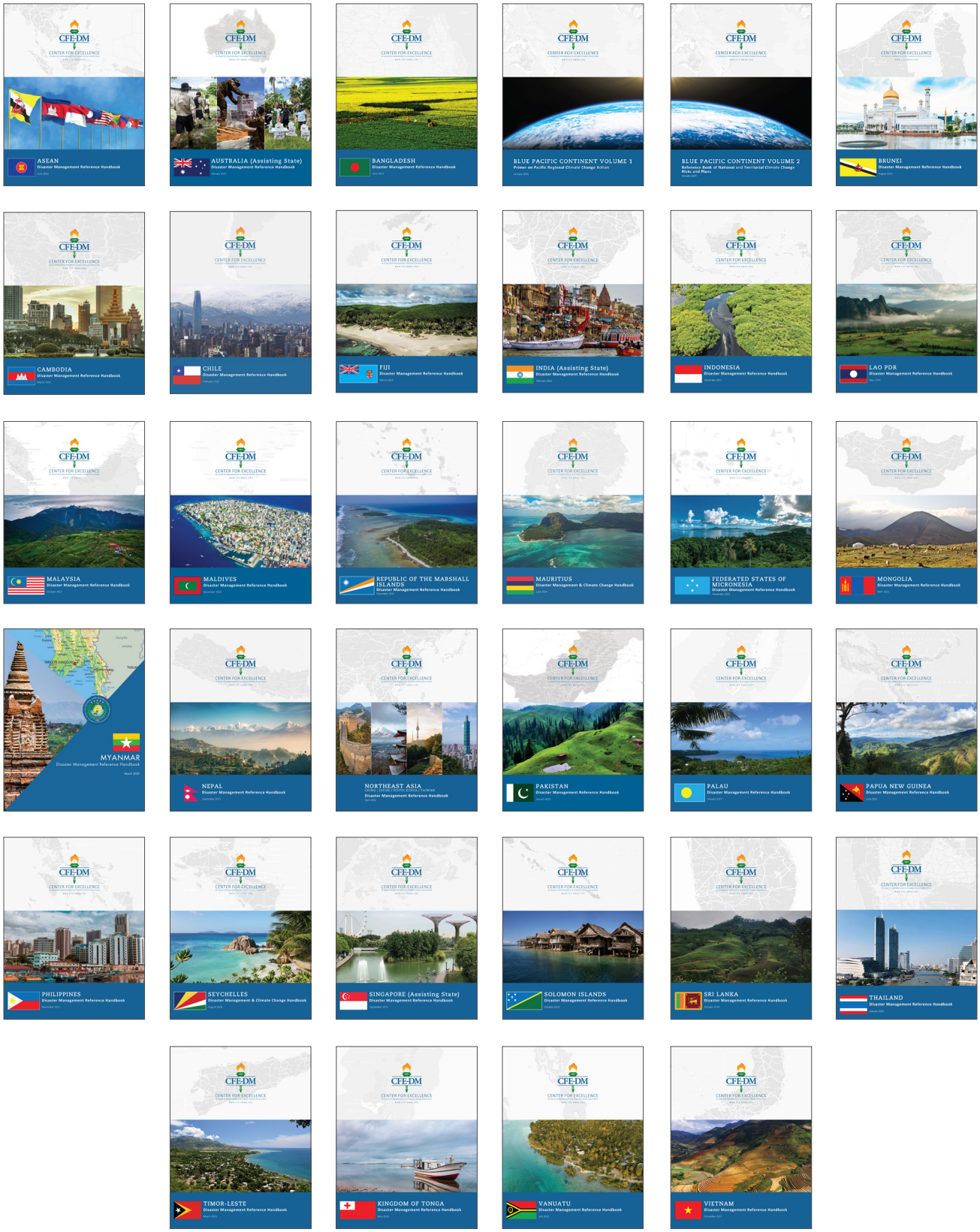
CHILE

Disaster Management Reference Handbook

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Front Cover

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

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Letter from the Director

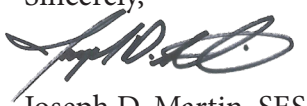
Chile is an important partner in disaster response in the Indo-Pacific and Latin America regions. Chile has developed a robust domestic disaster management framework, and it brings this expertise and experience to bear during disaster risk reduction (DRR) activities and disaster response operations.

In 2021, the Government of Chile (GoC) created a transformative new law establishing the National Disaster Prevention and Response System with the overall aim of decentralizing all phases of disaster risk management, strengthening capacity at the sub-national levels, and fostering a more participatory approach, inclusive of non-government public and private entities. Thus, disaster management public education campaigns have become more comprehensive, with increased focus on DRR, especially among Chile's vulnerable and special interest populations. As the GoC implements its new disaster management law, the country has also become a highly capable and active partner in humanitarian assistance and disaster response. Chile supports disaster response missions globally and regionally, but its high exposure and vulnerability to current and future hazards means the country may also, at times, be in a position of requesting external assistance.

Chile and the United States (U.S.) are close partners and allies, with a diplomatic relationship more than 200 years old. Our bilateral ties proudly address global challenges, advance human rights, and further security and prosperity in the region. Regular military-military engagements improve interoperability between Chilean and U.S. forces and enhance Chile's ability to participate in global peacekeeping and other security operations, including disaster response. Examples of these engagements include: the bilateral field training exercise, SOUTHERN FENIX 2024; U.S. Southern Command (SOUTHCOM) Commanding General Laura Richardson's visit to Chile in August 2024; SOUTHCOM's ongoing Women, Peace and Security program with counterparts in the Chilean armed forces; and the SOUTHCOM Humanitarian Assistance Program, which included 25 projects in FY24, totaling US$553,000 in support to Chilean volunteer fire departments and Chile's National Forestry Service. Furthermore, the Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DM) conducts its Humanitarian Assistance and Response Training course at SOUTHCOM annually to build U.S. military disaster response capacity in the region.

This Chile Disaster Management Reference Handbook contextualizes the historical, social, and economic factors underpinning initiatives to enhance Chile's resilience to natural and anthropogenic hazards. This publication explains the country's disaster management practices, outlining the frameworks, roles, and responsibilities of Chile's disaster management system. The handbook's primary objective is to serve as a resource for personnel within the U.S. armed forces who may engage alongside Chilean counterparts in disaster response operations or be involved in collaborative DRR activities, including military exercises.

Sincerely,



Joseph D. Martin, SES
Director

About the Center for Excellence in Disaster Management & Humanitarian Assistance

Overview

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

Vision

Joint Forces, Allies, and Partners are fully prepared to respond to crises across the spectrum of operating environments in the Indo-Pacific.

Mission

CFE-DM builds crisis response capacity in US, Allies and Partner militaries across the Indo-Pacific to save lives before, during, and after emergencies.

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EXECUTIVE SUMMARY

Chile is one of the most geographically extended countries in the world and is consequently exposed to a great variety of natural hazards. The country's diverse topography, which includes the Atacama Desert, the Andes Mountain range, and the Pacific Ocean, presents multiple environmental challenges. These challenges include earthquakes, volcanic eruptions, tsunamis, wildfires, floods, landslides, and droughts. The impacts of these hazards have been exacerbated by their increased frequency and severity. Furthermore, vulnerable populations disproportionately experience the adverse effects of such crises. Among the most vulnerable are women, children, individuals living in poverty or with disabilities, migrants, and indigenous minorities, all of whom face heightened risk related to environmental hazards, conflicts, and various socio-economic shocks.

Although Chile is a high-income country, its economy heavily depends on the mining, agriculture, and hydropower sectors, which are susceptible to recurring disruptions related to natural disasters. For example, Chile's infrastructure experiences an estimated annual loss of US$5.4 billion due to natural disasters.

Given Chile's disaster risk profile, the country's disaster risk management (DRM) framework has evolved significantly in the last 15 years to better address the nation's disaster response needs. Following the catastrophic Maule earthquake in 2010, the government of Chile (GoC) conducted a comprehensive review of its disaster management system. This assessment revealed critical areas requiring reform to enhance preparedness and mitigate disaster risk. In 2011, the government established the National Platform for Disaster Risk Reduction to improve coordination among public, private, and civil society institutions involved in DRM.

A pivotal reform in Chile's disaster management strategy was the 2021 enactment of Law 21.364, which restructured the National System for the Prevention and Response to Disasters (SINAPRED) and established the National Service for Disaster Prevention and Response (SENAPRED), formally replacing their predecessors - National Civil Protection System (SNPC) and National Office of Emergency of the Interior Ministry (ONEMI), respectively.[1] This reform is still underway and aims to decentralize national, provincial, and local decision-making processes while enhancing disaster risk reduction (DRR).

SINAPRED consists of various federal entities, including the Ministries of Interior and Public Security, Defense, Energy, Transport and Telecommunications, Health, Public Works, Foreign Affairs, Justice, Housing and Urban Development, Social Development, Education, National Assets, Environment, Agriculture, and Sports, alongside SENAPRED, law enforcement, and firefighters.

International organizations such as the United Nations (UN) System in Chile, the Chilean Red Cross Society, and U.S. Government agencies, including the DoD and Department of State, also support the Chilean government's disaster response framework.

Although Chile's disaster management system has made considerable progress in addressing the diverse hazards to which the country is exposed, challenges persist, particularly concerning decentralization of decision-making, enhancement of local resilience, coordination between governmental and local or civil society entities, and alignment of disaster preparedness strategies with evolving disaster risk. Ongoing efforts to improve preparedness, cultivate community engagement, and adapt to emerging disaster risk will be crucial in mitigating the adverse effects of natural disasters in Chile.

COUNTRY OVERVIEW

History

Historically, a diverse array of Indigenous Amerindian societies inhabited the territory that corresponds to contemporary Chile. The Inca Empire ruled in the northernmost regions of the area. At the same time, Araucanians, particularly the Mapuche, predominately inhabited the southern territories, and their population is estimated to have reached approximately one million individuals at the time of the Spanish arrival in the 1530s. The Spanish conquest of the territory of modern Chile was initiated by an expedition that started in Peru and resulted in the establishment of Santiago on 12 February 1541. During the latter half of the 18th century, Chile experienced a significant increase in exchanges with Argentina, the U.S., and Europe, and these exchanges facilitated the introduction of new liberal ideas. In 1807, Napoleon Bonaparte invaded Spain and installed his brother on the Spanish throne, an event that catalyzed Chile's quest for independence and autonomy. This movement commenced with establishment of the First National Board of Government on 18 September 1810 and culminated in the Declaration of Independence on 12 February 1818.[2]

The Chilean populace, led by prominent figures such as Bernardo O'Higgins Riquelme and José de San Martín, successfully rebelled against Spanish rule and achieved victory at the Battle of Maipú on 5 April 1818. This decisive battle secured Chile's formal independence. Following independence, Bernardo O'Higgins served as the Supreme Director of Chile beginning in 1817; however, increasing dissatisfaction with his leadership led to his ouster by military forces in 1823. Subsequent years were marked by political instability, characterized by a rapid succession of presidents and constitutional frameworks until 1830. From 1830 to 1837, Diego Portales Palazuelos was a dominant figure advocating for the 1833 "Portalian" constitution. Despite persistent uprisings during this "Portalian state" period, Chile experienced notable economic prosperity and territorial expansion, mainly through the successful prosecution of the 1879 War of the Pacific against the Peru-Bolivia Confederation. The war concluded with the 1883 Treaty of Ancón, which secured Chilean access to the Pacific Ocean and erased Bolivia's maritime outlet. In the aftermath of the War of the Pacific, Chile's military turned its attention toward the Araucanians. The decisive defeat of the Mapuche in 1882 facilitated the opening of vast territory for exploitation by affluent Chileans, who subsequently established large estates. Consequently, many Mapuche fled to Argentina, and those who remained were clustered into tribal reservations.

From the mid-19th century onward, Chile experienced significant urban growth, driven by an influx of immigrants and domestic migrants seeking employment in the expanding manufacturing sector. In the early 20th century, this demographic shift catalyzed a wave of labor organizing, unrest, and strikes across key industries, particularly within the northern nitrate and copper mines, port towns, and cities. President Arturo Alessandri Palma (1920-1924, 1925, 1932-1938) initiated a series of reforms in response to these socio-political challenges. However, in 1924, the political landscape dramatically shifted following a double coup, culminating in the formulation of the country's second constitution. The 1925 constitution marked a pivotal moment in Chilean history, as it enshrined the principles of church-state separation, recognized the right of workers to organize, and affirmed the social welfare rights of all citizens.

The socio-political landscape of Chile underwent a significant transformation during the tumultuous period marked by the Great Depression, which began in 1929. This global economic crisis catalyzed a leftward political shift, characterized by the unification of

socialists, communists, and centrist radicals into the Popular Front. This coalition secured the presidency in 1938 and maintained governance until 1952. In the aftermath of World War II, starting in the 1950s, Chile experienced sluggish economic growth accompanied by increased political activism, leading to increased mobilization, polarization, and radicalization within the political arena. The 1964 presidential election became a pivotal moment as the political right coalesced around candidate Eduardo Frei Montalva to thwart a potential victory by Salvador Allende, a Marxist. The Frei administration adopted an independent stance in foreign relations, notably providing substantial support to multilateral organizations. It also ensured that Chile received the highest per capita aid from the U.S. compared to other Latin American states.

As the 1970 presidential election approached, support for Frei's party began to wane. Under the banner of the Popular Unity coalition, the left committed to a socialist agenda, and Allende emerged as their nominee. In November 1970, following his election victory, Allende quickly initiated a program to socialize the economy, which included the nationalization of copper mines and the expropriation of foreign enterprises, banks, and large estates. During the subsequent years of the Popular Unity government, the Chilean economy entered a contraction phase. Allende's attempts to stabilize the economy proved ineffective, and his decision to appoint military officers to cabinet positions in 1972 and 1973 contributed to the politicization of the armed forces. Confrontation between the opposing political factions intensified. In early September 1973, as Allende prepared to call for a national plebiscite to resolve the political deadlock, the military preemptively launched a coup against the civilian government on 11 September. Before the coup, military commanders, led by Army General Augusto Pinochet Ugarte, purged officers sympathetic to Allende. The president ultimately committed suicide amid the assault, and despite instances of sporadic resistance, the military rapidly consolidated its control over the nation.

The military commanders assumed control over legislative functions by closing Congress. Mass media, education, political activity, and labor organizing were purged, suppressed, and banned, and an environment of fear reigned. Nevertheless, the opposition-in-exile managed to mobilize international support and foster diplomatic isolation of the Pinochet regime. While the initial years of the regime witnessed a substantial increase in financial aid and loans from the U.S., relations deteriorated following the 1976 election of President Jimmy Carter, who criticized the regime's human rights violations. To legitimize his rule amid growing international scrutiny, in 1978, Pinochet conducted a tightly controlled national plebiscite, and he claimed that over 75% of participants endorsed his regime's institutionalization. Under Pinochet's administration, economic policies of liberalization and privatization resulted in rapid economic growth from 1976 to 1981. Despite the regime's apparent strength and the consolidation of its power, by 1981, the eventual decline of the dictatorship was imminent and would occur with relative swiftness.

The economy collapsed in 1982. From 1983 to 1985, a wave of protests emerged, initially mobilized by organized labor and progressively involving the middle class, and they culminated in a concentration of dissent within urban shantytowns.[3] In 1989, the presidential election brought to power Patricio Aylwin, the nominee of the Christian Democratic Party. General Pinochet relinquished his role as head of state in 1990; however, he maintained his position as commander-in-chief of the armed forces. It was not until the presidency of Eduardo Frei (1994-2000), that the military's pervasive influence within the government began to diminish.

The 2005 presidential elections marked a significant political milestone in Chile with the election of Michelle Bachelet, a member of the Socialist Party and the nation's first female president. Her administration faced numerous challenges, including legal disputes with neighboring countries, natural disasters, and the resurgence of right-wing parties during the 2008 local elections. The political landscape

shifted dramatically in January 2010 when Sebastián Piñera, representing the right, won the presidency and ended the two-decade-long governance period of the left-wing Concertación coalition. Shortly after Piñera's inauguration in March 2010, Chile experienced its most severe natural disaster in fifty years—a devastating 8.8-magnitude earthquake and subsequent tsunami, which resulted in significant loss of life and widespread destruction. The Piñera administration prioritized disaster recovery efforts; however, it also contended with rising socio-political unrest that culminated in Bachelet's political resurgence. In 2013 elections, she regained the presidency, but by October 2014, she faced renewed public discontent as tens of thousands of parents participated in marches opposing government plans to eliminate subsidized educational institutions.

President Piñera returned to power after the 2017 elections. During October and November 2019, Chile experienced extensive mass protests predominantly driven by public discontent over economic inequality. In response to these widespread demonstrations, the government opted to address the unrest by committing to a referendum on the 1980 constitution. Gabriel Boric ascended to the presidency following his electoral victory in the 2021 general elections, and on 11 March 2022, he officially took office as the youngest head of state in Chilean history. His administration has articulated a commitment to implementing reforms aimed at addressing the economic disparities that were central to the protests, and it also has sought to mitigate issues of corruption within the political landscape.[4]

Culture and Demographics

In 2024, Chile had an estimated population of 19.8 million people.[5] The estimated sex ratio is 0.97 male per female.[6] Chileans perceive their society as quite homogeneous, despite regional and geographical differences. Factors such as the prevalence of the Chilean Spanish language, the prominence of Catholicism, and the country's relative geographic isolation from the rest of South America have significantly contributed to the cohesion of Chilean culture. Nonetheless, the political and economic reorganization initiated by President Pinochet, followed by the return to democratic governance, catalyzed substantial transformations across various facets of Chilean society over the past three decades. Since Chile's reintegration into the global community in 1990, alongside marked internal socio-cultural shifts, there has been a notable increase in the visibility of the identities of the country's Indigenous populations and its diverse immigrant communities. Despite Chile's predominantly Caucasian ethno-racial character, a complex interplay of mixed ethnic heritages exists. In 2013, 9.1% of the total population self-identified as Indigenous, and in following years this percentage increased.[7] This diversity reflects the many ancestral origins that have historically contributed to and continue to shape the Chilean cultural landscape.[8]

Ethnic Makeup

According to the 2017 census, Caucasian/non-Indigenous people comprise 87.2% of the population. In response to census questions regarding Indigenous identity, 12.8% of respondents identified as belonging to an Indigenous group. Of these 2.1 million individuals, 1.7 million, or 78% of the Indigenous population (9.9% of Chile's total population), identify as Mapuche. The census also highlights other significant Indigenous groups, including the Aymara, totaling around 156,000 individuals, and the Diaguita, comprising approximately 88,000 individuals. Additional Indigenous groups identified in the population include the Rapa Nui, Likan Antai, Quechua, Colla, Kawesqar, Yahgan, and Yamana.[9]

Key Population Centers

Among urban centers, Santiago Metropolis stands out as the largest city, boasting approximately 7.2 million residents. Following Santiago Metropolis are Greater Valparaíso and Greater Concepción, with populations of 979,000 and 945,000, respectively. The population distribution in Chile is concentrated within the

Santiago Metropolis, which has a population density of 8,470 people per square kilometer (km^2; 21,925 people per square mile [mi^2]) whereas the national average is 27 people per km^2 (69 people per mi^2).[10] As of 2023, 88.01% of the population of Chile is urban.[11]

Language

Spanish serves as Chile's official language, and approximately 99.5% of the population speaks the language. Indigenous languages are spoken by around 1% of Chileans.[12] The Chilean dialect of Spanish has integrated specific Mapuche vocabulary and has cultivated numerous *chilenismos*, or Chilean slang terms.[13] Chile has six recognized Indigenous languages, yet only 20% of the Indigenous population actively speaks their ancestral language. The most common Indigenous tongues include Mapudungun, which the Mapuche people speak; Quechua, primarily found in the northern regions; Aymara; and Rapa Nui, associated with Rapa Nui (Easter Island).[14]

Religion

The constitution of Chile enshrines the principles of freedom of conscience and worship and effectively safeguards individuals' rights to practice their religion without interference. To facilitate communication between diverse faith communities and the government, the National Office of Religious Affairs operates as an executive agency responsible for representing the interests of religious minorities. This office plays a crucial role in ensuring the protection of the rights of people to believe and practice as they see fit.[15]

Estimates from 2021 found that 70% of the population identifies as Roman Catholic, while an estimated 18% identify as "evangelical." In this context, the term "evangelical" encompasses non-Catholic Christian groups, including the majority of mainstream Protestant denominations as well as Charismatic Christians. There are smaller communities representing various religious traditions, such as Baha'i, Buddhism, Judaism, Islam, Jehovah's Witnesses, Seventh-day Adventism, the Family Federation for World Peace and Unification (commonly known as the Unification Church), the Church of Jesus Christ of Latter-day Saints, Orthodox Christianity, and other unspecified religious affiliations. About 4% of the population identifies as atheist or agnostic, and an additional 17% identifies as nonreligious.[16]

The Catholic Church has historically exerted significant influence in Chile. It was introduced by Spanish colonists in the 16th century. Following the military coup of 1973, the Church was instrumental in opposing the Pinochet regime and collaborating with leaders from Protestant and Jewish communities to advocate for human rights. With the restoration of democracy, the Catholic Church shifted its focus back to traditional values. It allied with conservative political factions, and this transition has contributed to a gradual decline in the number of adherents to Catholicism and lessened the Church's societal influence. Despite this decline, many Chileans seek solace and a sense of security from the Catholic Church in times of crisis. Observance of Catholic holidays and significant life events remains deeply ingrained in the cultural fabric of Chilean society. For instance, First Communion is typically celebrated when children reach 8 years of age, and older generations often commemorate their saint's day with the same significance as their birthday.[17]

The percentage of individuals in Chile who identify as Protestant remains significantly lower than that of those who identify as Catholic; however, the popularity of Protestantism is steadily increasing. Historical accounts suggest that Protestantism was introduced to Chile by German Lutheran immigrants during the early 19th century. Socioeconomic factors markedly influence the distribution of practicing Catholics and Protestants. Many Chileans who identify as Protestant come from lower socioeconomic strata. In the early 2000s, there was a notable increase in the number of Baptist Protestant churches, facilitating the engagement of individuals from higher socioeconomic classes and with higher educational backgrounds with Protestant practices. Approximately two-thirds of all Protestants in Chile adhere to either Pentecostal or Charismatic beliefs, positioning

Chile as one of the most "Pentecostalized" nations in Latin America.[18]

Vulnerable Groups

In examining the impact of disasters, it becomes evident that society's vulnerable groups frequently bear the brunt of such crises. These populations are often inadequately represented in pre-disaster preparedness efforts or strategic planning for disaster management and subsequent recovery processes. In Chile, specific demographic groups are particularly susceptible to adverse outcomes such as loss of life, livelihoods, or property. The vulnerability of these groups may be attributed to geographical location, occupational hazards, or varying legal statuses, which compound their susceptibility.

Indigenous Populations

A diverse array of Indigenous groups inhabits Chile, each distinguished by unique cultural practices, social structures, and ways of life. Since 2020, trends indicate a significant and sustained increase in the urban Indigenous population, with 87.8% of Indigenous individuals residing in urban areas, while only 12.2% remain in rural regions.[19] Historically, the Indigenous populations of Chile had developed diverse subsistence strategies, including agriculture, fishing, and hunting, which were tailored to the varied environments in which they lived. Their economic systems were sophisticated, and their cultural traditions were rich, as evidenced by their advanced practices in pottery, weaving, metalworking, and other artisanal crafts.[20]

Chile's 1980 Constitution does not recognize the existence and rights of Indigenous peoples, and this gap results in significant challenges regarding their territorial rights. According to Law 19.253 of 1993 on the Promotion, Protection and Development of Indigenous Peoples, or the "Indigenous Law," Indigenous ethnic groups recognized by Chile include the Mapuche, Aymara, Rapa Nui, Diaguita, Atacameño, Quechua, Colla, Chango, Kawésqar, and Yahgan.[21] Law 19.253 has not been amended despite urgent reform being needed to bring it into line with current international standards on the rights of Indigenous Peoples, such as the International Labour Organization Convention 169, which was ratified by Chile in 2008. Chile has also adopted the 2007 UN Declaration on the Rights of Indigenous Peoples and the 2016 American Declaration on the Rights of Indigenous Peoples.[22] Law 19.253 has faced significant criticism for its inadequacy in aligning with international legal standards that protect the rights of Indigenous peoples regarding land, territory, natural resources, and political participation and autonomy.

Northern Communities

In the north, Andean peoples, such as the Aymara and Quechua, dominate the highland Altiplano. In Antofagasta, the largest Indigenous population is the Atacameños, who are also regarded as an Andean people and were once ruled under the Inca Empire.[23] The Indigenous communities of northern Chile have historically faced significant challenges stemming from mining conflicts and damaging impacts of mining on their local water systems.[24]

In 2022, a lawsuit initiated by the Environmental Superintendency (Consejo de Defensa del Estado, CDE), in collaboration with the Council of Atacameño Peoples and various Atacama communities, against Minera Escondida Limitada—operated by BHP Billiton—represented a significant legal challenge concerning environmental degradation. The litigation centers on the detrimental effects associated with the extraction of freshwater from the Punta Negra Salt Flats, where this extraction supported copper production activities between 1997 and 2017. The plaintiffs contend that although the affected aquifer may have the potential for recovery, the estimated timeline for this recovery—approaching a century—poses substantial risk to the desert ecosystem's flora and fauna. This prolonged environmental impact threatens to disrupt the traditional ways of life of the Atacama communities, highlighting the intersection of ecological sustainability and Indigenous rights.[25]

Southern Communities

The Mapuche are central and southern Chile's most significant Indigenous population.[26] In the extreme south are several other small groups, such as the Kawésqar and the Yahgan. The Araucanía Region, located in the northern section of Chile's south, is home to approximately 80% of the country's Indigenous population. The region is characterized by elevated levels of poverty, making it the most economically disadvantaged area in the country. In response to these socioeconomic challenges, many members of the Mapuche community have migrated to more affluent regions of Chile, including Santiago and the southern areas of Aysén and Magallanes.[27]

Law 20.249, which establishes the Marine Coastal Spaces of Indigenous Peoples (ECMPO) — commonly referred to as the "Lafkenche Law" — represents a significant policy initiative aimed at preserving the traditional practices and natural resource management of coastal communities. The primary objective of this legislation is articulated in Article 3, which states the intent to "safeguard the customary use of these spaces in order to maintain the traditions and natural resource use of the communities linked to the coastal areas." Since March 2024, more than 100 ECMPO applications have been received across seven regions, covering an area of more than 30,000 km² (11,583 mi²). The prolonged processing times associated with the evaluation of ECMPOs have resulted in approximately 13% of these obligations remaining unfulfilled because they exceed the established legal deadlines. In April 2023, legislative efforts were initiated to amend the ECMPO Law with the purported aim of "enhancing its implementation." This legislative initiative raises concerns as it appears to undermine the rights previously secured by the Indigenous communities residing along Chile's coastal regions.[28]

Rapa Nui

The Rapa Nui inhabitants of Easter Island number just fewer than 3,000 people. They represent a subgroup within the broader global Polynesian population and likely trace their ancestry to the Marquesas Islands.[29] The main community of Rapa Nui is located at Hanga Roa, and the island is accessible by commercial air service from Chile. Easter Island is internationally renowned for the *moai*, monumental stone figures, which symbolize the cultural identity of the Rapa Nui people and exemplify their architectural and artistic abilities.[30]

On 4 October 2022, in response to a major fire event at the Rano Raraku visitation site on Easter Island, the United Nations Educational, Scientific and Cultural Organization (UNESCO) collaborated with the Indigenous community of Mau Henua and various governmental and civil society entities to assess the damage. This collaborative effort culminated in a comprehensive risk management plan to conserve the Rano Raraku site, enhance local capacity for disaster prevention, and ensure a coordinated and timely response to future emergencies.[31]

Women

In 2023, 50.3% of the Chilean population was female.[32] The country's social framework is conservative and characterized by traditional gender roles and a patriarchal culture.

Throughout the 20th century, there was an increase in women's involvement in political activism and social protest, facilitated by the emergence of women's rights organizations. This activism culminated in legislative reforms aimed at establishing gender equality and prohibiting gender-based discrimination. There have been significant advances in women's educational attainment, labor force participation, and legal rights since the restoration of democracy in 1990. The legalization of divorce in 2004 represented a substantial shift in familial and social dynamics, while the election of Michelle Bachelet as the first female president in 2006 further exemplified the progress achieved in women's political representation. Despite these advancements, Chilean women continue to encounter persistent

economic and political challenges. Issues such as income disparity, elevated rates of domestic violence, and the endurance of traditional cultural practices continue to impede the realization of full gender equality in the country.

In the context of disaster management, it is observed that, following disasters, women and girls experience heightened vulnerability and disproportionately greater suffering compared to their male counterparts. This increased vulnerability is largely attributable to entrenched societal norms that assign women specific post-disaster roles, including childcare, cleanup efforts, shelter organization, and care for elderly family members. After a disaster, women encounter various challenges that hinder their recovery. These challenges include delays in the restoration of social services, loss of income, the absence of financial support from partners, an increased risk of gender-based violence, and the potential for post-traumatic stress to go unaddressed. Indigenous women, especially those in rural areas, bear a significant burden exacerbated by disaster events such as droughts, which adversely impact their income opportunities, diminish their participation in agricultural work, and increase the likelihood of their being relegated to unpaid family labor or being excluded from the labor market altogether. Despite facing numerous challenges, Indigenous women in Chile, who have a profound connection to their land, often lead efforts in environmental conservation and disaster preparedness.[33]

Disasters can create opportunities for role-changing in society. The aftermath of the 2010 earthquake and tsunami in Chile caused profound changes in the gender roles and relations. Women moved from passive victims to active agents of change, contributing economically, socially, and politically to the community.[34]

Children

As of 2024, children ages 0-14 years constitute 19.2% of the population, with 1,822,908 male and 1,751,528 female individuals recorded in this age group.[35] In Chile, a substantially higher proportion of the child population resides in urban areas than in rural regions. Persistent disparities in development and opportunities remain evident between these two groups, particularly concerning education and health care. Research indicates that urban children in Chile exhibit greater average height and weight than their rural counterparts, likely a reflection of significant differences in nutritional access. Furthermore, children residing in rural Chile often face considerable challenges, including restricted access to health care, limited employment opportunities for their families, and a closer adherence to traditional Indigenous practices. The incidence of poverty is frequently higher in rural regions, a situation with detrimental effects on the overall well-being and development of these children.[36]

The period from 1990 to 2006 marked significant advancements in Chile's recognition and enforcement of children's rights. On 13 August 1990, Chile ratified the Convention on the Rights of the Child. In 1992, the Ministry of Planning initiated a National Action Plan (NAP) in Favor of Children, which was influenced by the commitments undertaken by the Chilean President at the World Summit for Children in 1990. This NAP represented the first substantial effort by the Chilean government to establish coherent and coordinated policies addressing children's rights. Under the Frei administration (1994-2000), several legislative measures were enacted to protect children's rights; these initiatives included the enactment of a law that prohibits discrimination against children, an adoption law that eliminated disparities for children born out of wedlock, and legislation targeting domestic violence, as well as regulations concerning national and international child abduction and the duties and rights of parents related to financial support. In 1995, the government established the National Committee Against Child Abuse, and in 1996, it launched the National Advisory Committee for the Prevention and Eradication of Child Labor.[37]

People Living in Poverty

According to data from the World Bank, approximately 6.5% of Chile's population live in poverty, based on national poverty thresholds from 2022. The proportion of the population surviving on less than US$3.20 per day had decreased to 0.9% that year.[38] Real wages have seen a notable increase, with the national median monthly salary reaching approximately 1.8 million Chilean Pesos (US$2,338) in 2023.[39] An analysis conducted by the Organisation for Economic Co-operation and Development (OECD) in their 2020 "How's Life?" survey revealed that only about 56% of Chilean individuals ages 15-64 years are engaged in paid employment, a percentage slightly below the OECD employment average of 66%. The employment rates further indicate disparities based on gender, with around 65% of men participating in the workforce compared to 47% of women.[40]

People Living with Disabilities

Chile ratified the Convention on the Rights of Persons with Disabilities in 2008, and this ratification initiated a series of legislative and policy reforms designed to align the national legal framework with international obligations. In early 2010, the Equal Opportunities and Social Inclusion of Persons with Disabilities Act (Act 20.422) incorporated the standards and principles outlined in the Convention.[41] This legislation established the National Service for Persons with Disabilities (Servicio Nacional de la Discapacidad, SENADIS), which oversees the coordination of disability-related activities and social services provided by various government entities.

Individuals with disabilities are disproportionately affected by disasters. It is essential to incorporate this group into DRR strategies and disaster response and recovery efforts. Given the diverse array of hazards to which Chile is exposed, there is an essential need for established practices that inclusively address the needs of persons with disabilities. Recent disasters, such as wildfires in the southern and central regions, volcanic eruptions at Villarrica, and landslides in the north, have placed considerable pressure on SENADIS. The limitations experienced by its regional directorates, particularly the lack of adequate staffing for surveying affected populations, hinder efforts to appropriately assess and cater to the needs of individuals with disabilities within impacted communities.[42]

On 17 April 2023, the municipality of Pudahuel became the first city worldwide to implement the Scorecard's Addendum for the Inclusion of Persons with Disabilities. This initiative, developed by Inclusiva, a non-governmental organization (NGO), in collaboration with the United Nations Office for Disaster Risk Reduction (UNDRR), signifies a substantial advancement in integrating disability considerations within local DRM frameworks. Implementing the Scorecard's Addendum occurred during a workshop organized by UNDRR as part of its Making Cities Resilient 2030 initiative. By adopting a disability-sensitive framework in disaster resilience action planning, Pudahuel has made a significant stride toward realizing the UNDRR's Ten Essentials for Making Cities Resilient. These essentials provide a structural basis for implementing the Sendai Framework for DRR at the local level, reinforcing the critical importance of inclusivity in enhancing urban resilience against disasters.[43]

Immigrants

Over the past three decades, Chile has transitioned from a nation characterized primarily by emigration to one that increasingly attracts immigrants from Asia, Europe, the Middle East, and neighboring countries. According to the National Socioeconomic Classification Survey, immigrants constitute approximately 8.8% of Chile's population - about 1.7 million foreign-born residents.[44] Between 2017 and 2021, the foreign population in Chile roughly doubled, illustrating a significant demographic shift. Specifically, the immigrant population increased from around 1% in 2006 to approximately 9% by 2020. Significant segments

of this immigrant population originate from Bolivia, Colombia, Haiti, Peru, and Venezuela.[45]

Economics

Chile's robust macroeconomic policy framework positions the country among the highest-rated, lowest-risk sovereign bond issuers in Latin America. This framework has reinforced investor confidence and afforded the government substantial fiscal and monetary flexibility to stimulate economic revitalization after the Coronavirus Disease 2019 (COVID-19) pandemic. While there has been progress in the reduction of poverty levels, persistent inequalities remain.[46]

The country's economy is diverse and includes strong mining, services, agriculture, industry, tourism, retail, and telecommunications sub-sectors. As of 2022, the agricultural sector contributed 3.54% of gross domestic product (GDP), while the industrial sector accounted for 31.97%, and the services sector represented 54.26%.[47] Despite its overall economic stability, Chile confronts several challenges, especially reliance on volatile copper markets, the imperative to develop food self-sufficiency, and the need to enhance workforce productivity.[48]

In 2023, the country's GDP stood at US$579.201 billion, and GDP per capita was US$29,500.[49] In 2024, the real GDP growth rate averaged 2%, largely driven by the mining and services sectors. Meanwhile, in 2023, the country's gross national income (GNI) per capita was US$15,820, an increase of US$390 (2.53%) over 2022 numbers, which indicates rising household incomes in addition to the overall growth of the economy.[50] The unemployment rate declined among male workers, falling to 7.9%, whereas the unemployment rate for female workers increased to 9.0%. In terms of inflationary trends, a trajectory of disinflation in place after inflation peaked in 2022 halted in March 2024, and resurgent inflation reached 4.7% by August of the same year.[51] The inflation is primarily driven by the cumulative 60% increase in electricity tariffs between June 2024 and February 2025.

Chile's open and stable economic model has significantly strengthened trade and investment over recent decades. According to the World Economic Forum's ranking, Chile was the first economy in South America to gain membership in the OECD. Establishing a modern banking system has fostered development in diverse sectors, including insurance, leasing, stock exchanges, credit rating agencies, foreign direct investment (FDI), and capital funds. Chile maintains an extensive network of 30 Free Trade Agreements (FTA) encompassing 65 economies. According to data provided by the Undersecretariat of International Economic Relations (Subsecretaría de Relaciones Económicas Internacionales, SUBREI) and the Central Bank, in 2021, Chile's trade totaled US$186.548 million, a pronounced increase of 41% compared to 2020, a year marked by COVID-19 disruptions.[52] In 2023, Chile's total exports amounted to US$104.349 billion, with exports made up of a diverse range of commodities including copper ore, refined copper, raw copper, carbonates, lithium, and fish. The primary export partners for Chile are the People's Republic of China (PRC), Brazil, Japan, South Korea, and the U.S. Meanwhile, in 2023, Chile's imports totaled US$99.808 billion, comprising various commodities such as refined petroleum, automobiles, crude petroleum, garments, and trucks. Chile's principal import partners include Argentina, Brazil, PRC, Germany, and the U.S.[53]

The World Bank has played a pivotal role in enhancing Chile's financial resilience against the economic repercussions of natural disasters. The World Bank facilitated Chile's issuance of a catastrophe bond and swap totaling US$630 million, the Bank's largest single-country transaction. This financial instrument will offer Chile ready access to funds during a disaster. The country aims to safeguard its budget by securing these funds, thereby minimizing the potential need for debt mobilization following catastrophic events.[54]

Government

Chile is a presidential republic, operating under the 1980 Constitution and characterized by a unitary administrative system, which delegates certain functions and responsibilities to regional, provincial, and municipal levels of government.[55] The national government structure consists of the Executive, Legislative, and Judicial branches. The Executive Branch is headed by the President of the Republic, who serves as the chief of state and the head of government. The President holds authority to appoint members of the Cabinet and is responsible for overseeing the functions of Cabinet Ministers, government service personnel, and the Governors' offices. The powers vested in the Presidency encompass critical areas of policy formulation, diplomacy, military strategy, and financial governance. Consequently, the President functions as the foremost regulatory authority within the state.[56]

The legislature is a bicameral entity referred to as the National Congress (Congreso Nacional). The National Congress is comprised of the Senate (Senado) and the Chamber of Deputies (Camara de Diputados). The primary seat of legislative activities is in the city of Valparaíso. The responsibilities of the legislature extend beyond the formulation and enactment of laws; it also plays a critical role in exercising oversight of the Executive Branch to ensure a system of checks and balances.[57]

The Judicial Branch is an autonomous entity with exclusive authority to adjudicate civil and criminal matters and enforce judicial decisions. At the apex of the judicial hierarchy is the Supreme Court (Corte Suprema), composed of a court president and 20 members, appointed by the President of the Republic and approved by the Senate. In addition to the Supreme Court, the Constitutional Court functions autonomously with the primary responsibility of evaluating the constitutionality of legislative acts. The subordinate courts include Courts of Appeal, criminal tribunals, military tribunals, local police courts, and various specialized tribunals. These specialized courts address distinct domains, such as family law, labor disputes, customs regulations, tax issues, and electoral matters.[58]

The President is elected through direct, popular vote. If an absolute majority of the popular vote is not attained in the first round of voting, a second round is conducted. The presidential tenure is limited to a single, four-year term. The most recent presidential election was on 21 November 2021, and the next election is anticipated in November 2025. The Senate comprises 50 members who are elected directly through multi-seat constituencies via an open party-list proportional representation system. Senators serve terms of eight years, with half of the Senate's membership subject to renewal every four years. The Chamber of Deputies has 155 seats. Similar to the Senate, Deputies are directly elected within multi-seat constituencies via a party-list proportional representation vote. They serve four-year terms.[59] Judicial appointments typically entail lifetime tenure, contingent upon a mandatory retirement age set at 70 years. The appointment of the President of the Supreme Court and the judges is conducted by the President, with subsequent ratification by the court itself.[60]

Chile is administratively divided into 16 regions. Each region is administered by a Regional Governor, a position filled through a democratic selection process. A total of 56 provinces are overseen by Provincial Presidential Delegates, appointed by the President. The country is subdivided into 346 municipalities at the local government level, and each is managed by a Mayor and a Municipal Council. The composition of the Municipal Council is determined by the population residing within the municipality. Both the Mayor and council members are elected by popular vote, a process that occurs every four years.

A movement for reform of the 1980 Constitution was galvanized by widespread protests in 2019. They led to the October 2020 national plebiscite that initiated a formal process for constitutional alteration. In May 2021, Chile convened a Constitutional Convention comprising 155 elected members to draft a new constitution. This convention culminated in the publication of a proposed constitution

in July 2022. This comprehensive 388-article document was characterized by its ambitious aim to establish one of the most progressive constitutional frameworks globally. However, this proposal was met with substantial dissent, and 62% of voters rejected it in a national plebiscite held in September 2022. Subsequently, in January 2023, the Chilean Congress established a commission of 24 experts to develop a preliminary constitutional text. In May 2023, a new electoral process selected 50 councilors—comprising an equal number of men and women—to draft a constitution based on the experts' preliminary work. The Constitutional Council presented the final draft in November 2023, but it was rejected in a December referendum, wherein nearly 56% of voters opposed it. Following the persistent rejections of new constitutional proposals, President Boric brought the constitutional reform initiative to a close, and the 1980 Constitution remains in force.[61]

Environment

Geography

Chile's total land area is 756,102 km^2 (291,932 mi^2), with 12,290 km^2 (4,745 mi^2) of water bodies, including lakes and maritime claims. The country's geography can be roughly divided into three areas. The first, continental Chile, is located on the western coast of the southern cone of South America and is bordered by the Andes Mountain range to the east and the Pacific Ocean to the west. Its geographical configuration is distinctive, stretching 4,300 km (2,672 mi) north-south but only 180 km (112 mi) east-west.[62] The northernmost point of the country is the border with Peru, at 17°30'S, while the southernmost point lies at Cape Horn, at 56°S.[63]

The second geographical area, insular Chile, is a set of islands of volcanic origin in the South Pacific Ocean. Chile retains sovereignty over Easter Island (Rapa Nui), the Juan Fernandez Archipelago, and the volcanic islands of Sala y Gomez, San Felix, and San Ambrosio.[64]

The third geographical area, the Chilean Antarctic Territory, encompasses an expanse of 1,250,257.6 km^2 (7,768,738 mi^2) within Antarctica, between 53°W and 90°W. Chile asserts sovereignty over this region, extending its southern border to the South Pole, though the Antarctic Treaty, of which Chile is a signatory, effectively suspends this claim.[65]

Chile's coastline extends for approximately 6,435 km (4,000 mi), and the country exercises exclusive rights, various territorial claims, and sovereignty over a maritime region referred to as the Chilean Sea. This maritime area encompasses four distinct zones: the territorial sea, which spans 120,827 km^2 (75,078 mi^2); the adjacent area, covering 131,669 km^2 (81,815 mi^2); the exclusive economic zone, comprising 3,681,989 km^2 (2,287,881 mi^2); and the corresponding continental shelf, which measures 161,338 km^2 (10,0150 mi^2).[66] Figure 1 shows a map of Chile.[67] Chile's topography is diverse with landforms that range from high mountains, to deserts, to deep fjords.

Andes

In northern Chile, the Andes exhibit a broad and arid landscape, with altitudes ranging 5,000-6,000 meters (m; 16,500-19,500 feet [ft]). The most prominent peaks in this region are classified as extinct volcanoes. Towards the south, the mountain ranges decrease gradually in elevation; however, within central Chile—specifically between 32°S and 34°30'S—there is a notable resurgence in height, with the Andes presenting formidable peaks such as Mount Tupungato at 6,570 m (21,555 ft) and Maipo Volcano at 5,264 m (17,270 ft). These mountain summits are perennially covered with snow, a critical source for the rivers traversing central Chile. In the zone between 34°30'S and 42°S, the highest peaks consist of volcanic formations, with elevations ranging 2,651-3,505 m (8,700-11,500 ft). This range includes both extinct and active volcanoes. Beyond 42°S, the Andes decline in altitude, and the mountains become more dispersed due to the effects of glacial erosion. Further south lies Chilean Patagonia, a region encompassing Magallanes and Chilean Tierra del Fuego. Although the mountains in this area



Figure 1: Map of Chile

are generally lower in elevation, they still feature notable peaks; for instance, Mount San Valentín exceeds 3,657 m (12,000 ft), while Mount Darwin in Tierra del Fuego approaches an elevation of 2,438 m (8,000 ft).[68]

Central Valley

The alluvial deposits derived from the numerous Andean River systems in central Chile have resulted in mineral-rich soils that facilitate the development of thriving Mediterranean-type agriculture within the Central Valley, located in the depression between the Andes and the coastal mountain ranges. The Central Valley is Chile's most densely populated and agriculturally productive region. In south-central Chile, the intermediate depression is characterized by a complex interplay of fluvial and alluvial deposits, contributing to its suitability for grain cultivation and the establishment of pastures that underpin the dairy industry. Further south of the Biobío River, dense forests replace the previously dominant open scrub woodland, while moraines and lakes become prevalent features within the landscape. The intermediate depression descends to sea level at Puerto Montt. In the extreme southern regions, the visible landscape is defined by the Andes and the peaks of the coastal ranges, as the intermediate depression either submerges or transforms into a network of intracoastal channels and fjords.[69]

The Coastal Ranges

In northern and central Chile, coastal ranges constitute a prominent ridge that separates the intermediate depression from the Pacific coastline. These mountainous formations, typically not exceeding elevations of 1,980 m (6,500 ft), exhibit smooth contours and flattened summits due to their considerable geological age relative to the Andes. In both north-central and central Chile, the coastal ranges have notably escaped glaciation, and the once-dense vegetation in the area has suffered extensive destruction due to human activities. In regions where intensive agricultural practices have been pursued, soil degradation has occurred, resulting in severe erosion and depletion of essential organic and mineral nutrients. Conversely, well-preserved soils can still be found within the evergreen forests of the Cordillera de Nahuelbuta, located south of Concepción and in the coastal ranges south of Valdivia. Wave erosion has significantly influenced the configuration of Chile's coastline and harbors.[70]

Rivers

Most rivers in Chile originate in the Andes Mountains and flow westward to the Pacific Ocean, and they drain the intermediate depression and coastal ranges. The characteristics of Chile's rivers vary significantly. In the northern region, rivers are primarily nourished by summer rainfall on the Chilean-Bolivian Altiplano; as a result, their volumes are often minimal, leading to substantial absorption by soil or evaporation before reaching the Pacific Ocean. In contrast, rivers of central Chile exhibit more consistent flows and volumes, as they are fed by heavy rains and melting snow. In south-central Chile, south of the Biobío River, a steady flow is maintained primarily by consistent rainfall, and in the regions of Chilean Patagonia and Tierra del Fuego, intense precipitation and snowstorms throughout the year ensure rivers remain well-fed.[71]

Borders

Chile shares a total of 7,801 km (4,847 mi) of borders. To the north, the border with Peru measures 168 km (104 mi), and the border with Bolivia measures 942 km (585 mi). The eastern border with Argentina extends 6,691 km (4,157 mi). Additionally, Chile boasts 6,435 km (3,998 mi) of coastline along the Pacific Ocean.[72]

In 2013, Bolivia brought a legal complaint before the International Court of Justice (ICJ) with regard to an ongoing territorial dispute with Chile. The Bolivian government, then under the leadership of President Evo Morales, sought a judicial mandate compelling Chile to engage in negotiations concerning Bolivia's access to the Pacific Ocean. This access had been forfeited during the War of the Pacific (1879–1884), with the terms solidified in the 1904 Treaty of Peace and Friendship. Landlocked Bolivia relies extensively on Chilean territory for transit of most of La Paz' international trade. The Morales administration allocated significant political capital toward regaining sovereignty over 400 km (250 mi) of the coast. In 2018, the ICJ ruled that Chile had no legal obligation to enter negotiations regarding Bolivia's claim for sovereign access to the sea.[73]

The border between Chile and Peru is generally accepted; however, the maritime boundary is subject to dispute between the two countries. In 2008, the government of Peru brought the matter before the ICJ, where it asserted that the maritime boundary had not been adequately defined. The dispute involved approximately 38,000 km^2 (14,670 mi^2) of lucrative fishing grounds and other valuable resources. In 2014, the ICJ issued a rule that established the maritime boundary based on mid-20th-century treaties. Subsequently, Chile and Peru agreed to abide by the court's decision.[74]

The last territorial dispute between Chile and Argentina was resolved through a treaty ratified in 1998, two decades after the countries nearly went to war over territorial claims in the Beagle Channel, located within Tierra del Fuego. During the peak of these tensions, the Pope undertook a significant mediation effort; however, the dispute persisted between Santiago and Buenos Aires until 1990. The 1998 treaty established a definitive border that bisected the glacial expanse known as Hielos Continentales or Campo de Hielo Sur, and this agreement formally concluded the long-standing border conflict.[75]

Climate

Chile has four distinct macro-bioclimates: tropical, Mediterranean, temperate, and anti-borealis. These climatic zones encompass a remarkable diversity of ecosystems, comprising 127 terrestrial and 96 marine ecosystems. In general, the country experiences predominantly dry summers from November to January and wet winters from May to August.[76]

In the northern regions—Tarapacá, Antofagasta, and the Atacama—there exist locales where precipitation has never been recorded. Certain areas do experience sporadic winter rainfall, which triggers the springtime "Flowering Desert." In the north, coastal areas enjoy a temperate climate, but as elevation increases temperatures rise during daytime and plummet significantly at nighttime. In the high-altitude Altiplano, temperatures often descend below freezing during nighttime, even in summer. The climatic conditions in central

Chile's Coquimbo, Valparaíso, Santiago, Maule, Libertador B. O'Higgins, and Biobío regions feature a temperate climate with clearly defined seasons, dry summers, and relatively wet winters. Between the Biobío and Los Lagos regions, the climate is mild and rainy and supports expansive native rainforests and a thriving agricultural sector. Rainy, moderately cold climates mark the southernmost regions of Aysén and Magallanes, but precipitation and temperatures both fall as one moves toward the extreme south.[77]

On average, Chile experiences mild southern hemispheric summers between November and January, with mean annual temperatures of 10–12°C (50–53.6°F), and wet winters between May and August, with precipitation of 72-90 millimeters (mm; 2.8-3.5 inches [in]) per month. Chile's climate is primarily influenced by the El Niño Southern Oscillation (ENSO), Pacific Decadal Oscillation (PDO), and the Antarctic Oscillation. In Chile, years with an El Niño phase of the ENSO have higher probability of precipitation; together, the phases of the PDO and ENSO considerably affect snow accumulation. The Andes Mountains influence both temperature and precipitation across the country. Chile's extensive coast benefits from ocean upwelling, the movement of dense, cool, and nutrient rich water to the surface, but coastal regions' climates are also influenced by wind and ocean temperature patterns.[78]

Temperatures vary depending on latitude and altitude, with higher temperatures occurring during southern summer months (November-February). During the winter months, the northward advance of the polar front results in falling temperatures; however, this decrease is relatively small due to the moderating influences of the oceanic currents. The summer months can also see cooling sea breezes that temper high temperatures and prevent the occurrence of heat waves.

Precipitation follows a seasonal pattern; most precipitation occurs during winter, and drier conditions are experienced in the summer. Some areas, such as the Atacama Desert, seldom receive rainfall, but when they do it is during winter months. Southern areas receive more precipitation, which falls primarily during the southern winter. In the central region, near Santiago, there is a large inter-annual variation in precipitation with most of the precipitation falling during May and July and almost no precipitation between October and March.[79]

Figure 2 shows Chile's monthly average minimum, mean, and maximum surface air temperature and precipitation for the period 1991-2023.[80]

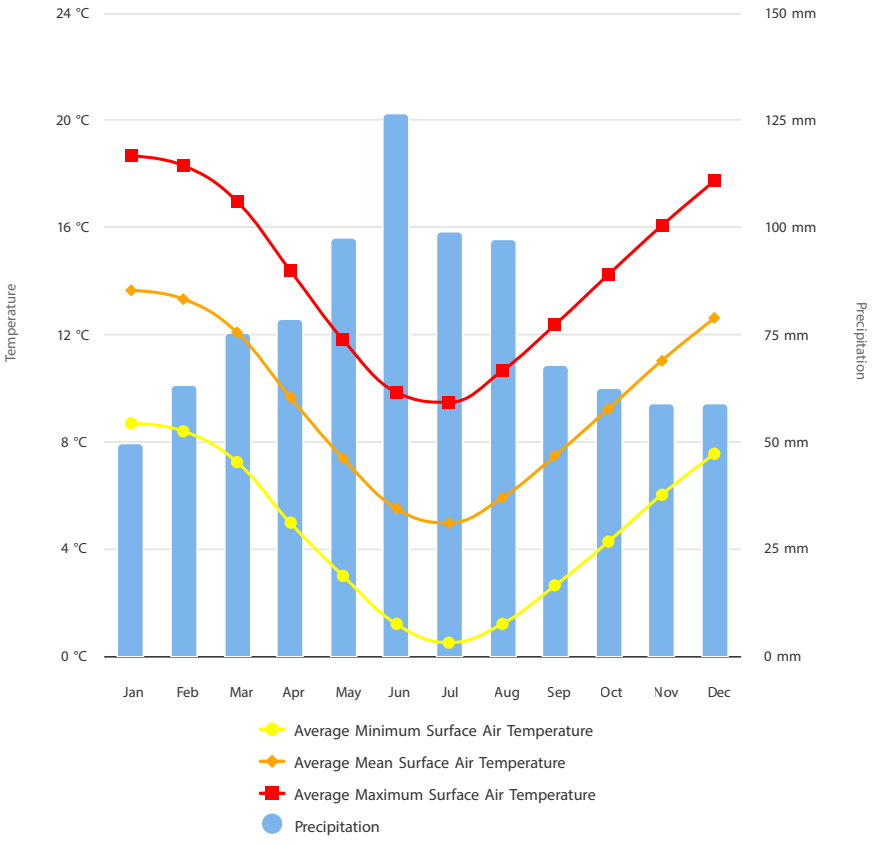


Figure 2: Average Monthly Precipitation and Temperatures, Chile (1991-2020)

DISASTER OVERVIEW

Chile is highly susceptible to a diverse range of natural disasters, primarily due to its geographical position on the Pacific "Ring of Fire" and the tectonic boundary between the Nazca and South American plates. This unique location results in frequent seismic and volcanic activity. Chile's extensive coastline along the Pacific Ocean also exposes it to tsunamis that result from undersea tectonic movement.

The nation has also faced a surge in climate-related hazards in recent years. Prolonged drought conditions, especially in the central and northern regions, have emerged as persistent challenges, significantly impacting water availability. These droughts have become increasingly severe, affecting agricultural productivity and hydropower generation—key components of the Chilean economy. Flooding and landslides represent further hazards for Chile, particularly during episodes of significant rainfall. The severity of these events is often exacerbated by factors such as deforestation and urban encroachment into ecologically vulnerable areas. The extensive mining industry, prevalent in these at-risk regions, frequently encounters disruptions due to such environmental hazards.

Climate Change

In Chile, average annual temperatures are expected to increase by 1.4–1.7°C (34.5–35.1°F) by mid-century and by as much as 3–3.5°C (37.4–38.3°F) by the end of the century. Northern areas of the country that currently experience tropical climates are expected to see a greater increase in temperature compared to the southern regions. Regional climate models project that temperature increases will be highest in the central regions. The number of frost days, days when the minimum temperature is below 0°C (32°F) is projected to decrease by 12–42 days by the 2050s and 37–69 days by the 2090s. Effects are projected to occur during winter months and be most pronounced in July and August. Summer days (maximum temperature above 25°C [77°F]) are expected to arrive earlier and their number to increase by 2–27 days by the 2050s and 17–61 days by 2090s.[81]

Chile's economy is highly susceptible to the adverse effects of emerging disaster risks, particularly within critical sectors such as fisheries and aquaculture, forestry, agriculture and livestock, and freshwater resources. These sectors are particularly vulnerable due to their reliance on stable climatic conditions. Chile has established itself as an active participant in global dialogues on climate and environmental issues. In alignment with international climate commitments, Chile submitted its initial Nationally Determined Contribution (NDC) to the Paris Climate Agreement in 2015 and presented an updated NDC in 2020.

The Ministry of the Environment has published its 2050 Long-Term Climate Strategy (ECLP), a comprehensive roadmap for the nation to achieve its climate commitments within a 30-year framework. On 13 June 2022, the ECLP was integrated into the Framework Law on Climate Change, which encompasses the updated NDC. To support regional and municipal governments in fulfilling national commitments to carbon neutrality, the Ministry of the Environment, in collaboration with the Inter-American Development Bank (IADB), has developed a comprehensive report titled "Planning Climate Actions in Cities and Regions." This report delineates 22 practical and implementable transformations to foster sustainable development and mitigate climate change impacts within urban and regional contexts.[82] In 2022, Chile ratified its participation in the Regional Escazu Agreement, which seeks to ensure comprehensive and equitable access to environmental information, promote public participation in environmental decision-making, and facilitate access to environmental justice.[83]

The government has implemented primary environment-related policy measures across six distinct categories: sustainable industry and mining; green hydrogen production; sustainable

construction for housing and public/commercial buildings; promotion of electromobility within the public transport system; the gradual phase-out of coal-fired power generation plants; and various energy efficiency initiatives. Pursuant to the Framework Law of Climate Change, the Ministry of the Environment is tasked with devising an emissions mitigation plan that establishes specific limits for each productive sector. This mitigation strategy will involve tailored goals for the major industries that significantly contribute to greenhouse gas (GHG) emissions. In the agricultural sector, Chile has committed to the 26th Conference of the Parties goal of reducing methane emissions by 30% by 2030 and has joined the U.S.-sponsored Global Methane Pledge.[84]

Hazards

The country is highly exposed to multiple hazards, including earthquakes, volcanic eruptions, and tsunamis, alongside climate-related phenomena such as wildfires, floods, landslides, and droughts, all of which are expected to increase in frequency, intensity, and magnitude.[85]

Between 1900 and 2020, Chile experienced a minimum of 117 natural disasters, which collectively impacted approximately 12.5 million individuals. The financial repercussions of these events resulted in damages totaling an estimated US$41.2 billion.[86] Between 2008 and 2015, the country suffered a prolonged drought, which severely affected vast regions in the southern and central areas. The incidence of forest fires is increasing with 2017 witnessing approximately 405,000 hectares (ha; one million acres) of vegetation being severely affected. Furthermore, regions from Santiago to Puerto Montt have heightened susceptibility to wildfires and experience an average of 3,000 to 5,000 incidents each fire season.[87] Figure 3 provides an overview of natural hazard occurrence in Chile for the period 1980-2020.[88] Table 1 shows data from the World Bank's Emergency Event Database (EM-Dat), detailing natural disasters experienced in Chile during the period 1900-2020, including floods, landslides, epidemic diseases, and storms.[89]

Drought

In the last two decades, Chile has experienced significant drought conditions, particularly in its central and northern regions, due to natural and climatic factors. Chile is currently in the midst of a mega-drought, with recurring drought scenarios becoming the new normal. Since 2010, central Chile has experienced an uninterrupted sequence of dry years, characterized by a mean rainfall deficit of 20–40% and making the mega-drought one of the most prolonged drought events ever documented. This considerable reduction in precipitation was notably severe in 2019 when the rainfall deficit reached between 80% and 90%. This has resulted in direct consequences for water security, with growing conflict over accessibility, supply and ultimately livelihoods.[90]

Earthquake

Earthquakes are the third most frequent disaster documented in Chile and represent a significant percentage of mortality and economic damages caused by natural disasters.[91] While frequent, few seismic events possess the severity necessary to instigate formal states of emergency in Chile. Tectonic activity along the Nazca-South American plate subduction zone is characterized by a movement of approximately 80 mm/year (3 in/year) and contributes to the uplift of the Andes Mountains. It does pose a significant risk for "megathrust" earthquakes throughout Chilean territory.[92]

The 1960 Valdivia earthquake was the strongest quake in Chile's recorded history. It registered a magnitude 9.5 and was located approximately 570 km (350 mi) south of Santiago. More recently, the event known as 27F, which struck off the coast of Maule on 27 February 2010 with a magnitude of 8.8, has served as a pivotal reference point for the nation's protocols in responding to earthquake and tsunami events. The combination of the earthquake and tsunami resulted in a significant loss of life, with the total number of fatalities

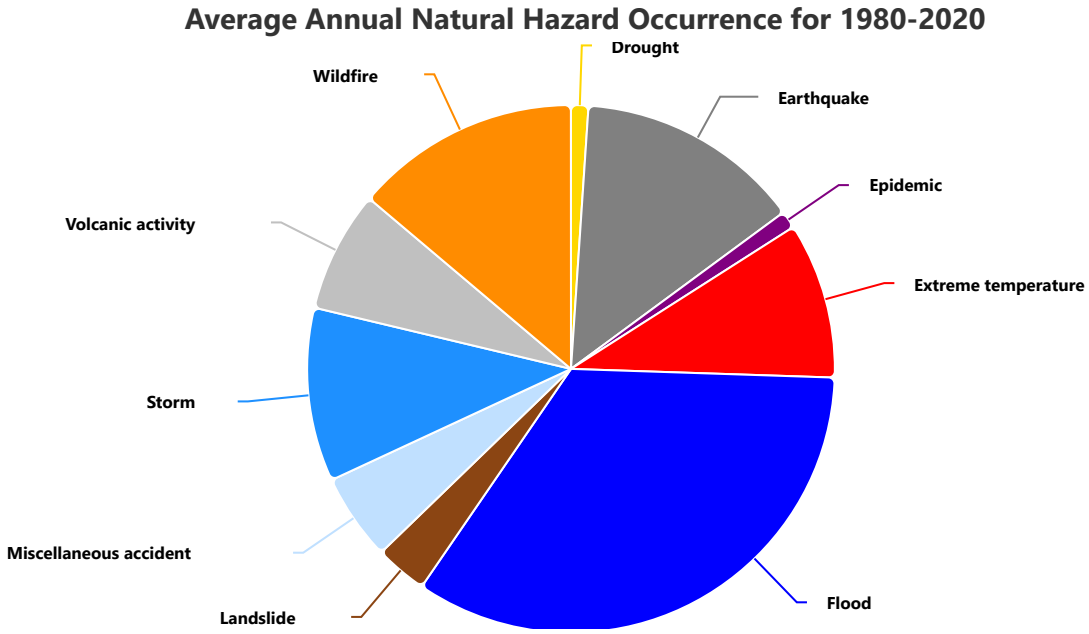


Figure 3: Natural Hazard Overview, Chile (1980-2020)

Natural Hazard	Subtype	Events Count	Total Deaths	Total Affected	Total Damage (Million USD)
Drought	Drought	2	0	120,000	255,000
Earthquake	Ground movement	27	58,852	6,568,929	4,712,070
	Tsunami	3	591	3,353,055	30,800,000
Extreme Temperature	Coldwave	5	2	35,150	20,000
	Severe winter conditions	4	6	50,950	1,000,000
Flood	Flash food	3	195	336,548	1,530,000
	Riverine flood	19	352	875,144	736,700
Landslide	Avalanche	1	32	30	-
	Landslide	3	78	142	-
	Mudslide	1	141	82,811	6,000
Storm	Convective storm	6	156	276,451	-
Volcanic activity	Ash fall	9	110	86,650	615,000
Epidemic	Bacterial Disease	1	1	40	0

Table 1: Natural Disasters in Chile, 1900-2020

exceeding 500.[93] The 2014 Iquique earthquake occurred at a magnitude of 8.2 off the coast of northern Chile near Iquique. The Iquique earthquake was preceded and followed by an unprecedented number of foreshocks and aftershocks, causing multiple deaths and injuries, damage to infrastructure and buildings, a prison break, and a series of tsunamis in the Pacific region, most notably a 4.63-m (15.2-ft) tsunami in Arica.[94]

Flooding

Flooding represents a significant natural hazard in Chile. It is predominantly influenced by factors such as heavy precipitation, rapid snowmelt, and extreme weather events. Changes in the frequency of El Niño events could impact temperatures and generate increased precipitation that could expose the country to extreme precipitation events and flooding. Reductions or wider ranges in seasonal precipitation can also change traditional river

flows and increase the risk of flooding. Models estimate that temperatures will increase, changing the isothermal lines causing changes in river flow and potentially instances of flash flooding. The country's geographical and climatic conditions make it susceptible to riverine and coastal flooding. A majority of flooding incidents occur during the rainy season, which typically spans from April to September.

Chile's coastal zones have been experiencing significant repercussions from rising sea levels, including increased coastal erosion, heightened flooding risk, damage to infrastructure, loss of coastal ecosystems, and the potential displacement of communities in low-lying areas. Rising sea levels contribute to the inundation of shorelines and more frequent storm surges. A study by the Ministry of the Environment has indicated substantial beach erosion nationwide, with specific locales experiencing shoreline retreat exceeding 1.5 m (4.9 ft) annually.[95] The Chilean government has implemented various flood management strategies in response to these challenges through SENAPRED. These strategies include establishing early warning systems, comprehensive flood risk assessments, and infrastructure enhancements to bolster resilience against flooding events.[96]

Landslide

Chile is classified as at high risk and is susceptible to land- and mudslides, often associated with heavy precipitation, flooding, seismic activity, and volcanic phenomena. The landslides are attributable to various factors, including hydrological conditions, geomorphology, geological characteristics, soil composition, and land use patterns. The precipitation and vegetative cover dynamics are critical in determining the frequency and location of landslide occurrences over time. Frequent landslide events predominantly affect remote roadways and can isolate communities, at times necessitating aerial evacuation of affected populations. Furthermore, climate change is anticipated to influence slope stability and bedrock integrity through alterations in precipitation patterns and temperature fluctuations, thereby exacerbating the risk of landslides in vulnerable regions.[97] Changes in land use (caused by population growth, agricultural, mining, and manufacturing needs, etc.), land affected by wildfires, and areas with steep slopes are most vulnerable to landslides.[98]

Tsunami

Chile's predominant catalyst for tsunami events is seismic activity, particularly undersea earthquakes. The subduction of the Nazca Plate beneath the South American Plate frequently generates significant seismic events that can precipitate tsunamis. Moreover, the Pacific "Ring of Fire" is a region from which volcanic eruptions can also generate tsunamis. Chile's geographical characteristics have made it particularly susceptible to severe and destructive tsunamis. Notable examples include the 1960 Valdivia earthquake, which produced a massive tsunami that inflicted damage on the Chilean coastline and caused repercussions as distant as Hawaii and Japan. Similarly, the 2010 Maule earthquake, registering a magnitude of 8.8, triggered tsunami waves that impacted various coastal communities.[99]

Volcanic Eruption

Chile is home to over 2,000 volcanoes, of which 90 are classified as potentially active, contributing to one of the largest volcanic chains globally. Historic eruptions, such as the Calbuco Volcano's eruption in 2015, have had significant regional and global implications. The most significant volcanic events over the past century include notable eruptions at Quizapu (Maule region) in 1932, Villarrica (La Araucanía and Los Ríos regions) in 1948, 1949, 1963, 1971, and 2015, as well as at Calbuco (Los Lagos region) in 1961, Lonquimay (La Araucanía region) during 1988-1989, Hudson (Aysén region) in 1991, Láscar (Antofagasta region) in 1993, Llaima (La Araucanía region) in 2000, Chaitén (Los Lagos region) in 2008, and the Puyehue-Cordón Caulle complex (Los Ríos and Los Lagos regions) in 1960 and 2011.[100]

Monitoring active volcanoes, particularly those presenting the highest risk, is conducted in real-time through the National Volcanic Watch Network (RNVV), managed by the National Geological and Mining Service (Servicio Nacional de Geología y Minería, SERNAGEOMIN). This network is equipped to issue alerts based on the activity levels of each monitored volcano. In recent years, alerts have been issued for the Laguna del Maule, Nevados de Chillán, and the Copahue and Villarrica volcanic complexes.[101]

Wild and Forest Fire

Wildfires represent a persistent and significant natural hazard, particularly prevalent during the summer months from December to March. This phenomenon is attributable primarily to the country's diverse climatic conditions and extensive forested areas. The central and southern regions of Chile are characterized by arid summers, marked by elevated temperatures and strong winds, contributing to an increased risk of wildfire. Additionally, prolonged periods of drought, exacerbated by the broader implications of climate change, are expected to further intensify these hazardous conditions.

Chile's varied ecosystems encompass temperate rainforests, Mediterranean type shrublands, and distinct biodiversity hotspots, all susceptible to the destructive impacts of wildfires. These fires can devastate habitats essential for wildlife, including species classified as endangered, thereby disrupting the intricate balance of these ecosystems. In response to the growing threat of wildfires, Chile has established a comprehensive wildfire management framework that integrates the efforts of various government agencies, local authorities, and specialized firefighting teams. The National Forest Corporation (Corporación Nacional Forestal, CONAF) is the principal agency overseeing the country's wildfire prevention, response, and forest protection initiatives.[102]

History of Natural Disasters

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

December 2024 – Wildfires

As of December 2024, multiple regions in Chile were experiencing severe wildfires, prompting significant government and organizational responses. In the Metropolitan Region, CONAF, in collaboration with the Presidential Regional Delegation of Metropolitan Santiago and SENAPRED, declared a Red Alert for Quilicura, Colina, and Tiltil municipalities. As of 26 December, it was reported that 1 ha (2.5 acres) was affected in Quilicura, while Colina and Tiltil had seen a substantial impact of approximately 450 ha (1,100 acres). Local firefighters from Quilicura and Tiltil conducted fire suppression efforts, complemented by specialized response teams, including Brigades Roble 3 and Roble 5. Additionally, six aircraft operated by CONAF were deployed to combat the fires. Meanwhile, in the Cauquenes municipality of the Maule Region, over several days starting on 24 December, a total of 1,271 ha (3,140 acres) was impacted, prompting the issuance of a Red Alert. Firefighters, personnel from CONAF, municipal officials, and other agencies established a command post for coordination efforts. In the Hualqui municipality of the Biobío Region, a Red Alert was issued due to the fire affecting 20 ha (50 acres), with evacuation messaging activated for the Ranguel and Conihueco sectors.[103]

August 2024 – Floods

On 6 August 2024, significant rainfall events impacted central Chile, particularly in the regions of Coquimbo, Valparaíso, O'Higgins, Maule, Ñuble, Biobío, Araucanía, Los Rios, Los Lagos, and the metropolitan area of Santiago. The weather phenomenon began on 31 July and led to extensive flooding, culminating in human and infrastructural losses. SENAPRED reported a total of four fatalities, with individual cases

recorded in the regions of Valparaíso, Los Rios, Los Lagos, and Santiago. The overall assessment indicates that approximately 2,498 individuals were affected by the disaster. Regarding structural damage, SENAPRED documented 89 destroyed houses and 4,975 houses that sustained damage across the impacted regions.[104]

January-March 2024 – Wildfires

The early 2024 wildfires in central and southern Chile had devastating effects, particularly in Valparaíso, O'Higgins, and Maule. In response to the magnitude of the wildfires in the central region, the GoC declared a State of Emergency of Catastrophe for two provinces in the Valparaíso Region. On 7 March, the United Nations Children's Fund (UNICEF) reported a total of 120 active fires in the central-southern region, with 16 fires being actively fought at that time.

On 6 February 2024, the GoC expressed willingness to accept U.S. Government assistance to support the country's efforts to control the wildfires and assist affected populations. The U.S. Agency for International Development (USAID) responded with US$100,000 to the Adventist Development and Relief Agency for the provision of clean-up kits, multipurpose cash assistance, and other emergency relief supplies to address humanitarian needs in communities impacted by the wildfires. This funding was in addition to US$50,000 that USAID provided through the Regional Disaster Assistance Program to support firefighting efforts by providing hoses, personal protective equipment, and tools.[105] Nearly 8,000 families in Valparaiso failed declarations that they had been affected, and the GoC created additional shelter vouchers, created an Early Help Committee to provide resources to affected people, and it launched a Reconstruction Committee with the support of the Ministry of Finance. UNICEF, through the application of a Child Protection Rapid Assessment (CPRA), provided relevant sectoral data to authorities and the private sector for a timely response in the context of the emergency.[106]

In response to the forest fires, Chilean Red Cross (Cruz Roja Chilena) mobilized its Regional Committee and local branches within the Valparaíso Region to deliver humanitarian assistance to affected families. In total, the fires impacted 39,528 individuals (representing 7,905 families) from Viña del Mar and Quilpué, with a reported loss of 123 lives. The total area of forest damage was estimated at 52,166 ha (129,000 acres), and approximately 14,823 homes sustained varying degrees of damage. In addition to providing essential humanitarian aid, the Chilean Red Cross deployed volunteers to offer first aid, psychosocial support, water-sanitation-hygiene (WASH) promotion services, and facilitate family reunification efforts.[107]

2020-2023 – Pandemic

The first confirmed COVID-19 case in Chile was reported on 3 March 2020. In response to the emerging outbreak, the Chilean government implemented a proactive public health strategy, including banning public gatherings. To further mitigate the spread of the virus, the government closed all daycares, schools, and universities on 16 March, subsequently enforcing a border closure and declaring a national emergency on 18 March 2020. These early containment measures effectively curtailed COVID-19 case counts, keeping them lower than those in regional counterparts such as Brazil, Peru, and Ecuador. In late April, the government began to ease these restrictions through the "Safe Return" plan, which aimed to reopen the economy. By mid-July 2020, the government had introduced a "step by step" strategy that involved gradual reopening based on epidemiological and health system indicators assessed at the municipal level.[108] Chile became one of the first nations to launch a national vaccination campaign against COVID-19, with its initial vaccine supply arriving on 24 December 2020.[109, 110] By mid-2022, with high vaccination rates and controlled case numbers, Chile relaxed many COVID-19 restrictions, reopening schools and businesses while maintaining specific health measures, such as mask mandates in crowded indoor environments. As of 31 December

2023, approximately 93% of the population had completed the primary series of COVID-19 vaccinations, and 83% had received at least one booster dose.[111] By 15 December 2024, Chile reported a cumulative total of 5,408,705 COVID-19 cases and 38 associated fatalities.[112]

August 2023 – Flooding

On 17 August 2023, a frontal system accompanied by an atmospheric river significantly impacted central-southern Chile. The intense rainfall instigated numerous mudslides and landslides, with several rivers exceeding their banks. By 21 August, the Maule Region had 31,002 individuals isolated, while 1,523 individuals were isolated in the Biobío Region. Furthermore, 32,728 people were displaced nationwide. Notably, 24,792 individuals were displaced in the Maule Region and 7,163 in O'Higgins. Approximately 1,042 houses sustained damage, primarily in the O'Higgins Region, with two houses wholly destroyed in the Ñuble Region. The event led to the loss of three lives. In response to the severity of the situation, President Gabriel Boric declared a State of Catastrophe for the affected areas in the Biobío and O'Higgins Regions on 21 August.[113]

June 2023 – Flooding

The severe weather event that began on 23 June 2023 had significant impacts across various regions of Chile, particularly in San José de Maipo, which recorded total rainfall of 126.4 mm (4.97 in). The consequent hydrological disturbances critically affected several regions, including Valparaíso, Santiago Metropolitan, O'Higgins, Maule, Ñuble, Biobío, and Araucanía. The infrastructure damage was extensive, with over 40 locations experiencing road closures, which isolated approximately 10,000 individuals. Moreover, the adverse weather damaged around 2,700 homes, with 54 wholly destroyed, displacing as many as 5,000 people. Power supply interruptions impacted around 15,000 residents, and the high turbidity levels coupled with increased flow in the Maipo River disrupted drinking water supply for 53,000 individuals in the communes of San Antonio, Cartagena, El Quisco, El Tabo, and Algarrobo. Additionally, approximately 2,500 individuals were isolated in Curepto due to road damage.[114]

February 2023 – Flooding

On 4 February 2023, significant flash floods in El Loa Province, located in the Antofagasta region of northern Chile, resulted in the isolation of numerous families due to the destruction of transportation infrastructure. The local government reported extensive rainfall and flooding across various areas within the province. Additionally, the city of Calama experienced adverse effects, with critical transportation routes, specifically the one connecting Calama to San Pedro de Atacama, becoming impassable. In response, the provincial government mobilized teams equipped with the necessary machinery and resources to restore the affected roadways in Lasana. By 5 February, efforts were underway to address the infrastructural damage caused by the severe weather events.[115]

January-February 2023 – Wildfires

Between January and February 2023, Chile experienced an unprecedented outbreak of wildfires, with over 400 incidents attributed to a combination of heat waves, record-high temperatures, and strong winds, as reported by the UN. The wildfires resulted in 26 fatalities, displacing approximately 8,000 individuals from their homes or livelihoods, and damaging or destroying more than 404,700 ha (1 million acres) of agricultural land, forests, and urban-interface areas, according to data from the GoC and the UN. In response to the escalating crisis and the GoC's declaration of humanitarian need on 5 February 2023, the USAID Bureau for Humanitarian Assistance (BHA) implemented a strategic intervention, collaborating with NGOs to enhance local firefighting efforts. This initiative included the distribution of Multi-Purpose Cash Assistance (MPCA) to support affected households in meeting their basic needs and establishing safe spaces for displaced populations, particularly focusing on vulnerable groups such as adolescents and children. The

collaboration with Caritas Chile and World Vision culminated in providing US$650,000 in assistance, aimed at mitigating the impact of the wildfires and facilitating recovery efforts.[116]

June 2022 – Flooding

On 6 June 2022, significant precipitation impacted southern Chile and Argentina. Specifically, the Los Ríos Region in Chile and Río Negro Province in Argentina experienced rainfall exceeding 50 mm (1.97 in) within 24 hours. Authorities in Los Rios Region's Corral town reported flooding that damaged 15 homes and necessitated the evacuation of several individuals. Additionally, the flooding compromised transportation infrastructure, rendering roads impassable in various areas within the Valdivia and Panguipulli districts.[117]

June 2021 – Flooding

Heavy rainfall in June 2021, in Chile's Biobío, Araucanía, Los Ríos, and Los Lagos regions, precipitated significant landslides and flooding, impacting approximately 15,000 residents by disrupting their access to electricity. During a 20-hour interval on 1 June, meteorological data indicated that the Araucanía region recorded 101.9 mm (4 in) of rainfall, while the Los Ríos region experienced 128.9 mm (5 in), and the Biobío region documented 77.8 mm (3 in). The Araucanía region was significantly affected, with numerous homes and buildings inundated. In response to the flooding of the Curacalco River, which resulted in structural damage to bridges, 13 individuals were airlifted to safety. The severity of the situation prompted authorities to issue a Red Alert in certain areas due to the imminent threat of the Cautín River overflowing, along with a Yellow Alert for regions at risk from the Toltén River. The turbidity of the Toltén River left approximately 4,000 residents in Queule, Toltén Commune, without access to potable water. In the Biobío region, numerous residences faced flooding, particularly in Antuco, where a landslide left 60 individuals isolated due to obstructed road access. In the Los Ríos region, a landslide in Ñisoleufu-Coñaripe, Panguipulli, necessitated the evacuation of 20 people, resulting in six individuals sustaining injuries and the destruction of one residential structure. The overflow of the Gol-Gol River compromised road infrastructure, exacerbating isolation for communities in Río Bueno. Landslides similarly impeded access in parts of Los Lagos, where several houses sustained damage, prompting the evacuation of two individuals in San Juan de la Costa.[118]

January 2021 – Flooding

Severe weather events characterized by strong winds, hail, and unprecedented rainfall impacted various regions of south-central Chile beginning on 29 January 2021. Areas most adversely affected included Santiago Metropolitan, O'Higgins, Valparaíso, Maule, Araucanía, and Biobío Regions. Santiago experienced rainfall accumulation within 24 hours equaling the typical precipitation expected over six months from November to April. ONEMI indicated that by 31 January, 521 individuals were residing in temporary shelters due to the adverse conditions. Reports indicated five houses were significantly damaged, while an additional 37 suffered severe damage. Furthermore, approximately 1,353 individuals were isolated in the Alto Biobío region; as of 30 January, around 170,000 people were without electrical power in the Metropolitan, Valparaíso, O'Higgins, and Maule regions. There was also a significant concern regarding potential disruptions to drinking water supplies in parts of the Metropolitan Region because of turbidity caused by rising river levels.[119]

January 2020 – Flooding

In response to severe flooding in the Atacama region, in January 2020, the GoC declared a state of emergency, particularly affecting the communes of Copiapó, Tierra Amarilla, Diego de Almagro, Chañaral, and Alto del Carmen. The region experienced an anomalous increase in precipitation beginning in mid-January, culminating with an intense rainfall event on 27 January, during which approximately 16

mm (0.6 in) of rain was recorded in El Tránsito, Atacama. This volume is particularly noteworthy given the typically arid conditions of the area, where annual rainfall in many locations is less than 15 mm (0.6 in). Emergency response teams were deployed to address the impacts of the inundation, which resulted in significant mud and floodwater accumulation, reaching depths of approximately 1 m (3.2 ft). ONEMI reported the most substantial damage occurred in agricultural sectors due to flooding. The GoC conducted evacuations in the communes of Alto del Carmen and Tierra Amarilla in light of the hazardous conditions, which resulted in one fatality in Alto del Carmen. Approximately 800 residents in El Tránsito experienced power outages as a direct consequence of the flooding.[120]

December 2019 – Forest Fire

In late December 2019, the Valparaíso region experienced significant devastation due to wildfires, resulting in the destruction of at least 250 homes. In response, the central government declared the region a catastrophe zone, enabling the expedited allocation of resources to assist affected communities in the reconstruction of homes and restoration of livelihoods.[121] According to CONAF, two primary fires, named "Fundo La Plantación 2" and "Antena Microonda," were documented between 24 and 26 December, consuming nearly 150 ha (370 acres) of grassland, scrubland, and woodland areas. The consequences of the "Fundo La Plantación 2" fire were particularly severe, with more than 150 homes reported as either damaged or entirely destroyed. Damage inflicted on a key power facility resulted in the loss of electricity for 1,715 buildings. To accommodate the displaced population, the Liceo Técnico de Mujeres in Valparaíso was repurposed as a temporary shelter, while Escuela Alemana served as a storage facility for the belongings of those affected. Emergency response efforts were coordinated by ONEMI, which facilitated the distribution of 800 blankets, 400 mattresses, and 300 hygiene kits to those in need. To combat the fires effectively, a collaborative effort was undertaken by 20 CONAF teams, three Chilean Army units, and one Chilean Navy team. Additionally, the response included 21 aircraft from CONAF, two helicopters from ONEMI, nine units from the Valparaíso Fire Department, and support from the Chilean Police.[122]

October 2019 – Drought

The winter drought of 2019 catalyzed significant dryness and agricultural deficits by the latter part of that year. Notably, the Coquimbo region emerged as one of the most adversely affected areas, recording an 87% deficit in accumulated rainfall as of August 2019. The situation was even more severe in the Atacama region, which experienced a 99% deficit. Other regions also faced considerable challenges, with Valparaíso and the Metropolitan Region reporting deficits of 77% and 78%, respectively, while O'Higgins and Maule recorded deficits of 78% and 52%, respectively. In response to this acute water crisis, the government declared a state of disaster in the Coquimbo and Valparaíso regions, thereby enabling the implementation of extraordinary measures. These included collecting, storing, and distributing essential food and non-food items. The government designated multiple provinces and communes as areas suffering from water scarcity, including three provinces in Coquimbo, seven in Valparaíso, four in Maule, and 12 communes within the Metropolitan Region. As a result of these measures, over 700,000 individuals residing in rural communities received water assistance, primarily facilitated through water distribution via cistern trucks.[123]

January-February 2019 – Flooding

Severe weather systems in northern Chile from late January to mid-February 2019 resulted in significant impacts, including the loss of at least six lives. The regions initially affected were Arica y Parinacota, followed by Tarapacá and Antofagasta. According to ONEMI, by 15 February, 346 homes were reported as destroyed, with an additional 427 homes sustaining severe damage. The municipalities most adversely

impacted included Arica, Camarones, and Putre. By 16 February, multiple roads were either fully or partially closed, leading to disruptions in transportation. The supply of drinking water experienced considerable disruptions in various locations. In Tarapacá, Iquique emerged as the most severely affected area, damaging 5,024 homes recorded in Tamarugal Province. Over 20 roads within the province were either fully or partially obstructed, isolating 17 communities. The heavy rainfall that commenced on 6 February led to widespread flooding and overflow of rivers in the Antofagasta Region. Notably, the Loa River breached its banks in Calama, causing damage to approximately 220 houses. Flooding events in San Pedro de Atacama resulted in 334 injuries and the destruction of 244 homes, attributed to the overflow of the Vilama and San Pedro rivers. Earlier in the sequence of storms, excessive rainfall contributed to the collapse of a hotel building in Abancay, Apurímac Region. The storms also caused significant flooding in Grau Province, adversely affecting residential and agricultural properties. The cumulative effects of these weather events resulted in the displacement of over 1,000 individuals, with approximately 340 seeking refuge in relief shelters.[124]

January 2019 – Earthquake

On 19 January 2019, a seismic event with a magnitude of 6.8 occurred in central-northern Chile, impacting several urban areas. Authorities reported that approximately 200,000 individuals experienced power outages as a result of the earthquake, which resulted in the deaths of two individuals. The epicenter was located roughly 15.6 km (9.7 mi) south-southwest of Coquimbo and at 53 km (33 mi) below the surface. The city of La Serena was notably affected, experiencing a complete loss of electrical power and sustaining minor structural damage, particularly to older buildings. According to police reports, the fatalities involved an adult man and woman, whose deaths were attributed to cardiac arrest likely induced by the stress of the earthquake.[125]

December 2017 – Landslide

On 16 December 2017, heavy rainfall triggered a significant landslide in Villa Santa Lucia, located within the Chaitén commune of Los Lagos, Chile. This event resulted in 11 fatalities, 15 individuals reported missing, and 12 others sustaining injuries. In response to the emergency, over 200 personnel, including members from fire services, police forces, military units, and civil defense organizations, engaged in search and rescue operations, debris clearance, reopening transportation routes, and safeguarding residents. The landslide led to the evacuation of more than 350 individuals. It destroyed at least 20 houses, with an additional 20 houses and one school sustaining damage, as reported by ONEMI. The precipitation that caused the landslide amounted to 122 mm (4.8 in) within a 24-hour period, which concurrently contributed to flooding in the region. Furthermore, ONEMI noted that over 30 individuals were left isolated in Hualaihué following the overflow of the La Máquina River, which destroyed a key bridge.[126]

June 2017 – Flooding

On 16 June 2017, severe weather conditions, intense rainfall, and thunderstorms impacted central and southern Chile. The most adversely affected regions included Biobío and Araucanía, specifically within the Los Alamos, Cañete, Curanilahue, and Temuco communes. ONEMI reported fatalities totaling four individuals: two in the Maule Region, one in Araucanía, and one in the Santiago area. As of 17 June, the onset of this weather had affected approximately 2,915 individuals, with 50 residents requiring temporary accommodation due to displacement. The inclement weather caused damage to over 700 houses, attributable to flooding and strong winds. The disruption of essential services was significant, with 263,533 customers experiencing power outages and around 6,000 individuals lacking access to water supply. The Disaster Management Centre (DMC) documented substantial precipitation levels, noting that Curanilahue in the Biobío Region recorded 189.5

mm (7.5 in) of rainfall in 24 hours, while Cañete, also in Biobío, recorded 104.5 mm (4.1 in) during the same timeframe.[127]

May 2017 – Flooding

On 12 May 2017, reports from disaster management authorities in Chile indicated significant flooding incidents in the Atacama and Coquimbo regions. The storms resulted in two fatalities and necessitated the evacuation of approximately 3,000 individuals. The government officially designated Chañaral Province as a catastrophe zone, facilitating the evacuation of over 1,300 individuals to temporary accommodations. The extent of the damage was considerable, with an estimated 3,000 homes affected, alongside widespread power outages across the region. A notable meteorological observation during the event included the city of La Serena, the capital of Coquimbo, which recorded over 100 mm (3.9 in) of rainfall within an 8-hour window, in stark contrast to the typical May precipitation of approximately 2.8 mm (0.1 in). Furthermore, over 20 locations within the affected areas reported similar rainfall exceeding 100 mm (3.9 in), with two locations surpassing 200 mm (7.87 in).[128]

March 2017 – Forest Fire

On 12 March 2017, wildfires in Valparaíso and Viña del Mar resulted in significant destruction, damaging 16 residential properties and forcing the evacuation of approximately 6,000 individuals. Official reports indicated the blazes ravaged over 230 ha (570 acres) of grassland, scrub, and indigenous forest within the Viña del Mar region. The government response mobilized a substantial contingent, comprising 700 personnel from police, military, and volunteer organizations, alongside the deployment of at least 13 aircraft and 37 water cistern trucks to combat the fires. The fires disrupted transportation along the Las Palmas route, which connects Viña del Mar and Valparaíso, for over 12 hours. By 13 March, the majority of the fires had been contained.[129]

February 2017 – Flooding

In late February 2017, central and northern Chile experienced severe rainfall that resulted in significant disruption and loss of life. Preliminary reports indicated at least three individuals died, while 19 others were unaccounted for. The torrential rains led to widespread flooding and mudslides, creating hazardous conditions that obstructed roadways and effectively isolated numerous communities. The urban water systems in the Metropolitan Region, particularly in Santiago, were adversely affected by the increased turbidity in the Maipo River. Consequently, from 26 February, Aguas Andinas (Andes Water) implemented water supply cessation, impacting approximately 1.4 million residents across 33 communes within the Metropolitan Region. In response to the interruption of potable water supply, local authorities declared a Red Alert for Santiago, along with the San Bernardo and Puente Alto communes. To mitigate the crisis, Aguas Andinas, in collaboration with local authorities, established 237 potable water supply points to serve the affected populations. ONEMI documented several landslides affecting significant roadways within the Cordillera, leading to the isolation of around 1,200 individuals in San Gabriel. In a coordinated effort to provide relief, helicopters were deployed to deliver essential resources, including water, medical supplies, and food. Police teams conducted search operations along the Maipo River.[130]

January-February 2017 – Forest Fire

In January 2017, Chile confronted a crisis with over 90 active forest fires spanning the Metropolitan and Biobío Regions. By early February, the fires had killed 11 people, including firefighters, law enforcement personnel, and civilians. The fires affected approximately 7,157 individuals and led to the destruction of nearly 1,500 residential structures. The government's expenditure on firefighting efforts and aid for affected populations exceeded US$333 million. The blazes ravaged over 580,000 ha (1.4 million

acres) of land, encompassing diverse ecosystems such as forest plantations, brush and scrubland, native forest habitats, agricultural land, and urban and industrial areas. International assistance was rendered by specialists from various countries, including Argentina, Brazil, Colombia, France, Japan, Mexico, Panama, Peru, Portugal, Spain, Venezuela, and the U.S. On 20 January, the Chilean Ministry of the Interior and Public Security enacted a State of Constitutional Exception of Catastrophe (EECC), declaring a State of Catastrophe and establishing simultaneous Zones Affected by Catastrophe (ZAC) within the Provinces of Colchagua and Cardenal Caro, specifically within the regions of O'Higgins, Maule, and Biobío. Following the cessation of active firefighting operations, recovery and reconstruction efforts were coordinated by government authorities alongside various donors. The infrastructure for water sources, including pipelines and tanks, sustained considerable damage.[131]

December 2016 – Earthquake and Tsunami

On 25 December 2016, a significant seismic event measuring 7.6 on the Richter scale occurred off the coastline of the Los Lagos region in Chile. The earthquake generated a tsunami, with wave heights reaching approximately 0.5 m (1.6 ft) above the norm near the town of Castro, while other locations along the impacted coastline recorded waves that were approximately 0.1 m (0.33 ft) higher than usual. The community of Quellón experienced the most severe repercussions, with substantial damage to residential structures and disruptions to road transport. In response to these challenges, the Ministry of Public Works implemented measures to address the infrastructural and logistical impacts of the earthquake.[132]

April 2016 – Flooding

In mid-April 2016, prolonged periods of heavy rainfall culminated in significant flooding and landslides across central Chile, particularly impacting the Santiago metropolitan area. The adverse weather conditions resulted in the loss of two lives and left several individuals missing in San Jose de Maipo. Reports indicated missing persons in San Fernando within the Colchagua Province of the O'Higgins Region. The flooding injured 359 individuals. Around 4 million residents were without access to potable water at the peak of the crisis, while tens of thousands experienced power outages. Approximately 140 homes sustained considerable damage. The Cachapoal and Tinguiririca rivers posed significant overflow threats in various municipalities of the O'Higgins Region. In Santiago, the Mapocho River experienced overflow alongside the Angostura River in the Maipo region, which inundated Comuna de Paine, damaging 10 residences and rendering 35 individuals homeless. In response to the widespread disruption of water services, the government of Chile established several drinking water points in Santiago to assist those who lacked access to safe drinking water.[133]

2007-2016 – Drought

Between 2007 and 2016, Chile experienced the most prolonged and geographically extensive drought in its recorded history, characterized by the phenomenon of a "mega-drought," which continued at least through 2024. The period 2007-2016 represents an acute timeframe, in which the severe dry spell affected regions from north-central Coquimbo to central La Araucanía, with the Chilean Meteorological Service (Dirección Meteorológica de Chile, DMC) indicating that 17 out of 22 meteorological stations documented significant rainfall deficits during this period. By August 2016, the situation in Coyhaique exemplified the severity of the drought, with reported precipitation of only 220 mm (8.6 in)—more than 600 mm (23.6 in) below the average, reflecting a 75% reduction in expected rainfall.[134] In 2015, which marked the peak of the drought conditions, over half of the nation's 194 communes declared an "agricultural emergency." In response to this crisis, the Chilean government allocated US$170 million to mitigate the impact on water supplies intended for human consumption. The measures included tanker trucks to transport water, support for

irrigation initiatives, groundwater exploitation, installation of rainwater catchment systems, the establishment of desalination plants, the construction of small reservoirs, and the reuse of wastewater. Notably, the La Araucanía region reported an alarming rainfall deficit of 99% during 2015.[135]

September 2015 – Earthquake and Tsunami

On 16 September 2015, an 8.4-magnitude earthquake occurred off the coasts of the Coquimbo and Valparaíso regions of Chile. The coastal areas of Coquimbo experienced a tsunami, with wave heights recorded at 4.6 m (15 ft) above normal, while Valparaíso recorded a wave height of 2.2 m (7.2 ft). Additional coastal regions registered tsunami waves exceeding 1 m (3.2 ft) above average, and even more remote coastal areas observed waves that were 0.25 m (0.8 ft) higher than normal.[136] In response to the event, ONEMI issued a tsunami alert for the entirety of Chile's coastal region and subsequently evacuated over 600,000 individuals. The Coquimbo region was designated as a catastrophe area. The Chilean Red Cross reported 13 fatalities and 15 injuries within the Coquimbo region. Structural assessments indicated that 704 homes were destroyed; 1,245 homes were rendered uninhabitable; and 3,122 homes sustained minor damage. Approximately 1,183 people experienced power outages; however, the water supply quickly returned to normal operation. Educational disruptions were significant, with 16 schools unable to resume classes, necessitating the relocation of students to alternative facilities. The earthquake caused landslides that obstructed numerous roads, although these were cleared promptly. Immediate assistance was mobilized by the Chilean government to address the urgent needs of those affected.[137]

August 2015 – Storm and Flooding

On 8 August 2015, an intense storm system resulted in the fatalities of at least six individuals in the Atacama Desert region of Chile. This storm brought atypical rainfall, with the city of Antofagasta receiving approximately 14 mm (0.55 in) within a span of 12 hours. The unusual precipitation led to significant flooding and mudslides in the town of Tocopilla, situated just north of Antofagasta. This phenomenon marked the second incidence of anomalous rainfall in the area during 2015, following a more severe rainfall event in March of the same year. The Atacama Desert, known for its extreme aridity and lack of soil and vegetative cover, is particularly vulnerable to rapid runoff during heavy rains. Consequently, the region experiences heightened risks of flooding and erosion. Additionally, the coastal areas were adversely affected, as evidenced by social media reports depicting the destructive waves generated by the storm, which notably impacted regions near Valparaíso. Among the casualties attributed to the storm, one individual drowned at sea, while two others lost their lives due to storm-related incidents—one as a result of a falling tree and another due to a structural collapse of a roof.[138]

May 2015 – Flooding

Meteorological events in southern Chile resulted in significant flooding across multiple regions, notably Araucanía, Los Ríos, Los Lagos, and Aysén. The precipitation led to elevated water levels in the Río Aysén, located in the Aysén Region, as well as the Río Queche in Los Lagos. According to reports from ONEMI, 96 individuals were evacuated from various locations, including La Puntilla, Aguas Muertas, and Teniente Merino within the Aysén Region. Additionally, in Los Lagos, 16 individuals sustained injuries, and four residential structures were reported damaged due to the overflow of the Río Queche in Hualaihué. The storm system also precipitated power outages, affecting over 6,000 residents in the impacted areas.[139]

April 2015 – Volcanic Eruption

On 22 April 2015, the Calbuco volcano in Chile experienced a significant explosive eruption, as reported by SERNAGEOMIN. The eruption produced an ash plume that ascended to an altitude exceeding 15 km (9.3 mi) above

the crater, with the plume primarily drifting in an east-northeast direction. The eruption's initial phase lasted approximately 90 minutes and was characterized by local and radial collapses, which affected the headwaters of several major rivers in the vicinity. The severity of the ashfall rendered several roads and bridges impassable. In response to these hazardous conditions, ONEMI issued an evacuation order for all individuals within a 20-km (12.5-mi) radius of the volcano, evacuating approximately 5,000 residents. ONEMI advised the public to maintain a distance of at least 200 m (650 ft) from drainage areas due to potential lahar hazards. Structural damage was reported, with several residences near the volcano collapsing under the weight of accumulated ash. The continuation of sporadic explosions contributed to sustained ash emissions and seismic activity, although at diminished levels, through 27 April 2015.[140]

March 2015 – Wildfires

On 22 March 2015, ONEMI reported response efforts to 26 active wildfires across the O'Higgins, Biobío, La Araucanía, Los Ríos, and Los Lagos Regions. These incidents had collectively scorched approximately 11,597 ha (28,656 acres) of land. At that point in the fire season, a total of 64 fires had been controlled within the Metropolitan, Maule, Biobío, La Araucanía, Los Ríos, and Los Lagos Regions, which had destroyed 5,540 ha (13,690 acres). A significant complicating factor in the firefighting efforts was the recent activity of the Villarrica volcano, which contributed gases and particulates that adversely affected air quality in the affected areas. During the 2015 fire season, the port cities of Valparaíso and Viña del Mar experienced evacuations, affecting around 7,000 residents. In those cities, one fatality was reported, along with nearly two dozen injuries sustained as a result of the events.[141]

March 2015 – Storms and Flooding

Between 24 and 27 March 2015, a significant meteorological event occurred when a stationary low-pressure system brought heavy precipitation across Chile's northern regions, which experienced a cluster of 18 floods. The extreme weather phenomenon was linked to fatalities, with 31 confirmed deaths, while impacting an estimated 35,086 individuals. The floods led to the destruction of 2,071 homes and damage to 6,253 others. The intense rainfall primarily affected arid zones typically unaccustomed to sustained and heavy precipitation, particularly influencing the Salado and Copiapó Rivers.

The four-day storm culminated in a health emergency, prompting the declaration of a state of exception across three regions. Following the event, air quality deteriorated due to the resuspension of particulate matter—a consequence of vehicular traffic traversing dry, muddy roadways. In response to the initial level of Environmental Alert, which highlighted elevated concentrations of respirable particulate material in Copiapó, the Emergency Operations Center instituted measures including vehicular restrictions, road watering, speed limitations, and the recommendation for community mask usage.[142]

Country Risk

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

$$\textit{Disaster Risk} = (\textit{Hazard} \times \textit{Vulnerability}) / \textit{Capacity}$$[143]

Taken from the UNDRR glossary, definitions will help clarify this formula:

- Capacity - The combination of strengths, attributes, and resources available within an organization, community, or society to manage and reduce disaster risks and strengthen resilience.
- Disaster risk - The potential loss of life, injury, or destroyed or damaged assets,

which could occur to a system, society, or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability, and capacity.
- Hazard - A process, phenomenon, or human activity that may cause loss of life, injury, or other health impacts, property damage, social and economic disruption, or environmental degradation.
- Vulnerability - The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of an individual, a community, assets, or systems to the impacts of hazards.[144]

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

INFORM Risk Profile

INFORM is a collaboration of the Inter-Agency Standing Committee (IASC) Reference Group on Risk, Early Warning, and Preparedness with the European Commission. It is a multi-stakeholder forum for developing shared, quantitative analysis relevant to humanitarian crises and disasters. The Joint Research Center of European Commission is the scientific lead. There are three operational dashboards – i.e., INFORM Risk, INFORM Severity, and INFORM Climate Change.[145]

The INFORM Risk Index measures the risk of humanitarian crises and disasters in 191 countries. The INFORM model is based on the standard dimensions of risk: Hazards and Exposure, Vulnerability, and Lack of Coping Capacity. The first dimension measures the natural and human hazards that pose the risk. The second and third dimensions cover population factors that can mitigate against or exacerbate the risk. The Vulnerability dimension considers the strength of individuals and households relative to a crisis while the Lack of Coping Capacity dimension considers factors of institutional strength.[146]

The INFORM model is split into different levels to provide a quick overview of the underlying factors leading to humanitarian risk. INFORM gives each country a risk score of 1-10 (1 being the lowest and 10 the highest) for each of the dimensions, categories, and components of risk, as well as an overall risk score.[147] The higher the score the more at risk a country is. In the 2025 INFORM Risk Index, Chile had an overall risk score of 3.1/10, which INFORM categorizes as the "Low" risk class and lands Chile as the 103rd most at risk country in the Index. The Hazards and Exposure dimension score takes into account a combination of both natural and human hazards, and Chile rated 3.2/10 or 66 of 191 countries. The Vulnerability dimension score was 3.6/10 or 105 of 191, and the Lack of Coping Capacity dimension score was 2.7/10 or 148 of 191. Physical exposure to earthquake at 9.6/10, was the greatest threat in the Hazards and Exposure dimension, with Inequality measuring at a 3.2/10 for the Vulnerability dimension and Governance rated 3.7/10 in the Lack of Coping Capacity dimension.[148]

Figure 4 shows Chile's INFORM Risk Index dashboard.[149]

World Risk Report

The WorldRiskReport calculates the level of risk a country faces based on a formula of exposure to hazards and vulnerability. It provides an assessment of the risk that countries will confront disasters but does not indicate probabilities for the emergence of disasters, nor does it forecast the timing of future disasters. This index uses 100 indicators that include risk, hazard exposure, vulnerability, and coping capacity (as defined above), and adds two others:
- Susceptibility - The disposition to suffer damage in the event of extreme natural events. Susceptibility relates to structural

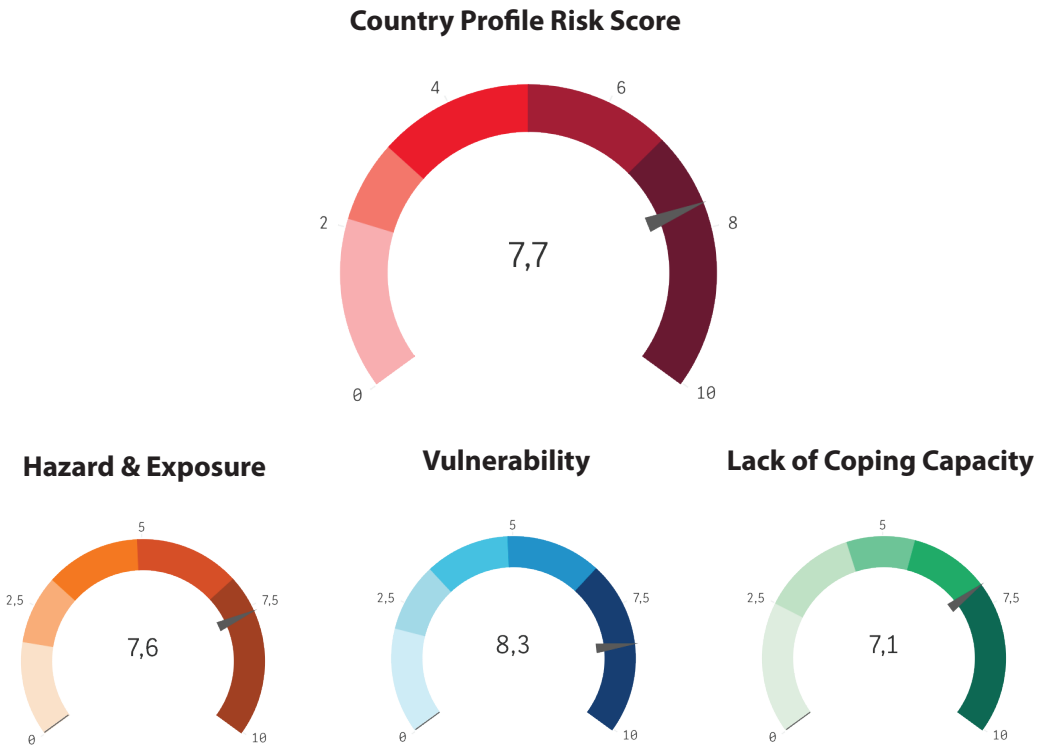


Figure 4: INFORM Risk Index, Chile (2025)

characteristics and frameworks of societies.

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

In the 2024 WorldRiskReport, Chile ranked 39 of 193 countries wherein the lower the rank, the greater risk the country faces. Chile's total Index score was 13.74 (on a scale of 0-100 wherein the lower the number the less risk a country faces), putting it in the "Very High" risk classification. The component scores were:

- Exposure: 12.86 (Very High)
- Vulnerability: 14.68 (Low)
- Susceptibility: 8.35 (Low)
- Lack of Coping Capacity: 9.43 (Low)
- Lack of Adaptive Capacity: 40.15 (Medium)

In a comparative analysis within Latin America, Chile's overall index score of 13.74 is significantly lower than Colombia's index score of 37.81. Compared to Chile's component scores, Colombia received an Exposure score of 31.54, Vulnerability score of 45.33, Susceptibility score of 39.30, a Lack of Coping Capacity score of 39.30, and a Lack of Adaptive Capacity score of 48.10.

The most notable difference between Chile and Colombia's risk scores is in that of Conflict Exposure, where Colombia is highly susceptible to armed conflict, remote violence, and explosion, riots, and violence against civilians. Meanwhile, Chile's highest component scores – Exposure and Lack of Adaptive Capacity – pertain largely to the very high risk of earthquakes, tsunamis, and drought. Chile is challenged by the speed at which its government can successfully develop institutionally to improve DRR education, research, and investment, reduce disparities, and implement disaster preparedness.[150]

ORGANIZATIONAL STRUCTURE FOR DISASTER MANAGEMENT

The National Emergency Office of the Ministry of the Interior (ONEMI) was created in 1974, but municipalities and communities were not required to follow its guidelines, nor participate in disaster prevention activities. It was not until 2002 that ONEMI was officially commissioned through the National Civil Protection Plan, and this plan also marked the beginning of a national shift from reaction to prevention in emergency management. Chile joined the Hyogo Framework for Action in 2005, and this international framework for DRR efforts paved the way for the country's evolution of DRM, and, importantly, allowed DRM actions to overcome political barriers.[151]

Following the 2010 Maule earthquake (also known as 27F), the GoC requested a UN review of its entire National Civil Protection System - the set of public, private, and organized civil society institutions, which, coordinated by ONEMI, provide capacities to reduce the risk of disasters in the country through DRM. The evaluation identified major shortcomings in compliance and revealed that many of the existing regulatory instruments were oriented toward response rather than preparation and prevention. In response, the National Platform for Disaster Risk Reduction (PNRRD) was established in 2011 and is the national body for coordinating public services, NGOs, and civil society organizations in matters of DRM. PNRRD's first task was to create the first National Policy for DRM, based on the five priority areas of the Hyogo Framework for Action. The policy was promulgated in 2014 and updated in 2015, according to the Hyogo Framework's successor, the Sendai Framework, and the policy led to the first National Strategic Plan.[152]

Despite important reforms to transfer responsibilities to the regional level, Chile's DRM framework was still challenged by the centralized nature of decision making throughout the country's government institutions. In July 2021, Law 21.354 established the National System for the Prevention and Response to Disasters (SINAPRED) and the National Service for Disaster Prevention and Response (SENAPRED). SINAPRED replaced the National Civil Protection System, and SENAPRED replaced ONEMI. The new law recognizes and incorporates the advances, developments, and achievements in DRM in Chile while presenting a greater focus on institutional strengthening, decentralization of decision making through capacity strengthening at the regional and community levels, and more emphasis on DRR at the local levels to complement existing emergency response capabilities.[153]

Lead Government Agencies in Disaster Response

The SINAPRED system is directed by disaster management instruments, coordinated through Disaster Risk Management Committees (Comites Gestión del Riesgo de Desastres, Comites GRD or COGRID), and implemented by SENAPRED, which advises, coordinates, organizes, plans, and supervises activities related to DRR.[154]

The SINAPRED system is comprised of a set of public and private entities with powers related to the phases of the disaster management cycle. Entities within the system are organized in a decentralized manner and in a staggered manner, from the communal levels to the provincial, regional, and national levels. SINAPRED ensures adequate DRR measures are in place through standards, policies, plans, instruments, and procedures. So-called "Base Organizations" are organizations with competencies related to one of the phases of disaster management established in their regulatory frameworks, statutes, or purpose. This implies a permanent relationship

with the other organizations in SINAPRED and with SENAPRED. "Support Organizations" are organizations whose regulatory frameworks, statutes, or purpose are not directly related to DRM but rather act occasionally to contribute or provide support in some phase of the DRM cycle. This implies a sporadic relationship with the other organizations of SINAPRED and with SENAPRED.[155]

SENAPRED is mandated to lead the planning and coordinating of public and private resources for the prevention of and response to emergencies and disasters, both natural and anthropogenic. SENAPRED provides ministries, delegations, regional governments, municipalities, and civil protection agencies at the national, regional, provincial, and communal levels with models and plans for the prevention and management of emergencies, disasters, and catastrophes. Likewise, in order to comply with its legal mandate, SENAPRED is responsible for mobilizing, within the parameters established by the GoC, the available resources from both the public and private spheres to avoid or mitigate the potential impact of the occurrence of a risk situation, emergency, or catastrophe. With the enactment of Law No 21.364 in 2021, SENAPRED was formed with the intention to decentralize emergency management; modernize monitoring, alert, and communication systems; foster inter-institutional and public-private coordination; build tools to integrate information from and to the community level; and develop the SINAPRED system with a focus on organizational development, innovation, and gender rights.[156]

SENAPRED operates under the supervision of the President of the Republic and through the Ministry of the Interior and Public Security. SENAPRED maintains Regional Directors for each of Chile's 16 regions. These appointments can be found on SENAPRED's website: *https://web.senapred.cl/nosotros*.[157]

SENAPRED provides the following services and is responsible for the following deliverables:

- National Policy for DRR
- DRM Plans at national, regional, and provincial levels
- Risk maps of a proportion of the territory at a given time to support DRM
- Information System for DRM, with content covering the entire risk cycle
- Dissemination of emergency alerts, effective and timely, according to current protocols and agreements
- Evacuation messages and coordination of the process with SINAPRED
- Mitigation and preparation actions against disaster risks
- Disseminate specific recommendations to the community and SINAPRED regarding territorial threats
- Agreements and protocols with SINAPRED organizations for information capture and alerting
- Drills or simulation exercises with the population and SINAPRED for specific threats
- Supervision plan for DRM instruments mentioned in Law 21.364 and its regulations
- Training and educational activities for the community, technical teams, and authorities
- DRM program to fund instruments defined in Law 21.364
- Delivery of emergency items and contracting of services for response and rehabilitation[158]

Within SENAPRED there are two sub-directorates: the Sub-Directorate for DRR and the Sub-Directorate for Strategic Development. The Sub-Directorate for DRR is shown in Figure 5 and includes: the Department of Risk Analysis and Understanding, the Department of Territorial Information Management, the Department of the SENAPRED Academy, the Department of Planning for DRM, and the Department of Community Preparedness.[159]

Disaster Relief and Emergency Response

Emergency response in Chile is guided by the National Emergency Plan (Plan Nacional de Emergencia, PNE) Law No. 1.434, established on

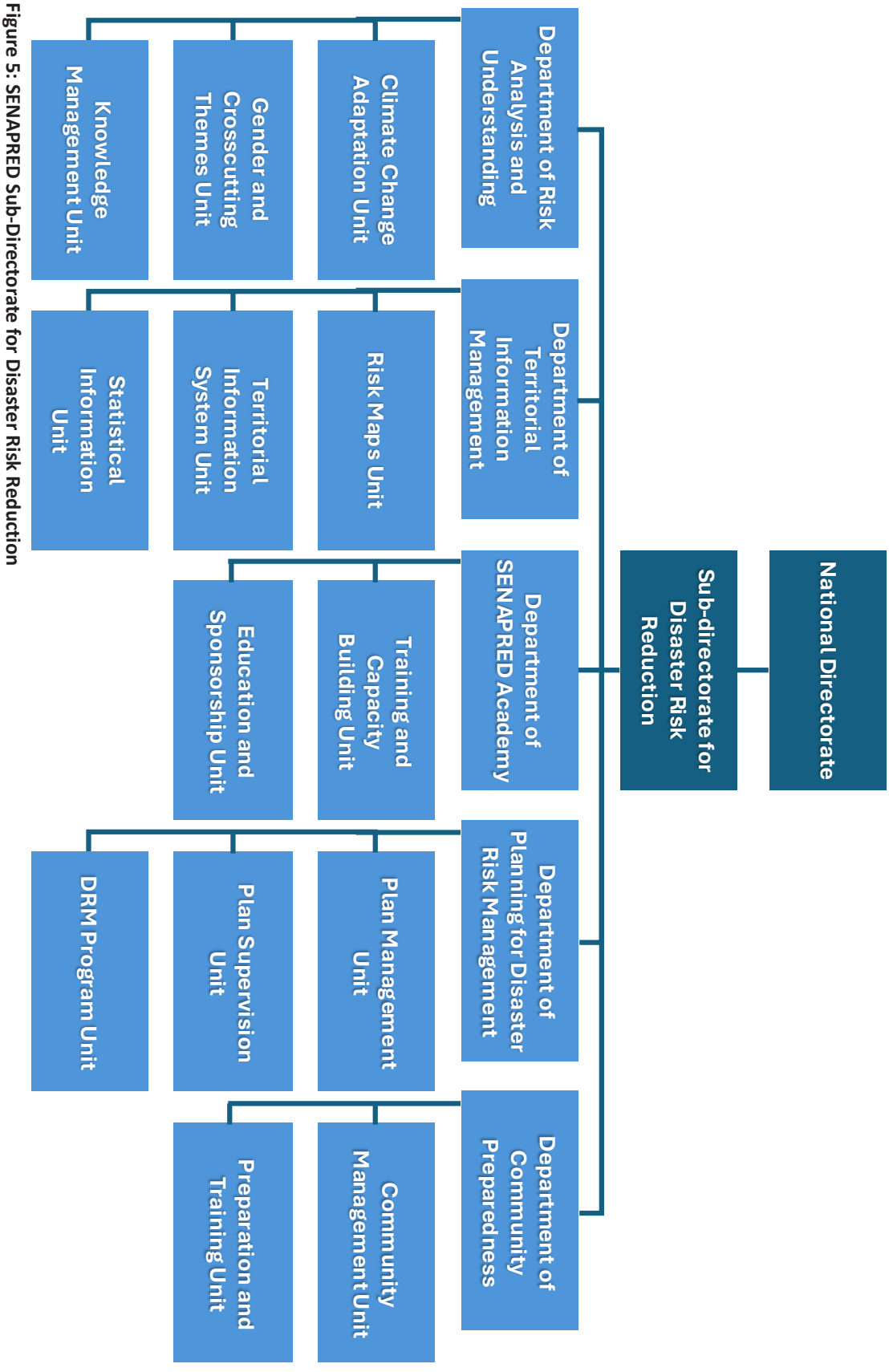


Figure 5: SENAPRED Sub-Directorate for Disaster Risk Reduction

29 June 2017, whose scope is focused on three operational phases – alerting, response, and rehabilitation.[160]

In terms of command and coordination, the PNE defines responsibilities based on the competencies, capabilities, and technical and/or administrative powers of the organizations involved in the response to emergencies, disasters, or catastrophes. Each organization involved maintains its own hierarchical and administrative structure, and they do not subordinate themselves to one another. In the context of the coordination of operations in emergencies, disasters, or catastrophes, three types of command have been detailed; they are defined in Table 2.[161]

Decree 234 approves the Regulations for the Operation of the Committees for Disaster Risk Management and the Other Coordination Bodies of the National System for Disaster Prevention and Response, published on 5 Aug 2022. Committees and coordinating bodies then utilize specific National Emergency Plans for Risk Variables and Sectoral Plans.[162]

The integration of the commands is established through the Joint Command, which corresponds to the Emergency Operations Committee (COE). It is configured as an operational body, based on the establishment of common objectives.[163]

SINAPRED Roles in Emergency Response

While SENAPRED is responsible for advising, coordinating, organizing, planning, and supervising activities related to DRM, the SINAPRED system and the entities within it are likewise mandated to participate in DRM.[164] The organizations responsible for specific response roles, functions, and capabilities, as part of SINAPRED and according to the National Emergency Plan, are described in Table 3.[165]

Impact Levels

Impact Levels, as described in the 2017 PNE, determine the activation of COEs, as coordinating bodies for response and rehabilitation actions in the face of emergencies, disasters, and catastrophes, through a convening procedure established in the respective emergency plans. In the case of the PNE, the activation of the National Emergency Operations Committee is required, without prejudice to the possibility of establishing Communal, Provincial, and Regional COEs in the affected jurisdictions. Table 4 describes the impact levels and their administrative coordination required, classification, type of committee convened, and corresponding implementation of the COEs.[166]

DRM Committees

DRR in Chile is guided by the National Policy for DRR and National Strategic Plan 2020-2030.

Types of Command as Defined in National Emergency Plan
Technical Command: Exercised by the organization or institution that has a direct relationship with the event or incident in development, either by legal provisions and /or technical competence and capacity. Its main function is to provide the technical-operational guidelines and strategies that allow for an adequate response to the incident or event.
Coordination Command: Exercised by the Directors of Civil Protection based on the respective territorial-administrative jurisdiction (national, regional, provincial, and communal). Its main function is the coordination of the institutions and resources allocated for the response to events or incidents and the relationship with the Internal Government authority. The Coordination Command is exercised by: • National Director of ONEMI (SENAPRED) • Regional Director of ONEMI (SENAPRED) • Provincial Director of Civil Protection and Emergency • Director or Communal Officer of Civil Protection and Emergency
Authority Command: Exercised by the authorities of the Interior Government (or to whom this function is delegated) in relation to the respective territorial-administrative jurisdiction (national, regional, provincial, and communal). Its main function is to facilitate and support response actions, through decision-making, based on guidelines from the coordination command and technical command, under the protection of current laws and regulations. The Authority Command is exercised by: • Minister of the Interior and Public Security • Undersecretary of the Interior • Regional Mayor • Governor • Mayor

Table 2: Types of Command as Defined in National Emergency Plan

Ministry or Agency	Roles and Functions
Ministry of the Interior and Public Security	• Oversees emergencies, safety, and coordination with relevant agencies. • Focuses on public security and disaster management.
SENAPRED (formally ONEMI)	• Main agency for coordinating emergency response and disaster management. • Monitors risks, issues alerts, and organizes national-level emergency plans.
Ministry of Defense	• Coordinates with armed forces to assist in emergencies. • Provides logistical and operational support for rescue and recovery operations.
Ministry of Energy	• Ensures the continuity of energy supply during emergencies. • Coordinates with electricity and fuel companies.
Ministry of Transport and Telecommunications	• Ensures transportation and communication systems remain operational. • Assists in repairing infrastructure like roads, bridges, and networks.
Ministry of Health	• Provides medical assistance and health services during emergencies. • Ensures hospitals and emergency services are prepared and functional.
Ministry of Public Works	• Repairs public infrastructure affected by disasters. • Focuses on rebuilding roads, bridges, and buildings.
Chilean Police	• Maintains public order and safety during emergencies. • Supports rescue operations and disaster response.
Police of Investigations	• Coordinates investigation and safety tasks during emergencies. • Prevents crime and assists in emergency responses.
Ministry of Foreign Affairs	• Coordinates international aid and support for disaster response. • Facilitates cooperation with foreign organizations.
Ministry of Justice	• Ensures legal protocols are maintained during emergencies. • Supports administrative processes related to disaster response.
Ministry of Housing and Urban Development	• Assesses housing damage and supports reconstruction. • Provides emergency shelters and housing aid.
Ministry of Social Development	• Delivers social aid and support for vulnerable populations. • Ensures food and shelter for those affected.
Ministry of Education	• Coordinates school safety plans and disaster response education. • Ensures continuity of education during emergencies.
Ministry of National Assets	• Manages public lands for emergency shelters and logistics. • Coordinates land use for reconstruction projects.
Ministry of Environment	• Monitors environmental impacts caused by disasters. • Ensures environmental recovery and resource protection.
Ministry of Agriculture	• Assesses agricultural damage and supports farmers. • Coordinates aid for food production and livestock.
Ministry of Sports	• Provides infrastructure like stadiums as emergency shelters. • Assists in community recovery programs.
National Forestry Service	• Provides rescue operations, firefighting, and emergency response. • Coordinates closely with local and national agencies.

Table 3: Organizations Responsible for DRM Roles and Functions, as Part of the SINAPRED System

These instruments provide guidance for DRR plans at the regional, provincial, and communal levels. Central to Chile's DRR strategy are DRM Committees, which have responsibilities at each administrative level and in all phases of the disaster management cycle. DRM Committees are established as coordination structures at the national, provincial, regional, and communal levels, as appropriate, to coordinate the necessary bodies to develop the capacities and resources to strengthen DRR within its jurisdiction. According to the level of the emergency in the geographic areas involved, the committees may carry out functions in support of the response and recovery phases of the disaster management cycle. DRM Committees play a pivotal role in enhancing disaster risk governance across various administrative levels.[167]

Emergency Operations Committee

While DRM Committees are responsible for the comprehensive planning and coordination of DRM across multiple phases of the disaster management cycle, COEs are activated primarily during the response and recovery phases. The main role of the COE is to coordinate the

Level	Description	Coordination	Classification	Type of Committee	Implementation
Level I	Situation managed with locally available resources.	Local Level	Emergency	Not Applicable	Not Applicable
Level II	Situation handled with additional local resources allocated for emergencies, without exceeding their response capacity.	Communal Level	Emergency	Communal Emergency Operations Committee	According to the convocation procedure established in the Communal Emergency Plan
Level III	Situation that exceeds local and/or communal response capacity.	Provincial and/or Regional Level	Emergency (major or complex)	Provincial and/or Regional Emergency Operations Committee	According to the convocation procedure established in the Provincial and/or Regional Emergency Plan
Level IV	Situation that surpasses the regional response capacity.	National Level	Disaster	National Emergency Operations Committee	According to the convocation procedure established in the National Emergency Plan
Level V	Situation that surpasses the national response capacity.	International Cooperation	Catastrophe	National Emergency Operations Committee	According to the convocation procedure established in the National Emergency Plan

Table 4: Emergency Operations Committees Activation Based on Impact Level

immediate operational actions required to manage emergencies, disasters, or catastrophes. COEs are convened at various administrative levels, including national, regional, and communal, depending on the scale and impact of the emergency. While DRM Committees develop and approve DRM instruments, coordinate intersectoral actions, and ensure the integration of DRM into public policies and development planning, COEs focus on the tactical coordination of resources, implementation of emergency plans, and real-time decision-making to address the immediate need arising from a disaster. Importantly, DRM Committees are established by Law 21.364 and aligned with the new SINAPRED system, while COEs were established under ONEMI and are part of the 2017 PNE.[168]

At the national level, the COE is led by the Minister of the Interior and is made up of the respective ministries that have a direct relationship with the developing crisis, as well as with the institutions of the armed forces and law enforcement and security. At the regional level, the COE is led by the Regional or Provincial Mayor and made up of SINAPRED entities from various sectors, including public services, armed forces, law enforcement, public utility companies (water, electricity, gas), emergency institutions, and volunteers, who must act in close coordination with SENAPRED. At the communal level, the COE is led by the Mayor of the affected community and is made up of representatives of organizations, services, and institutions that have specific and concrete capacities to respond to the type of event in question. The organizations and institutions participating in this committee maintain their own structure and have full freedom to adapt their organization to achieve maximum efficiency in the fulfillment of their tasks.[169]

Communal Emergency Plan

The Emergency Plan at the community level is governed by the National Emergency Plan and establishes local responsibilities and tasks in the event of an emergency. The first line of emergency management corresponds to the community level. As the emergency situation evolves and the need for human and material resources rises, the government level involved in the response will also escalate from the community to the province and then to the region.[170] Under the leadership of the Mayor, the COE is responsible for mobilizing the human, technical, and financial resources necessary to respond to an emergency. Specialized technical services and agencies are activated at the regional level and through the respective Regional Ministerial Secretariats, according to the specific needs of the situation being addressed in the commune. According to Communal Emergency Plans, the Mayor's disaster management

responsibilities are:

- Develop and update the Communal Emergency Plan
- Form and preside over the Communal COE, establishing the respective Commands
- Establish the COE in the town hall building, provided that the building is not within the radius of any risk and has the necessary material resources to effectively manage the emergency or disaster situation
- Maintain permanent communication links with the Provincial Governments and Regional Intendancy and with the members of the Communal Civil Protection System
- Keep the Provincial or Regional COE informed of courses of action and events
- Establish the initial assessment of the impacted territory
- Gather information at a local level on population, infrastructure, and services
- Consolidate information in Damage and Needs Reports and Assessments
- Meet the requirements and needs of the affected population with local resources
- Provide shelters, which must be evaluated by the Health Authority
- Channel and deliver to the population the relief available for the care of victims, after evaluating their needs[171]

Security Perimeter and Evacuation

The President of the Regional Committee may establish by resolution, as appropriate, a Security Perimeter, indicating the evacuation of the population and restrictions on entry to the place where, according to a report by SENAPRED, there is a serious and current threat to the life or physical integrity of people, and these restrictions may only be maintained as long as the threat persists. A Security Perimeter refers to the targeted geographical area, defined by the nature of the threat, and once established, empowers authorities to impose emergency actions, such as evacuations, road closures, and restrictions.[172]

Evacuation Plans are available for every administrative region in Chile and are intended to guide the evacuation process for specific geographic areas. They show evacuation routes, meeting points, and evacuation areas, among other elements related to one or more threats. These plans are incorporated into Visor Chile Preparado and can be accessible as stand-alone documents through SENAPRED's website and on most administrative regional websites.

Armed Forces Role in Disaster Relief

The Ministry of National Defense (MND) and the armed forces are considered part of the SINAPRED system.[173] According to the National Emergency Plan, the MND is responsible for the coordination and execution of the armed forces in support of the National Policy for DRR, the National Strategic Plan for DRR, and the National Emergency Plan. MND is also responsible for preparing plans and operating protocols for the coordinated participation of the armed forces in all phases of the disaster management cycle. The plans and protocols must ensure compliance with the provisions of the DRM instruments and the instructions issued by the Minister of National Defense.[174] In the event the resources required for the response indicated in these DRM instruments are insufficient due to the magnitude of the emergency, the Minister of National Defense may authorize the use of other military resources. Such authorization is granted upon request of the President of the National DRR Committee, when the emergency develops at a national level, or, upon request made to the Regional or Provincial DRR Committee in cases where the DRR Committee is responsible for the direction of the emergency at these levels.[175]

Within MND, the Chief of the Joint Chiefs of Staff (JEMCO) is responsible for providing military advice and for coordinating and directing military support activities for resources and capabilities from the armed forces for DRM in all phases of disaster management, in consideration of the instructions issued by the Minister of National Defense and the provisions of the DRM instruments. Law 21.364 states "the use of the armed forces may not affect the strategic capabilities of national defense."[176] MND

will designate regional and provincial military authorities when Regional and Provincial DRR Committees have been established. In these cases, committees will advise the military authorities in relation to the participation of military assets. In the event a constitutional state of emergency is declared due to catastrophe, it is the responsibility of "the Head of National Defense to exercise his duties and powers, in permanent coordination with the person presiding over the respective [DRR] Committee in the response and recovery phases. During the emergency response phase, the Head of National Defense will have at his disposal all operational military means considered in the previously established emergency plans."[177]

Disaster Management Partners

Chilean Bomberos

The Chilean Bomberos is an organization of more than 57,000 firefighters belonging to 314 fire departments present in each commune or group of communes. The organization was officially recognized in 1970, though volunteer firefighter corps in Chile have a long and proud history that stretches at least to the mid-19th century. Volunteer firefighters are part of a national structure, which comprises the National Fire System, considered a public utility service by law, and includes Fire Departments, Regional Firefighter Councils, and the National Board of Fire Departments, which has representation before the National Assembly. Bomberos are expected "to respond, free of charge and voluntarily, to emergencies caused by nature or man, such as fires, traffic accidents or others, without prejudice to the specific competence of other public and private bodies."[178] Bomberos train to execute a variety of tasks during a range of scenarios, including fires; rescues; saving people and animals in aquatic environments, mountains, cliffs, mines, underground tunnels, wells, floods, avalanches, and storms; containment of spills and recovery of dangerous materials; and gas leaks. The National Fire System receives some funding from the government, however fire departments at the local level rely heavily on monetary and equipment donations. The National Board of Fire Departments is responsible for the coordination of firefighting assets in the event of earthquake, flood, or other natural disaster within the country; it is also the coordinating body in the event of a request to send firefighters abroad to support other countries. Law No. 20.564 "Firefighters of Chile, National Firefighting System, National Board of Firefighters of Chile," was promulgated on 28 January 2012 and establishes the framework law for the Bomberos, who reside within the Ministry of the Interior and Public Security.[179]

Chilean Civil Defense Force

The Chilean Civil Defense Force was established by Law No. 8.059 (1945) and is considered a public corporation, with a mandate of helping to prevent, mitigate, respond to, and recover from the effects of any catastrophe, whether from armed conflicts or seismic phenomena, fires, floods, building collapses, epidemics, or other disasters and public calamities. The Civil Defense Force is associated with and dependent upon the MND, though it is made up of predominantly volunteers, who support citizens and communities during emergencies. The organization maintains a national headquarters, 42 local headquarters, and nearly 2,000 active volunteers. Notably, the Civil Defense Force maintains relationships with institutions within the SINAPRED system as well as with private entities. For example, the Civil Defense Force has a formal agreement with Deff, a manufacturer of long-life food rations for Armed Forces, security and emergency entities, and humanitarian aid.[180]

External Capabilities and International Cooperation

According to the 2017 PNE, international cooperation in emergencies, disasters, and catastrophes for the country is addressed by the "Interagency Response Plan for Emergencies and Disasters" of the United Nations System (UNS) in Chile. The Plan's objective is to define the set of actions that the UNS must undertake in Chile

in the event of a disaster, in order to support the State in reducing the loss of human lives and material assets and to provide humanitarian aid in a timely and effective manner to victims of disasters.[181]

The implementation of the Interagency Response Plan considers all UN agencies resident in Chile and that have functional and/or mandated responsibilities in emergencies and disasters. The responsibility for activating the plan falls on the UN Resident Coordinator (RC) at the request of the Minister of Foreign Affairs and the United Nations Disaster Management Team (UNDMT), which in turn is technically supported by the United Nations Emergency Technical Team (UNETE).[182]

In the event of a request for international assistance by the GoC, the execution of the Interagency Response Plan depends on the following assumptions:

1. It is the responsibility of the State to provide humanitarian aid to people affected by emergencies, disasters, or catastrophes that occur in Chilean territory. The request for international aid to the UN in Chile is requested through the Ministry of Foreign Affairs.
2. The State declares by supreme decree (signed by the President of the Republic and the Ministers of the Interior and National Defense) the State of Emergency of Catastrophe (in terms of order and security).
3. In the event that a State of Emergency of Catastrophe is not declared and there is no reaction from the authorities to an emergency, the UNDMT, by virtue of its humanitarian mandate, may decide to activate the plan. If the State does not ask the international community for help, fundraising will be difficult, and execution of the plan will depend on available resources.[183]

Table 5 contains a list of the actions and corresponding responsibilities concerning the Interagency Response Plan for Emergencies and Disasters.[184]

The 20 UNS agencies that are resident in Chile also work with the GoC and the different actors of society for the well-being of Chileans based on the implementation of the Sustainable Development Agenda and its Sustainable Development Goals (SDG).[185]

Japan International Cooperation Agency

Although Chile is an OECD member and a higher-income country, Japan and Chile share the characteristic of being highly exposed to seismic hazards. To address some facets of

Actions and Corresponding Responsibilities Concerning the Interagency Response Plan For Emergencies and Disasters	
Contact SENAPRED and the Ministry of Foreign Affairs to determine: • National capacity to address the disaster or catastrophe. • The intention to request international aid. • Information on the impact and damage caused by the disaster or catastrophe. • An institutional focal point (SENAPRED) is designated to carry out contact and coordination with the Ministry of Foreign Affairs.	UNRC Institutional Focal Point (SENAPRED) – Chief of Staff
Define and monitor if the mobilization of UN Disaster Assessment and Coordination (UNDAC)/International Search and Rescue Advisory Group (INSARAG) will be requested. • An institutional focal point (SENAPRED) is designated to carry out contact and coordination for the mobilization of UNDAC/INSARAG groups.	UNDMT – UNETE Institutional Focal Point (SENAPRED) – Chief of Staff Division of Civil Protection
Define field missions.	UNDMT – UNETE
Determine if humanitarian aid will be delivered and the action strategy.	UNDMT – UNETE
Activate the International Humanitarian Network.	RC – UNETE – ONEMI
Identify personnel and necessary consultants according to the specific disaster or catastrophe, prioritizing local and regional resources.	UNDMT – UNETE
Supervise the response program and recommend necessary adjustments based on needs.	UNDMT – UNETE
If necessary, establish field operation teams to plan and deliver aid based on the disaster's impact and priorities.	UNDMT – UNETE
If the mobilization of UNDAC groups is required, they will assist in providing information and evaluation on priority assistance needs.	UNDMT – UNETE

Table 5: Interagency Response Plan

disaster prevention, Japan has partnered with Chile via the Japan International Cooperation Agency (JICA).

JICA activities in Chile have several focus areas including: Disaster Prevention, Promotion of Social Inclusion, and Combatting Climate Change.[186] In Disaster Prevention, JICA supports the building of a highly resilient society by strengthening the disaster management capacity of public administrations, raising awareness among citizens, and improving the capacity of human resources to reduce disaster risk.[187] In combatting climate change, JICA promotes the strengthening of scientific and technological research, in addition to carrying out technology transfer, strengthening of systems, and development of human resources to face the challenges of climate change, in accordance with the National Plan on Climate Change.[188] JICA also supports the building of a resilient society through the development of human resources and capacity building focused on DRR based on lessons learned from past disaster experiences, and strengthening disaster prevention systems through digital transformation and other measures.[189]

The International Red Cross and Red Crescent Movement

International Committee of the Red Cross

The International Committee of the Red Cross (ICRC) is a private, independent humanitarian organization, headquartered in Geneva, Switzerland. The ICRC bases its activities on the provisions of International Humanitarian Law, and it is neutral in politics, religion, and ideology. The ICRC assists with the protection of civilian victims of armed conflict and internal strife and their direct results. Within these roles, it may take any humanitarian initiative as a neutral and independent intermediary.[190]

International Federation of Red Cross and Red Crescent Societies

The International Federation of Red Cross and Red Crescent Societies (IFRC) is a humanitarian organization that provides assistance and promotes humanitarian activities carried out by the National Societies, with a view to preventing and alleviating human suffering. IFRC was founded in 1919 and includes 191 National Societies. The IFRC carries out relief operations to assist victims of disasters and combines this with development work to strengthen the capacities of its member National Societies.[191]

Chilean Red Cross Society

The Chilean Red Cross is an integral partner to the GoC in disaster management. The Chilean Red Cross was founded in 1903 and is regulated by law as an auxiliary of the GoC. The Chilean Red Cross was admitted to the network of the IFRC in 1920 and currently has 148 branches in 10 regional committees and 2 territorial zones. The Chilean Red Cross' Strategic Plan 2022-2025 prioritizes humanitarian intervention for vulnerable communities through five strategic pillars: health, risk management, communication and resource mobilization, financial transparency, and institutional development.[192]

The Chilean Red Cross' strategic plan prioritizes the increased capacity of its staff to create strategies, which generate actions focused on climate change, adaptation, and environmentally sustainable practices. The organization prepares for crisis response by training and increasing the capacity of its volunteers and the branch territorial network, particularly by focusing on vulnerable communities, expanding leadership in the field of disaster law, strengthening specialized intervention teams for mass events, demonstrations, and social tensions, and developing the Chilean Red Cross' Livelihoods program, which facilitates access to resources for people.[193]

The national society supports the GoC in the development and implementation of migration policies to manage the influx of migrants to the country, including recent work on the National Policy on Migration and Aliens (No. 21325). Chilean Red Cross branches also provide food support to the migrant population entering

through the north of the country.[194]

In late 2019, a Disaster Response Emergency Fund (DREF) operation was launched to support the Chilean Red Cross' response to large-scale social mobilizations and civil unrest.[195] The IFRC provided financial support to the Chilean Red Cross via mechanisms such as the IFRC-DREF and Emergency Appeals. A recent example of its use came in February 2024 after forest fires in central Chile; the DREF allocation of CHF496,982 (US$562,797) supported the Chilean Red Cross to assist more than 9,000 people affected by forest fires in Valparaíso.[196]

Several participating National Societies provide support to the Chilean Red Cross. The Argentine Red Cross provides technical support to the National Society in the area of community health. The German Red Cross has a technical cooperation agreement with the National Society which has enabled volunteers to be trained in anticipatory action. The Italian Red Cross supports the Chilean Red Cross through financial and technical support for the implementation of migration and climate change actions.[197]

The Chilean Red Cross leads the coordination of the International Red Cross and Red Crescent Movement in Chile, bringing together the National Society, the IFRC, and the ICRC. This is carried out in line with the Strengthening Movement Coordination and Cooperation principles, and the newly adopted Seville Agreement 2.0.[198] In its auxiliary role, the Chilean Red Cross works closely with government agencies and private enterprises, such as Jetsmart, DHL Supply Chain, DHL Express, and DHL Global Forwarding.[199]

Chilean Red Cross' contact information includes:

Cruz Roja Chilena (Chilean Red Cross)
Address: Avda Santa María 0150 - Providencia
Providencia
Santiago de Chile
Phone: (56) (2) 27834100
Email: *cruzroja@cruzroja.cl*

U.S. Government Agencies in Chile

U.S. Southern Command, Humanitarian Assistance Program

Funded by U.S. Southern Command (SOUTHCOM) and coordinated through the Security Cooperation Officer (SCO), the U.S. Embassy in Chile bolsters its humanitarian assistance and disaster response (HADR) line of effort by supporting emergency response agencies with disaster prevention and response equipment donations. The program not only funds infrastructure, equipment, and training to help nations prepare before disasters and to respond when crises strike, but also supports countries who request assistance from the U.S. government when they experience health and weather-related emergencies. Assistance can include technical aid and support with the construction of disaster relief warehouses, emergency operation centers, shelters, and fire stations. Humanitarian Assistance Program (HAP) officials at SOUTHCOM plan, coordinate, and facilitate the provision and improvement of emergency response infrastructure and capabilities throughout the SOUTHCOM region. HAP also sponsors disaster preparedness exercises, seminars, and conferences aimed at improving the collective ability of the U.S. and partner nations to respond effectively and expeditiously to disasters. This type of multinational disaster preparedness has proven to increase the ability of SOUTHCOM and the U.S. military to work with partner nations.[200]

National Guard State Partnership Program

The State Partnership Program (SPP) has been successfully building relations for more than 30 years and now includes 105 partnerships with 115 nations around the globe. The SPP evolved from a 1991 U.S. European Command decision to set up the Joint Contact Team Program in the Baltic Region with Reserve component Soldiers and Airmen. A subsequent National Guard Bureau proposal paired U.S. states with three nations emerging from the former Soviet

Bloc and the SPP was born, becoming a key U.S. security cooperation tool, facilitating cooperation across all aspects of international civil-military affairs and encouraging people-to-people ties at the state level.[201] Administered by the National Guard Bureau, the SPP is guided by State Department foreign policy goals and executed by the state adjutants general in support of combatant commander and U.S. Chief of Mission security cooperation objectives and DoD policy goals. Through SPP, the National Guard conducts military-to-military engagements in support of defense security goals but also leverages whole-of-society relationships and capabilities to facilitate broader interagency and corollary engagements spanning military, government, economic, and social spheres.[202]

The Texas National Guard maintains an SPP with Chile, Czech Republic, and Egypt. The SPP with Chile was formally established in 2008. Together, Texas and Chile have conducted numerous HADR exchanges, including Hurricane Response Exercises, Volcano Disaster Response Exercises, Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Operational Readiness Exchanges, and Medical Operational Exchanges.[203]

The 2024 annual Defense Consultative Committee (DCC) meeting in Santiago, Chile, also yielded the following agreements:

- Future Exchanges: In addition to continuing recurring planning, medical, and CBRNE subject matter expert exchanges, two firefighting technique exchanges were agreed upon for the next fiscal year, one in each country.
- Civilian Agency Integration: Discussions focused on the best ways to integrate civilian agencies into the planning and execution of exchanges for disaster preparation and preparedness. Upcoming assessments will include a gap assessment.
- Post-Event Communication: The subcommittee agreed to maintain mutual lines of communication following emergencies to discuss events, lessons learned, and tactics, techniques, and procedures executed.[204]

Texas National Guard contact information includes:

Texas Army National Guard (TXARNG)
J53 International Affairs
State Partnership Program – Chile
Email: *ng.tx.txarng.list.tmd-j53@mail.mil*

United States Agency for International Development

USAID/BHA is the U.S. Government lead federal coordinator for international disaster response and humanitarian assistance. USAID/BHA requests U.S. DoD support to disaster response operations on an as-needed basis, and only in situations where the U.S. military can provide a unique capability that other first responders, including those of the host nation and international humanitarian partners, have insufficient capacity to provide. USAID/BHA responds to an average of 75 crises in more than 65 countries every year—including natural disasters, conflicts, and severe food insecurity—and fulfills its mandate of saving lives, alleviating human suffering, and reducing the physical, social, and economic impact of disasters worldwide. USAID/BHA provides funding, supplies, and expertise for the rapid and effective provision of humanitarian aid throughout the world.[205]

USAID/BHA's staff presence globally and at its Washington, D.C., headquarters includes experts in the food security, nutrition, WASH, health, shelter/settlements, logistics, agriculture, economic recovery/livelihoods, livestock, DRR, climate adaptation, and humanitarian protection sectors. USAID/BHA has humanitarian advisors at all of the DoD combatant commands, Special Operations Command, and key DoD field-forward positions, as well as at the U.S. Mission to the UN in New York, the U.S. Mission to the UN and other International Organizations in Geneva, the U.S. Mission to the UN Agencies in Rome, the U.S. Mission to the European Union in Brussels, and the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, U.S. To support disaster response globally, USAID/BHA maintains regional offices in six countries – Costa Rica, Hungary, Kenya, Senegal, South

Africa, and Thailand – as well as 14 liaison offices, where regional advisors coordinate with relevant actors across their respective regions and countries. In addition to these offices, full-time USAID/BHA staff are present in 32 other countries. USAID/BHA's vast network of implementing partners includes affected communities, local and national governments, other U.S. Government entities, and international partners, including NGOs, international organizations, the international donor community, and the private sector. Relief supplies are pre-positioned primarily in implementing partners' warehouses, and in five USAID/BHA-managed warehouses around the world to enable a rapid response to any location globally.

As the lead federal coordinator for Foreign Disaster Response (FDR), USAID/BHA's annual budget reflects the U.S. Government's interest in providing needs-based assistance, and it has been as high as US$11.9 billion annually in recent years for humanitarian assistance activities. All of USAID/BHA's programs and activities are humanitarian assistance, targeting populations most vulnerable to the impacts of shocks from slow or sudden-onset emergencies. USAID/BHA's humanitarian assistance consists of two major conceptual areas, which may frequently be interlinked programmatically and strategically. The first area is humanitarian response pursuant to a Declaration of Humanitarian Need (DHN) issued by the U.S. Ambassador or Chief of Mission in the affected country based on four criteria:

1. There is evidence of significant unmet humanitarian need;
2. U.S. Government humanitarian assistance will save lives, reduce human suffering, and mitigate the impact of humanitarian emergencies on the most vulnerable;
3. The host country requests or will accept international assistance; and
4. Responding aligns with U.S. Government interests and humanitarian objectives.

This DHN permits USAID/BHA to begin emergency response activities. Humanitarian response is characterized by urgent action, including rapid assessment of needs and provision of funding to partners to meet those needs, logistical support to local and national actors, and frequently the deployment of USAID/BHA disaster response experts or teams. The second conceptual area of USAID/BHA assistance is known as early recovery, risk reduction, and resilience (ER4) activities, which aim to improve the well-being of vulnerable people by strengthening their capacities to manage risk, to anticipate, withstand, recover from, and adapt to shocks and stresses, and to support positive, transformative changes. These ER4 activities may be integrated with humanitarian response programming or may be stand-alone activities. ER4 programs and activities are cost-effective, reducing the need for future humanitarian assistance when shocks occur.

Core USAID/BHA responsibilities during an emergency response include:

- Conducting assessments of humanitarian needs
- Developing U.S. Government response strategy
- Coordinating the operational on-ground response in support of the U.S. Ambassador
- Providing fast and effective funding to established partners (NGOs, international organizations, etc.)
- Leading official reporting on humanitarian issues and U.S. Government response activities
- Requesting support from other U.S. Government agencies as required.

When civilian and host nation military response capacity is overwhelmed and the U.S. military has a unique capability, USAID/BHA may request supplemental FDR support from DoD for a limited period. These requests occur in less than 5% of all official U.S. Government responses. Interagency requests for DoD support to FDR are transmitted to the Secretary of Defense (SECDEF) in an official memorandum (Executive Secretariat Memo), which is required in order to leverage such DoD support. With SECDEF approval, DoD components may

provide non-reimbursable FDR support to USAID using available Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) funds. Coordination between USAID and DoD personnel is facilitated at the tactical, operational, and strategic levels by Humanitarian Assistance Advisors to the Military (HAA/M), who are USAID/BHA personnel trained to liaise with DoD counterparts and bridge gaps between the U.S. military and international humanitarian community. The DoD capabilities most commonly requested by USAID/BHA during a disaster response are logistics and airlift support rather than direct assistance to beneficiaries. USAID uses the Mission Tasking Matrix form as the formal means of tasking for DoD resources at the tactical level. OHDACA steady-state projects are distinct from FDR activities, and their implementation requires coordination with the local or regional USAID mission as well as approval by the relevant U.S. Ambassador and DoD combatant command.

The U.S. Government prioritizes civilian leadership in humanitarian operations in accordance with internationally-recognized humanitarian principles, including both the leadership of our responses and engagement with partner nations. The unique socio-political context of each partner nation is a key consideration for decision makers at all levels before, during, and after the use of DoD capabilities in a disaster response scenario.

USAID/BHA in Chile

Chile falls within the USAID Latin America and Caribbean (LAC) region.[206] In Fiscal Year (FY) 2023 USAID/BHA regional funding totaled US$527,270,545, of which Colombia, Guatemala, Haiti, Peru, and Venezuela were top recipients. Nearly US$476 million of funding supported emergency response activities in 13 countries, and nearly US$51 million supported standalone ER4 activities in 11 countries and the region aimed to address the root causes of food insecurity and support communities' disaster preparedness and recovery.

In FY 2023, complex emergencies, disasters caused by natural hazards, food insecurity, and ongoing migration flows continued to drive humanitarian needs across LAC. Regionwide, climate change has intensified the impact of natural hazards, resulting in casualties, destruction of property, and displacement.[207] USAID/BHA programming in the past has included support for the Regional Platform for DRR in the Americas, Tsunami Preparedness Workshops, and Increasing Resilience Across South America through the AmRC program.[208]

During a High-Level Dialogue in October 2024, USAID/BHA announced a US$400,000 commitment to the expansion of its active wildfire risk management program in Chile; the program provides training and technical assistance for Chilean officials and community organizations.[209] The Disaster Assistance Support Program (DASP) is implemented globally but is of specific relevance to Chile and South America due to the seasonal wildfires, which can become devastating emergencies. The DASP is what allows USAID to mobilize and deploy domestic firefighters in a variety of critical functions in support of disaster-affected nations.[210]

In response to wildfires in Chile between January and February 2024, USAID/BHA funded NGO partners, Caritas Chile and World Vision, to support local firefighter response, distribute multipurpose cash assistance to help households affected by wildfires meet their basic needs, and establish safe spaces for at-risk displaced populations, including adolescents and children. Sectors aided included: multiple cash assistance; protection; and WASH.[211]

USAID contact information includes:

USAID Bureau for Latin America and the Caribbean
Address: 1300 Pennsylvania Ave, NW Washington DC 20004
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USAID/BHA
Regional Office, Latin America and the Caribbean
Email: *BHA.ALAC.LAC@usaid.gov*

USAID/BHA
Civil-Military Operations Division
Email: *bha.cmd.dcleads@usaid.gov*

Laws, Policies, and Plans on Disaster Management

Before the 27 February 2010 earthquake and tsunami, DRM in Chile was based on the 2002 National Civil Protection Plan, which established a management structure, where ONEMI was responsible for risk management at the national level and undertook the tasks of monitoring systems, issuing alerts, planning, and coordinating and executing actions surrounding hazards and disaster events.[212] The 2010 earthquake revealed shortcomings in transmitting information from the tsunami early warning system. Additionally, disaster response efforts were hindered by a centralized decision-making process and an administrative structure that obstructed communication, resource allocation, and local, regional, and national coordination. Thus, the Chilean Congress reformulated the country's DRM framework.[213] The result was a 10-year plan, which included the rollout of a national training plan, improvement of Chile's incident command system, strengthening first response capability, and improved integration with civil organizations.[214]

A National Platform for DRR was established in 2012 by ONEMI. A second National Policy for DRR was issued in 2020, along with the National Strategic Plan for DRR 2020-2030.[215] In August 2021, a new disaster management law – Law 21.364 – was ratified and brought a wave of reforms, including a new legal framework, whereby the newly formed SINAPRED is a system of a collection of public and private entities with competencies related to the different phases of the disaster management cycle. Also with the new law, ONEMI, created in 1974 as a "centralized public service," was replaced by SENAPRED. The new national system is intended to be decentralized and hierarchical, spanning the communal, provincial, regional, and national levels.[216] Guided by Law 21.364, Chile's disaster management system is implemented through DRM Committees, DRR Plans, and Emergency Plans, each of which is mandated at the national, provincial, and communal levels.[217]

Law 21.364

Law 21.364 was published in the Official Journal on 7 August 2021. The Law recognizes the progress made over the years by the SNPC and ONEMI and replaces them with SINAPRED and SENAPRED.[218] The law modified how Chile handles DRM – decentralizing decision-making authorities, establishing coordination mechanisms vertically through administrative levels of government and laterally across geographic and sectoral separations. The law also drives a renewed emphasis on DRR and its early warning system, aiming to increase capacity at the sub-national and community levels to both respond to and prepare for disaster. Pertinent regulations include:

- Decree 86: Regulation on governing technical bodies for monitoring threats; technical bodies for sectoral monitoring; instruments for DRM; and procedures for preparing threat maps and risk maps.
- Decree 338: Regulation on the DRM Program.
- Decree 234: Regulation on the operation of the DRM Committees and other coordination bodies of SINAPRED.[219]

In the context of continued disaster management reform, Law 21.364 establishes norms to correct problems related to the previous system. For example, the legislation emphasizes the importance of understanding and reducing factors underlying risk, including those associated with the vulnerability of people and communities. It highlights the importance of having risk maps that adequately describe the interaction of vulnerability, exposure, and other relevant elements for disaster mitigation, response, and recovery. It re-establishes the national system, now called SINAPRED, which is a collection of multi-sectoral public and private

entities, spanning the community, provincial, regional, and national levels.[220]

National Policy for Disaster Risk Reduction and National Strategic Plan 2020-2030

The National Policy for Disaster Risk Reduction and its respective National Strategic Plan 2020-2030 (Política Nacional para la Reducción del Riesgo de Desastres, PENRRD) comprise the guiding instruments for matters of DRM, defining objectives, actions, goals, deadlines, and national actors involved, and providing the framework through which DRR initiatives are designed and executed for sustainable development.[221] The purpose of merging the Policy and its Strategic Plan was to expedite its processing and subsequent implementation in the country.[222]

PENRRD consists of seven cross-cutting approaches, six guiding principles, five priority axes, and 25 strategic objectives, which inform 74 strategic actions and 161 goals and deadlines of the National Strategic Plan.[223] The five priority axes roughly correspond to the four priority actions of the Sendai Framework for DRR - i.e., understanding disaster risk, strengthening disaster risk governance, investing in DRR, and enhancing disaster preparedness for effective response and "Building Back Better." The PENRRD splits the fourth priority into two - i.e., provide effective response and foster sustainable recovery.[224] To implement PENRRD, the National Strategic Plan 2020-2030 establishes 74 strategic actions, which describe their respective goals, deadlines, indicators, and responsible bodies. These strategic actions are divided into the five strategic axes developed by the National Policy.[225]

The implementation, monitoring, and evaluation of PENRRD is the responsibility of the PNRRD, which, through SINAPRED and SENAPRED, under the leadership of the Ministry of the Interior, ensures its proper operation and permanent monitoring.[226] The National Policy for DRR and the National Strategic Plan 2020-2030 elaborate on the National Policy for DRR 2014-2018 and the National Strategic Plan for DRR 2015-2018. The new policy and plan aim to inspire more sectoral DRR initiatives and align various efforts under a common framework. Through the policy, the government has established a permanent line of support for ministries to guide the development of planning documents, such as Sectoral Emergency Plans.[227] The policy also brings to the forefront the need to improve formal and informal community DRR education, calling on entities in both the public and private sectors to develop communication strategies accessible in language and socio-cultural contexts for diverse target groups. SENAPRED prepares and updates the PNRRD every five years, with the approval of the President of Chile and in collaboration with the public and private entities.[228]

National Emergency Plan

The PNE is a national-level instrument that establishes response actions in emergency situations, disasters, and catastrophes. The plan was approved on 29 June 2017 and includes the following sections:

- Conceptual framework for emergency response
- Roles and functions of important actors
- Activation of the emergency plan and its system of alerts
- Communication and information
- Coordination of the SNPC (now SINAPRED)
- System of evaluation
- Re-adaptation of the plan[229]

The PNE activates complementary and specific emergency plans at the national, regional, provincial, and communal levels, including general emergency plans, specific emergency plans by risk variable, contingency plans, and sectoral emergency plans, as described in Table 6.[230]

Disaster Management Communications

The 2010 earthquake and tsunami disaster were turning points for Chile's disaster management communications. Significant

Complementary and Subordinate Emergency Plans	
Emergency Plans	Complementary instruments with a multi-threat perspective which establish the response actions in the face of an emergency, disaster, or catastrophe situation, through the activation and coordination of the agencies and institutions of the Civil Protection System at the regional, provincial, and communal levels.
Specific Emergency Plans by Risk Variable	Specific instruments that establish response actions in response to an emergency, disaster, or catastrophe situation derived from a specific and known risk variable, which is characterized and differentiated from other events, based on the background information provided by competent technical organizations. This instrument establishes the activation and coordination of the organizations and institutions of the Civil Protection System, which have jurisdiction (legal and/or technical) in the risk variable addressed at the national, regional, provincial, and communal levels. The execution of these plans is linked to the emergency plans of the respective levels.
Contingency Plans	Complementary and specific instruments for response planning, in which operational coordination is established in relation to a specific event, with a duration (temporality or validity) and territorial coverage determined by the existence or permanence of the event at the national, regional, provincial, and communal levels. The execution of these plans is linked to the emergency plans of the respective levels.
Sectoral Emergency Plans	Complementary and specific instruments that establish response actions in the event of an emergency, disaster, or catastrophe by the respective sector, based on the determination of actions internally (institutionally) and externally (inter-institutionally), based on available resources, mainly at the national and regional levels. The execution of these plans is linked to the Emergency Plans and/or Specific Emergency Plans by Risk Variable of the respective levels, in relation to the actions adopted by the sector and its relationship with other SINAPRED agencies.

Table 6: Complementary and Subordinate Emergency Plans

gaps were identified including insufficient protocols and procedures, an unreliable telecommunications system, insufficient staffing. no 24-hours-a-day-7-days-a-week shift system in place, regional offices without operational capacity, COEs without training or organization, and limited operational capacity at the communal level..[231] In the last 15 years, disaster management communications in Chile have improved, with the help of the early warning mandate central to Law 21.364 and citizen-initiated programs.

For example, the Municipal Association for Public Security (AMSZO) focuses on the search for and improvement of the best technological tools for public safety. With AMSZO's encouragement, the Public Security Directorate, in 2021, made investments to unify mission-critical communication systems through integrating the Hytera Integrated Command & Control (ICC) solution. Hytera ICC was then launched as a unified dispatching and management platform in Santiago's major municipalities and allows efficient communication and collaboration while handling events reported to the emergency service of the Directorate of Public Safety. In other areas, the Directorate has implemented technology diversification and upgraded existing systems to enable ICCs to receive emergency calls more reliably and to efficiently manage response efforts. To ensure response capacity, some ICC Centers now have server redundancy, a duplicate switching matrix, dispatcher stations, a geographic information system (GIS), and incident management, such that each emergency is received and allocated automatically to the units closest to the incident. Photo 1 shows a Public Security official utilizing the new Hytera ICC solution at one of Chile's main municipalities in Santiago.[232]

In 2018, Chilean engineers created a low-frequency radio signal communication system to send help information when mobile and Internet systems collapse during an emergency or natural disaster. The Emergency Information System (EIS) uses radio waves to send information to private telephones even when other



Photo 1: Public Security Official Operating Hytera ICC

communication lines are unavailable. To issue warnings for earthquakes or tsunamis, Chile uses the Commercial Mobile Alert System/ Wireless Emergency Alerts (CMAS/WEA) system, which requires the operation of antennas that replicate the mobile phone signal through Global System for Mobile Communications (GSM), Code Division Multiple Access (CDMA), 3G Mobile Telecommunications, Long-Term Evolution (LTE) high-speed wireless communication. The EIS project aims to return to radio frequencies, which already have the infrastructure and use this high frequency independent of mobile or Internet signal.[233]

Early Warning Systems

According to SENAPRED, there has been a continuous development of Chile's early warning system (EWS).[234] Law 21.364 placed a renewed emphasis on Chile's EWS, and within the new framework, the GoC plans to modernize a disaster communications platform for receiving information, update the Emergency Alert System (SAE), and establish the EWS system for tsunami, avalanche, and volcano hazards.[235] New capabilities already implemented include the strengthening of telecommunications and links with satellite support, the Risk Management Viewer for the analysis of scenarios that include critical infrastructure, and the implementation of the Cellular Emergency Alert system.[236]

The EWS comprises of four elements: Early Warning Units, Technical Organizations for Monitoring Threats, National Communications System, and Security Perimeter.[237]

Early Warning Units (or Early Warning Centers) are located and aligned with each of SENAPRED's 15 regional directorates, which operate continuously (24-hours-per-day, 7-days-a-week), with the same technology as SENAPRED's national (central) coordination center. Regional centers also maintain infrastructure for the operation of the COE and officials who coordinate the operational and civil protection action in the region.[238]

Technical agencies for monitoring threats are those with the technical capacity for each type of hazard; these include:

- The Meteorological Directorate of Chile
- The Hydrographic and Oceanographic Service of the Navy
- The National Geology and Mining Service
- The National Forestry Corporation or its legal successor
- The National Seismological Center
- The General Directorate of Waters
- The Directorate of Hydraulic Works
- Firefighters of Chile
- The Chilean Nuclear Energy Commission

Technical organizations communicate to SENAPRED and to each Regional Directorate the status of threats, their level of danger, and the scope and extent of the same. SENAPRED will, then, declare the appropriate level and based on the reports of said bodies, the Alert to the population and all communal, regional, provincial, or national authorities through all necessary means of communication.[239]

Chile's National Communication System includes primary, secondary, and other systems, which are supported by VSAT, BGAN, and IRIDIUM satellite systems, as follows:

- Primary systems: P25 land mobile radio; very high frequency (VHF) radio; and "Operational Emergency Message from the Committee" – conveys formal message or communication issued by emergency committees.
- Secondary systems: high frequency (HF) radio; satellite, mobile, and land-based phone systems; Torrente and amateur radio.
- Multiprotocol Label Switching: High-speed, low-latency, and secure communication that directs and manages data flows across telecommunications networks, such as Intranet, Internet, telephone, email, and video conferencing.[240]

Chile's communication system aligns with international guidelines, such as the ISO 22322 standard for public alerts, and, in comparison to other countries, Chile's system stands out for its focus on integrating traditional

telecommunication infrastructure with modern technology to deliver real-time alerts to the population during emergencies.[241] According to Law No. 18.168, telecommunications operators must broadcast alerts for free. Alerts cover threats such as earthquakes, tsunamis, volcanic eruptions, and forest fires. SAE messages are georeferenced to specific areas and transmitted via dedicated frequencies, ensuring reliable delivery.[242] Chile's SAE consists of a Central Unified Platform (PCU) for generating alerts, detection, and dissemination of media to broadcast georeferenced alerts, and alerts transmitted to mobile phones with a compatibility seal, even during network congestion.[243] SAE Alerts are text messages of up to 90 characters, include audible signals and vibrations, with mandatory displays as pop-up windows on mobile devices, and remain active until manually dismissed by the user.[244]

The fourth element of Chile's EWS, the Security Perimeter, refers to the specific geographical area which is officially declared in the event of a disaster and empowers authorities to carry out various actions, such as evacuations, road closures, and restrictions.[245]

EWS Alert Levels

Chile's 2017 PNE considers each alert level by scope, coverage, and risk variable. Scope corresponds to the entities that are in the affected area and that may respond to an emergency. Coverage refers to the geographic area affected by an emergency or disaster. Scope follows the political-administrative division of the country (national, regional, provincial, and communal). Alert-level declarations are based mainly on recommendations from assigned technical organizations, which are responsible for providing SENAPRED with the information that supports their declaration. The declaration or establishment of an alert is subject to evaluation and must always be coordinated by both regional and national levels.[246] Table 7 includes the three alert types according to the PNE (2017).[247]

EWS Alert Levels According to National Emergency Plan	
Green	Steady-state level, which implies the permanent surveillance of the different areas and risk scenarios to warn as soon as possible of a risk situation present in the country. In particular, the Preventive Early Alert is established, which constitutes a state of reinforcement of the surveillance and attention conditions, through the precise and rigorous monitoring of the risk conditions warned, as well as of a probable ongoing threat, and the respective vulnerability conditions associated with that threat, to act promptly, both to control the occurrence, and in case it leads to a major event.
Yellow	Established when a threat grows in scope and severity, and it is assessed that it cannot be controlled with the usual local resources, and the necessary resources must be prepared to intervene, according to the evolution of the event or incident.
Red	This is established when a threat grows in scope and severity, requiring mobilizing all necessary and available resources to address and control the event or incident.

Table 7: EWS Alert Levels

Information Sharing

Understanding how to overcome the information challenges that civilian and military agencies experience during a typical disaster response mission is important. Sharing information is critical since no single responding entity, NGO, international governmental organization, assisting country government, or the host government can be the source of all the required information.[248] Collaboration, information sharing, and networking have been the backbone of successful disaster response and preparation. Disseminating information not only to those in-country and threatened by disaster but also to those responding to assist in the emergency has been crucial to timely, efficient, and effective disaster response. There are many resources, stakeholders, and components to consider before, during, and after a natural disaster. This section will discuss country-specific, humanitarian, regional, government, and U.S. DoD information sources.

Chile Information Sources

SENAPRED

SENAPRED is required to implement an Information System to integrate all types of content in all phases of disaster management. Public and private institutions provide SENAPRED with all information they hold related to this matter. The requirements of the

Information System are:

- Available at the national, regional, provincial, and communal levels, adapted to the requirements of each geographic level
- Integration of all types of DRR content
- Free public access
- Obligation of public and private institutions to provide information
- Directed, coordinated, and executed by SENAPRED
- Information on statistics of impact and the capacities, actions, and resources used[249]
- Website: *https://web.senapred.cl*

Other web resources by SENAPRED include:

- SENAPRED's DRR Platform: *https://web.senapred.cl/plataforma-nacional-para-la-reduccion-del-riesgo-del-desastre/*
- Database of events. *https://senapred.cl/informate/eventos*
- Database of national alerts, classified as Preventive Early Alert (Green), Yellow Alert, and Red Alert. *https://senapred.cl/informate/alertas*
- BiblioGRD, a citizen information service that disseminates scientific and technical information related to DRM, with the purposes of promoting a culture of prevention and raise awareness among citizens. *https://bibliogrd.senapred.gob.cl/*
- Visor Chile Preparado, an interactive application, maintained by SENAPRED, through which individuals, families, and communities can plan against threats specifically related to volcanic hazards, forest fires, and tsunami. *https://web.senapred.cl/visor-chile-preparado-2/*

Humanitarian Information Sources

United Nations Office for the Coordination of Humanitarian (OCHA) Regional Office for South America

Based in Panama City, Republic of Panama, OCHA's Regional Office for Latin America and the Caribbean (ROLAC) works with country offices in the region to support and strengthen humanitarian coordination and response preparedness. It also coordinates the Regional Group on Risks, Emergencies, and Disasters for LAC, a regional inter-institutional platform that supports emergency preparedness and response.

Website: *https://www.unocha.org/latin-america-and-caribbean*
For OCHA situation reports, click on the "Subscribe" button on top of page.
X: @UNOCHA_Pacific

ReliefWeb

ReliefWeb is a service of UN OCHA that consolidates information and analysis from organizations, countries, and disasters for the humanitarian community. A subsection of ReliefWeb is ReliefWeb Response. It aggregates operational content from other humanitarian action platforms to provide an authoritative source of information. The goal is to ensure that humanitarians can share, find, and re-use critical information quickly and efficiently.

Website: *https://reliefweb.int/*
RW Response Website: *https://response.reliefweb.int/*

PreventionWeb

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

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

International Federation of Red Cross and Red Crescent Societies

IFRC is the world's largest humanitarian organization, comprised of 191 National Societies, including the Chilean Red Cross, a secretariat in Geneva, Switzerland, and over 60 delegations around the world. The IFRC carries out relief operations to assist victims of disasters and combines this with development work to strengthen the capacities of the National Societies. IFRC's work focuses on four core areas: promoting humanitarian values, disaster

response, disaster preparedness, and health and community care.[250]

Country-specific Website: *https://go.ifrc.org/countries/46/ongoing-activities/emergencies*

IFRC Go Platform

IFRC's GO is a platform that connects information on emergency needs with the right response. It aims to make all disaster information universally accessible and useful to IFRC responders for better decision-making. In addition to country-specific real-time information on emergencies, the platform provides a host of resources for preparedness, response, and institutional learning.[251]

Website: *https://media.ifrc.org/ifrc* and *https://go.ifrc.org/*

International Committee of the Red Cross

ICRC is an impartial, neutral, and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. It also prevents suffering by promoting and strengthening humanitarian law and universal humanitarian principles.[252]

Website: *https://www.icrc.org/en*
Facebook: @ICRC
X: @ICRC

Global Disaster Alert and Coordination System (GDACS)

GDACS is a cooperation framework among the UN, the European Commission, and disaster managers worldwide to improve alerts, information exchange, and coordination in the first phase after major sudden-onset disasters.

Website: *https://www.gdacs.org/alerts/*

Virtual OSOCC

The Virtual OSOCC is a real-time online coordination tool for disaster response professionals from urban search and rescue teams, national authorities, and regional and international organizations.

Website: *https://vosocc.unocha.org/*
The latest alerts can be found here: *https://www.gdacs.org/Alerts/default.aspx*
To subscribe: *https://www.gdacs.org/About/contactus.aspx*

ThinkHazard!

ThinkHazard! is a website that provides detailed information on a country. Information is provided on Chile regarding hazards, country assessments, projects, EWS, and other resources.

Website: *https://thinkhazard.org/en/report/51-chile*

Humanitarian Country Teams (HCT)

HCT is a strategic and operational decision-making and oversight forum established and led by the Humanitarian Coordinator in each country. It generally comprises representatives from UN agencies, international NGOs, IFRC, and the National Red Cross/Crescent Society. During a disaster response, HCTs often produce a Situation Report, usually in conjunction with OCHA.

Most HCT Situation Reports can be found through ReliefWeb: *https://reliefweb.int/*

Humanitarian Data Exchange (HDX)

HDX is an open platform for sharing data across crises and organizations. Launched in 2014 with the goal of centralizing humanitarian data for easy access and analysis, HDX is managed by OCHA's Center for Humanitarian Data in The Hague.

Website: *https://data.humdata.org/*

Regional Information Sources

Inter-American Development Bank

Risk Monitor is a digital tool developed by the IADB to further understand disaster risk and advance DRM for member countries of Latin America and the Caribbean.

Web: *https://riskmonitor.iadb.org/*

Pan American Health Organization (PAHO)

The PAHO is the specialized international health agency for the Americas. It works with countries throughout the region to improve and protect people's health. PAHO engages in technical cooperation with its member countries to fight communicable and noncommunicable diseases and their causes, strengthen health systems, and respond to emergencies and disasters.

Website: *https://www.paho.org/*

U.S. Government Sources

Joint Typhoon Warning Center

JTWC provides advanced warning for U.S. Government agencies and organizations.

Website: *https://www.metoc.navy.mil/jtwc/jtwc.html*

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

DKI-APCSS is a U.S. DoD institute that addresses regional and global security issues by inviting military and civilian representatives of the U.S. and Asia-Pacific nations to its program of executive education and workshops.

Website: *https://dkiapcss.edu/*

The Center for Excellence in Disaster Management and Humanitarian Assistance

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

Website: *https://www.cfe-dmha.org/*

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

Civil-Military Coordination in Foreign Disaster Relief Missions: Best Practices for Information Sharing is available here: *https://www.cfe-dmha.org/Publications/Best-Practices-Pamphlets*

INFRASTRUCTURE

Over the past 25 years, Chile has successfully rolled out many key investments in the country's basic infrastructure that are essential for the country's economic development and welfare. A key challenge to sustained poverty reduction and economic growth is frequent damage and disruption to key transport, eduction, power, and other networks. Annual infrastructure losses are approximately US$5.4 billion due to disasters. This figure places Chile among the countries with the highest expected annual losses in the LAC region and highlights the urgent need to strengthen infrastructure and capacities to address these challenges.[253] Infrastructure development in the last several decades is characterized by privatization and a multi-sectoral commitment to DRR and infrastructure resilience.

Transport

Chile has a broad and comprehensive transportation network, connected globally, regionally, and domestically. Santiago Airport is Chile's largest airport with direct flights to the main business centers of the region. Domestic airports make it possible to travel from Santiago to the most distant points of the country, such as Arica or Punta Arenas, in less than three or four hours, respectively. Chile's road system is one of the most consolidated networks in Latin America and allows for fluid land connections between regional capitals and the country's main cities, towns, and ports. Chile's port infrastructure is equally sophisticated, with numerous ports located throughout the country.[254]

The Ministry of Transport and Telecommunications (MTT) was created in July 1974 and holds national policy level responsibilities, in addition to supervising public and private companies that operate means of transport and communication in the country. MTT comprises the Undersecretariat of Transport, the Undersecretariat of Telecommunications, and the Civil Aeronautics Board. Additionally, the Ministry serves as a link with the Government to independent companies such as Ferrocarriles del Estado, Metro SA, Correos de Chile, and the 10 port companies created from the subsidiary of Empresa Portuaria de Chile (EMPORCHI).[255]

Airports

The General Directorate of Civil Aeronautics (DGAC) is the civil aviation authority, and it is charged with developing Chile's aeronautical infrastructure and providing air navigation, meteorology, airport, and operational security services.[256] In 2022, Santiago International Airport was touted as the most modern airport in South America after an investment of US$990 million, which doubled the airport's capacity from 16 to 38 million passengers per year.[257] Chile continues to prioritize infrastructure investment and announced a significant initiative, called the Airport Plan for Chile 2025-2030, which involves an investment of US$3.3 billion and the renovation of 19 airports across 15 regions.[258] Chile maintains an extensive network of 344 "aeródromos," 102 heliports, and 7 "aeropuertos" distributed from Arica to Antarctica and covering the island territories. An "aeródromo" typically refers to a smaller, regional airstrip, while an "aeropuerto" generally indicates a larger, fully equipped aviation facility with more extensive passenger services.[259] A map of Chile's aviation facilities, organized by geographic regions, is provided in Figure 6.[260]

A list of Chile's main airports is provided in Table 8; the airport's name in English is followed by Spanish.[261]

Seaports

Chile's economy is highly dependent on maritime trade. In 2022, Chile's exports accounted for 35% of GDP, and about 95% of its external trade was handled through ports.[262] Chile's port system comprises a dual network

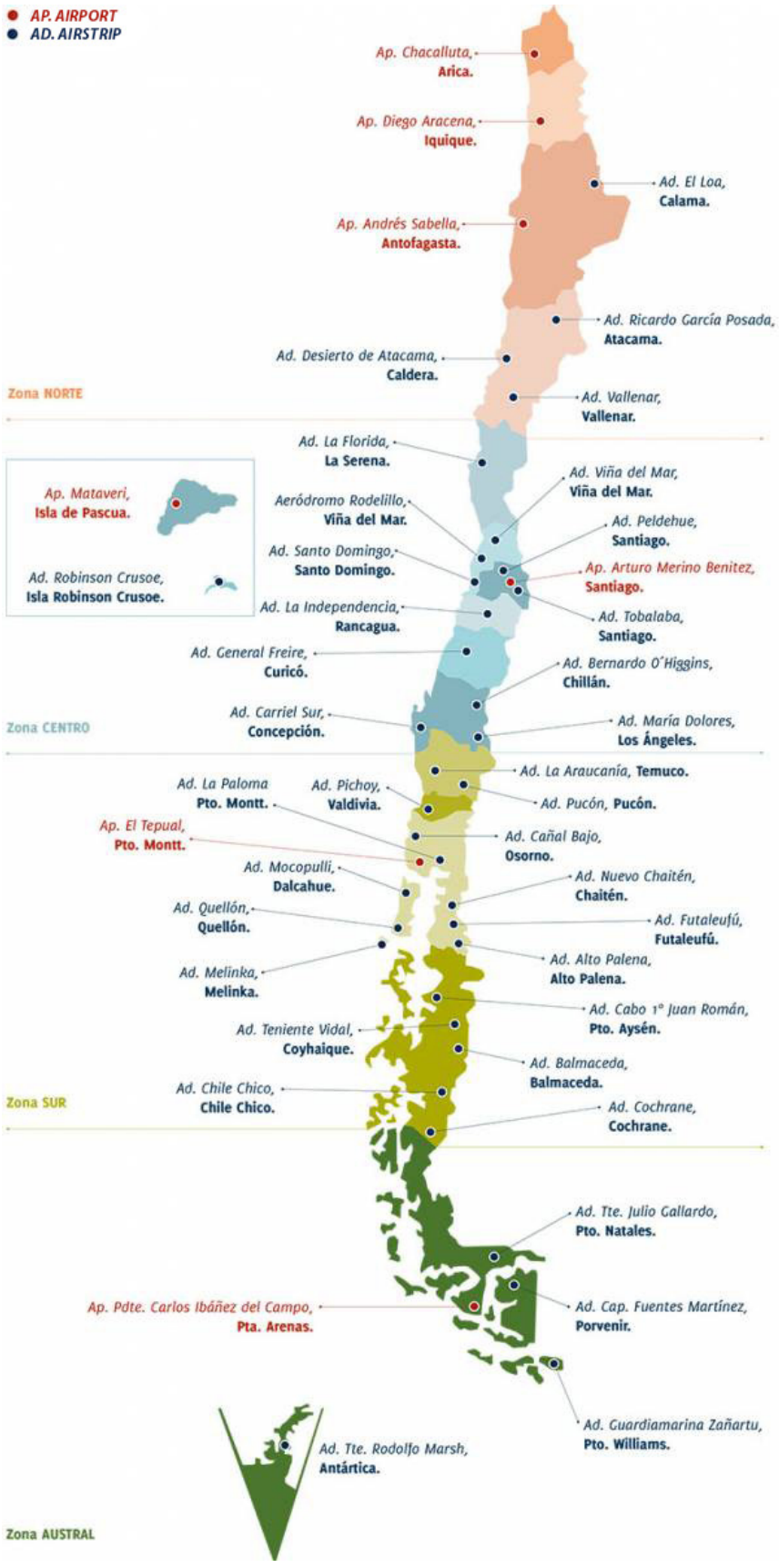


Figure 6: Map of Chile's Aviation Network

of public and private ports. Public ports, also known as state-port companies, are legally registered public companies with their own assets. The State Port Modernization Law (Law 19.542) stipulates that public port services must be carried out by private companies through a concession for each berth through open bids, which may not exceed 30 years.[263] Following a landlord model, state port companies oversee the administration and regulation of the port, as well as the attribution of concessions to private operators to support infrastructure development and port services, including stevedoring, unstowing, and cargo handling. They also influence policies and work with the state to develop future projects.[264] Public ports maintain a subordinate relationship to the MTT, which is responsible for strategic planning of the state port system and implementation of programs to improve the efficiency and competitiveness of the public ports.[265]

The same framework does not regulate private ports which are instead subject to a different legal instrument that grants maritime concessions to build ports. The difference between public and private ports is generally in whether the port may refuse clients and use price discrimination, and whether the port is subject to the Free Competition Court. Often there is a distinction between "private ports of public use" and "private ports of private

Airport	IATA/ ICAO Code	Runway Dimensions / Elevation / Runway Surface	Airport Information	Rescue & Firefighting Services	Notes
Andrés Sabella Airport, Antofagasta Region Aeropuerto Andrés Sabella, Antofagasta	ANF / SCFA	Runway 01-19: 2,800 x 50 m (9,186 x 164 ft); Asphalt Elevation: 105 m (346 ft) / 139 m (455 ft)	Coordinates: 23°26'40"S 70°26'42"W Direction and Distance from City: 26 km (16.16 mi) from the Plaza de Armas to the North of the city of Antofagasta	CAT 7 H24 Rescue Equipment: Yes	Traffic: IFR / VFR Helicopter Landing Area: None Cargo/ Handling Facilities: Yes
Arica Chacalluta International Airport Aeropuerto Chacalluta Arica	ARI / SCAR	Runway 02-20: 2,170 x 45 m (7,119 x 147 ft); Asphalt Elevation: 38 m (123 ft) / 51 m (166 ft)	Coordinates: 18°20'55"S 70°20'19"W Direction and Distance from City: 18.5 km (11.5 mi) NW of the city of Arica	CAT 7, H24 Rescue Equipment: Yes	Traffic: IFR / VFR Helicopter Landing Area: Yes (Visual Reference Point Taxiway BRAVO 182058S / 0702016W) Cargo/ Handling Facilities: No
Carriel Sur International Airport Aerodrómo Altn Carriel Sur – Concepción	CCP / SCIE	Runway 02-20: 2,600 x 45 m (8,530 x 147 ft); Asphalt Elevation: 8 m (26 ft) / 5 m (16 ft)	Coordinates: 36°46'17"S 73°03'45"W Direction and Distance from City: 5 km (3.11 mi) NW of the city of Concepción	CAT 7, H24 Rescue Equipment: Yes	Traffic: IFR / VFR Helicopter Landing Area: No Cargo/ Handling Facilities: Yes
Diego Aracena Airport in Iquique Aeropuerto Diego Aracena - Iquique	IQQ / SCDA	Runway 01-19: 3,350 x 45 m (8,530 x 147 ft); Asphalt Elevation: 29 m (97 ft) / 48 m (156 ft)	Coordinates: 20°32'07"S 70°10'53"W Direction and Distance from City: 45 km (27.96 mi) S of the city of Iquique	CAT 7, H24 Rescue Equipment: Yes	Traffic: IFR / VFR Cargo/ Handling Facilities: Yes Helicopter Landing Area: No As of 11 July 2024, runway conservation work is underway and may alter runway characteristics.
Mataveri International Airport (Easter Island Airport) Aeropuerto Mataveri - Isla De Pascua	IPC / SCIP	Runway 10-28: 3,300 x 45 m (10,826 x 147 ft); Asphalt Elevation: 39 m (127 ft) / 69 m (227 ft)	Coordinates: 27°09'53"S 109°25'18"W Direction and Distance from City: 500 m (1640.42 ft) S of Hanga Roa	SSEI CAT 9 for itinerary aircraft; others CAT on request according to aircraft type. Rescue Equipment: Yes, Standard	Traffic: IFR / VFR Cargo/ Handling Facilities: Yes Helicopter Landing Area: No
Puerto Montt Airport Aeropuerto El Tepúal – Puerto Montt	PMC / SCTE	Runway: 17-35: 2,650 x 45 m (8,694 x 147 ft); Concrete Elevation: 80 m (263 ft) / 90 m (294 ft)	Coordinates: 41°26'20"S 73°05'38"W Direction and Distance from City: 14 km (8.7 mi) NW of the city of Puerto Montt	CAT 7 H24, ACFT critical A321, CAT increase see DAP 14 03. Rescue Equipment: Yes, Standard	Traffic: IFR / VFR Cargo/ Handling Facilities: Yes Helicopter Landing Area: No

Table 8: Codes and Runway Lengths for Chile's Main Airports

Airport	IATA/ ICAO Code	Runway Dimensions / Elevation / Runway Surface	Airport Information	Rescue & Firefighting Services	Notes
Presidente Carlos Ibáñez del Campo International Airport Aeropuerto Presidente Carlos Ibáñez Del Campo – Punta Arenas	PUQ / SCCI	Runway 07-25: 2,790 m x 45 m (9,153 x 147 ft); Asphalt; Elevation: 43 m (139 ft) / 34 m (112 ft) Runway 12-30: 2,400 m x 45 m (9,153 x 147 ft); Asphalt; Elevation: 42 m (138 ft) / 34 m (112 ft) Runway 01-19: 1,677 m x 45 m (9,153 x 147 ft); Concrete; Elevation: 37 m (122 ft) / 34 m (112 ft)	Coordinates: 53°00'13"S 70°51'13"W Direction and Distance from City: 20 km (12.43 mi) N of the city of Punta Arenas	CAT 7 H24, ACFT critical A321, CAT increase see DAP 14 03. Rescue Equipment: Yes	Traffic: IFR / VFR Cargo/ Handling Facilities: Yes, By Consignee Companies Helicopter Landing Area: No
Arturo Merino Benitez International Airport Aeropuerto Arturo Merino Benítez - Santiago	SCL / SCEL		Coordinates: 33°23'39.99"S 70°47'37.69"W Direction and Distance from City: 14 km (8.70 mi) NW of the city of Santiago		

Table 8: Codes and Runway Lengths for Chile's Main Airports (cont.)

use." Private ports of private use tend to be more specialized and provide exclusive services to one or more specific companies, such as mining or industrial firms. Private ports of public use tend to be multipurpose and handle not only the port owner's cargo, but also third-party cargo.

According to the GoC, the country's national port system is made up of 56 ports: 10 state-owned ports for public use, 14 private ports for public use, and 32 private ports for private use.[266] Chile's ten public ports are: Port of Arica, Port of Iquique, Port of Antofagasta, Port of Coquimbo, Port of Valparaíso, Port of San Antonio, Port of Talcahuano, Port of Montt, Port of Chacabuco, and Port of Austral. These are divided into three main geographic regions, under the administration of the MTT: Northern Zone, Central Zone, and Southern Zone. A list of ports in each zone is provided in Table 9.

Chile's ports mobilize approximately 140 million tons of cargo annually, with Valparaíso and San Antonio being the main cargo ports for goods passing through the country.[267] Each port in Chile's national port system plays a leading role in the economic development of the region.[268] The northern ports specialize in mining products, especially copper, iron, and coal, which are increasingly exported in containerized form rather than break bulk. The ports of the central region move containers and agricultural products. The central region of Chile, around Santiago, is the main consumption region as it accounts for 66% of the total population and 60% of the GDP. More than half of shipping tonnage (for public ports) occurs through the central region's ports.[269] Ports in the south specialize in the export of fruits and forestry products. In the southern-most part of the country and in island zones, maritime transport is the only transportation mean for both cargo and passengers.[270]

Chile State Ports by Administrative Region	
North Zone (Zona Norte)	• Arica • Iquique • Antofagasta • Coquimbo
Central Zone (Zona Centro)	• Valparaíso • San Antonio (Chile's largest port) • Puerto Ventanas
South Zone (Zona Sur)	• Talcahuano-San Vicente • Puerto Montt • Chacabuco • Punta Arenas (Austral Port Company)

Table 9: Chile State Ports by Administrative Region

Port of Arica

The Port of Arica (18°28'31"S, 70°19'21"E) is one of the main port terminals in northern Chile, serving as a transit point for goods to and

from Bolivia, among other important points in the Andean macro region. The Port of Arica is located 2,062 km (1,281 mi) north of Santiago, in the Province of Arica.[271] The infrastructure at the Port of Arica comprises six areas: Docking Front No. 1, Peru Service Site, Northern Sector Area, External Support Areas, Real Estate Project Area, and the Outer Port.

Details of the port areas can be found at:
- *https://puertoarica.cl/infraestructura/*
- *https://lca.logcluster.org/chile-limited-lca*

Port of Iquique

The Port of Iquique (20°12'22"S, 70°9'34"W) is located in the Tarapacá region, on the northern coast of Chile. The port has approximately 20 ha (50 acres) of sheltered waters and is formed by the former Serrano Island, which forms the base of a pier connecting to the mainland and another 846 m (2,775 ft) long sheltered pier in a 028° direction. Because it is located on what was once an island, it has no limitations on physical growth since the city does not affect it, as is the case with other ports in the country, which are being restricted in their physical development by the natural growth of the cities themselves.[272]

Details of the port areas can be found at:
- *https://epi.cl/la-empresa*.

Port of Antofagasta

The Port of Antofagasta (23°38'33"S, 70°24'23"W) is located in the Antofagasta Region of Chile, a strategic area that borders northwestern Argentina, part of Bolivia, and the Pacific Ocean.[273] Run by the Empresa Portuaria de Antofagasta (EPA), the port is located close to various mining centers. Services at EPA include the multi-operator terminal and the concessions, which include the Antofagasta International Terminal, Mallplaza Antofagasta, the outer harbor small port, and the Antepuerto Portezuelo, which handles Bolivian minerals.[274]

Details of areas at the Port of Antofagasta can be found at:
- *https://www.anfport.cl/*
- *https://lca.logcluster.org/node/874*

Port of Coquimbo

In 2022, the Port of Coquimbo (29°57'0"S, 71°20'40"W) mobilized a total of 526,900 tons, including fractional, containerized, and bulk cargo, which made up more than 57% of total throughput.[275] Port of Coquimbo serves numerous clients from the mining, agricultural, service, and tourism industries, mainly from the Atacama, Coquimbo, and Metropolitan Regions. The scale of port operations in Coquimbo is expected to increase rapidly over the next decade, due to development projects valued at US$1.4 billion, including a 14-km-long (8.7-mi-long) tunnel at the Chilean-Argentine border crossing of Agua Negra, which will connect the trans-Andean province of San Juan with the Coquimbo region.[276]

Details of the port areas can be found at: *https://puertocoquimbo.cl/*

Port of Valparaíso

The Port of Valparaíso (33°3'1" S, 71°38'20"W) is one of Chile's main commercial drivers and plays a key role in the transfer of general cargo, handling millions of tons each year. In terms of regional share, the port had a throughput of 6.2 million tons in 2023, of which 5.2 million tons were containerized cargo.[277] Port Valparaíso has three concession contracts in force. The port's infrastructure includes two terminals and a passenger terminal.[278]

Details of Terminal 1 and 2 port areas can be found at: *https://www.puertovalparaiso.cl/*.

Port of San Antonio

The Port of San Antonio (33°34'2"S, 71°36'31") is the main port of Chile and the only one capable of simultaneously docking three New Panamax vessels.[279] Port San Antonio is important to the Chilean economy for its role in the country's exports, especially agricultural products and minerals. In addition, its proximity

to Santiago gives it a significant logistical advantage. Port of San Antonio is a national leader in the transfer of general cargo, containers, bulk for human and animal consumption, and vehicle unloading.[280]

The port has five concessionaires: STI, DP World, Puerto Panul, Terquim San Antonio, and QC Policarpo Toro.[281]

The main facilities and services at STI include: a wharf with three sites, 40 reefer towers for a total of 2,328 boxes, a truck buffer for more than 200 units on standby, platforms for agriculture and livestock service inspections, and customs service facilities.[282]

Details of the port area managed by STI can be found at: *https://home.stiport.com/*

Infrastructure at the DP World terminal includes Sites 4, 5, 6, and 7 and the Costanera Dock. Types of cargo transferred at DP World San Antonio include liquid bulk cargo, dry bulk cargo, containers, project cargo, general cargo, and dry dock.[283]

Details of the port areas managed by DP World can be found at: *https://agental.cl/en/port-manual/chile/puerto-central-s-a/*

Puerto Panul S.A. is the largest operator of clean bulk goods in the Port of San Antonio, providing services such as mooring, cargo transfer, and other services. In 2010, the terminal transferred nearly 1.8 million tons, making Puerto San Antonio the number one solid bulk transfer operator in Chile.[284]

Details of the port areas managed by Puerto Panul S.A. can be found at: *https://agental.cl/manual-del-puerto/chile/panul/*

Terquim San Antonio was the first public maritime terminal for liquid bulks in the South American Pacific Coast.[285] In 2022, the port transferred 1,085,777 tons, primarily in bulk chemicals, including sulfuric acid. The concessionaire has two contracts with Puerto San Antonio: TQ Sulfuric Acid and TQ Multipurpose.[286]

Details of the port areas managed by Terquim San Antonio can be found at: *https://www.puertosanantonio.com/concesionarios/terquim-san-antonio*

QC Policarpo Toro S.A. operates the Policarpo Toro terminal and Dock Site 9 in the Port of San Antonio. The terminal is dedicated to the transfer of bulk liquid products. Among the main loads transported are solvents for paint, glue, and pharmaceutical products, as well as essential oils, agrochemicals, vegetable oils, and asphalts.[287]

Details of the port areas managed by QC Policarpo Toro S.A. can be found at: *https://qcpolicarpotoro.com/*

Port of Talcahuano

Port of Talcahuano (approximately located 36°43′S, 73°07′W) is operated by the concessionaire Talcahuano Terminal Portuario SA (TTP) and is the most sheltered port terminal in Concepcion Bay, Biobío Region.[288] Types of cargo transferred at the port include dry bulk cargo, containers, project cargo, and general cargo.[289] Talcahuano is home to one of the primary bases for the Chilean Navy. The area is also known for its significant role in the fishing industry, with facilities for processing and shipping seafood. The surrounding region hosts various industrial activities, contributing to the port's commercial significance.[290] In 2010, Talcahuano was devastated by an earthquake and subsequent tsunami.

Details of the port areas managed by Talcahuano Terminal Portuario S.A. can be found at: *https://agental.cl/manual-del-puerto/chile/ttp-talcahuano-port/*

Port of Montt

Port of Montt (41°28'4"S, 72°56'55"W) is located in the Los Lagos region. The total area of the port is approximately 10 ha (25 acres) and

is divided into a commercial dock and a ferry terminal. The Port of Montt is considered a multipurpose terminal with a total pier length of 386.11 m (1,266 ft). The terminal consists of two berthing sites: Site 1 and Site 2. Connectivity with a ferry terminal includes five ramps specially designed to operate at different tide levels, which is essential since the area experiences tidal extremes of up to 7.3 m (23.9 ft).

Details of Port of Montt can be found at: *https://empormontt.cl/infraestructura*

Port of Chacabuco

The Port of Chacabuco (45°24'21"S, 73°17'13"W) is located on a total area of approximately 6.4 ha (16 acres), which is divided into two zones: one zone consisting of Multipurpose Conventional Docks and another zone designed for the Ferry Terminal.[291] The multipurpose conventional docks service vessels, such as bulk carriers, reefers, container ships, and industrial fishing vessels. There are three docks with five berthing places in total.[292] The port also maintains a Floating Dock with two berthing sites.

Details of Port of Chacabuco can be found at: *https://chacabucoport.cl/index.php/infraestructura/*

Port of Austral

Port of Austral (53°10′S, 70°56′W) is the main port for Punta Arenas, the capital city of Magallanes and Chilean Antarctica, located on the Strait of Magellan, and is the center of economic productivity in Chile's southern region. The port supports a host of maritime activities, including offshore oil exploration, industrial fishing, scientific activities aimed at the Antarctic continent, and attracting tourist cruises to the Patagonian region. The port consists of three terminals and connectivity docks.[293]

Empresa Portuaria Austral (EPAUSTRAL), the concessionaire to Port of Austral, is also in charge of a series of "connectivity docks," which are intended to connect the different provinces of the Magallanes and Chilean Antarctic Region.

Details of Port of Austral can be found at: *https://www.epaustral.cl/empresa-portuaria/*

Roads

The national road network in Chile is administered by the Ministry of Public Works and has a total length of 82,133.78 km (51,035 mi). The network includes paved, unpaved, and intermediary roads. Roads in Chile have surfaces of asphalt, concrete, gravel, and dirt and are formally divided into paved roads, intermediary roads or "basic solution roads," and unpaved roads. Basic solution roads are low-cost paved roads involving minimal investment and are part of Chile's effort to improve rural connectivity while maintaining budget efficiency. They often consist of thin asphalt or stabilization with chemical products to improve travel conditions and reduce dust emissions in suspension.[294]

Chile's paved roads consist of international routes, such as the Pan-American Highway, or Route 5 in Chile, urban highways, and coastal highways. Route 5 is the main north-south highway with a length of 3,364 km (2,090 mi).[295] Other international routes include Route 60 and Route CH-2. Route 60 passes through the Valparaíso Region, connecting to Route 5 Crossing (Llay-Llay) and the Christ the Redeemer Tunnel (Túnel Cristo Redentor) near the Argentinian border. Route CH-27 is a paved highway that connects San Pedro de Atacama to the Paso Jama border crossing with Argentina. It spans approximately 156 km (96.9 mi).[296]

Urban Highways include Route 68 and Route 9. Route 68, also known as the Santiago - Valparaíso - Viña del Mar Road, connects the Metropolitan and Valparaíso regions in central Chile with 141 km (87.6 mi) of infrastructure and is important for travel between the capital and the central coast.[297] Route 9 connects Punta Arenas to Puerto Natales in the Magallanes Region. The road spans approximately 260 km (161.5 mi) and serves as a critical corridor in the southernmost part of the country. It supports access to Torres del Paine National Park and

other remote areas in Patagonia.[298]

Coastal highways include Route 1 and Route 7. Route 1 runs through the Antofagasta Region, covering sections from Las Breas to Taltal, Río Loa, and Iquique. Route 7 (Carretera Austral) is a key highway in southern Chile. It connects Puerto Montt to Villa O'Higgins, passing through remote and scenic regions of Los Lagos, Aysén, and Magallanes. Route 7 spans over 1,240 km (770 mi), providing critical infrastructure to isolated Patagonian communities and supporting tourism, commerce, and regional development.[299]

According to GoC, basic roads offer an alternative to ensure better connectivity in rural and remote areas. This method of investing in low-traffic routes has been implemented in Chile since 2003, and more than 13,000 km (8,077 mi) of basic roads have been completed across all regions of the country.[300] The program has a very important social aspect since its explicit objective is to improve the quality of life of residents in rural areas by repairing roads, contributing to greater social equity, which allows, for example, a reduction in the displacement of rural populations to the cities.[301]

Railways

In terms of the length of its rail network, Chile ranks 31st in the world with only 37.1 cm (14.6 in) per capita. In total, the rail network is 7,281.50 km (4524.51 mi) in length. Freight traffic on the rails totaled 3.59 billion tons. Passenger traffic reached 738 million passenger-km (459 million passenger-mi) in 2021.[302] A revival of passenger trains is taking place in the country through the Master Plan of the State Railways Company (EFE) in conjunction with the MTT. Projects to implement new suburban passenger services such as Rancagua Express, the extension of the Biotrén to Coronel, the modernization of the Corto Laja service, and the acquisition of rolling stock for the Valparaíso Regional Metro (MERVAL) are among the initiatives that seek to recover the former role that this means of transport had in the development of the country. Current railway concessions include Ferrocarriles Suburbanos de Concepción S.A. and two concessions each in the Santiago and Valparaíso regions.[303]

Waterways

The Ministry of Public Works, through the General Water Directorate (DGA) is responsible for managing and protecting Chile's water resources, including rivers and lakes. DGA's functions include planning the development of water resources, establishing water use rights, maintaining and operating the national hydrometric service, monitoring work in natural water channels for public use, and preventing construction, modification, and destruction of such works without authorization, and supervising organizations which use water channels with the provisions of the Water Code.[304] Through regional representatives, MTT focuses on transportation systems which includes public transit along waterways in regions where rivers and lakes are part of local mobility. None of the country's rivers or lakes supports significant passenger or cargo transport.

Schools

According to the United Nations Human Development Index, in 2022, the average number of years of schooling was 11.1.[305] Adult literacy (literacy for persons 15 years or older) in 2022 was 97.2% for men and 97.1% for women, surpassing the LAC region, where the overall adult literacy rate for men and women was 94.9% and 94.3%, respectively.[306] According to UNICEF, net attendance rates for children of primary school age is 89%, of lower secondary school age is 60%, and of upper secondary school age is 74%. The completion rate for children of primary school age is 96%.[307] The school system in Chile is organized in three levels: pre-primary education (educación parvularia or preescolar, children up to 5 years old), primary education (educación básica, covering eight years with typical ages 6 to 13 years), and secondary education (educación media, covering four years with typical ages 14 to 17 years). Since 2003, both primary and secondary education are mandatory for children up to 18 years old, totaling 12 years

of compulsory schooling.[308] Primary education is divided into two cycles, and secondary education is organized into two stages. The educational tracks allow for specialization in either scientific-humanistic studies, geared towards further study at a higher education level, or technical-professional studies geared toward working life or the continuation of technical studies. In 2011, 63.9% of students were enrolled in scientific-humanistic studies and 36.1% enrolled in technical-professional studies.[309]

There are four types of school providers in Chile:

- Municipal schools: public schools administered by the respective municipalities.
- Private subsidized schools: schools administered by private non-profit or for-profit organizations that receive a public subsidy per student of the same amount as municipal schools.
- Private non-subsidized schools: schools administered by private non-profit or for-profit organizations that do not receive public subsidies.
- Schools with delegated administration: schools owned by the Ministry of Education and mostly offering technical-professional education and whose administration is delegated to public or private non-profit organizations (typically associated with industry, commerce, and construction).[310]

Disaster Risk Reduction in the Education Sector

The Ministry of Education (MINEDUC) is a primary partner in DRR in Chile. The first axis of the National Policy for DRR focuses on understanding disaster risk, and the National Strategic Plan 2020-2030 calls for academic institutions, with leadership by SENAPRED and the MINEDUC, to update, implement, and incorporate their DRR programs and courses by 2030. A second strategic action mandates that the DRR approach be incorporated into formal education at all levels – preschool, primary, secondary, and higher – by the MINEDUC, with support from the National Council of Education and its institutions. The MINEDUC is also responsible for supporting the development of risk scenarios, in coordination with the academic and scientific community. Along with other ministries, and in support of SENAPRED and the Undersecretary of the Interior, the MINEDUC is charged with implementing structural measures for DRR and the development of disaster-resilient infrastructure throughout the school system. Additionally, the MINEDUC supports the development of training programs for educators, promotes applied research in risk management, and supports the awareness of historical hazard events through the development of educational materials to foster a collective understanding of risk and resilience measures.[311]

The National Disaster Risk Management Unit of the MINEDUC is responsible for monitoring, developing, and implementing policies, plans, and programs, with the aim of training and preparing the educational system and all MINEDUC departments, both at the central and regional level, to respond to an emergency, disaster, or catastrophe and/or recover, in order to ensure the delivery of educational services in safe contexts for communities throughout the country. Tasks include promoting access to information, training, and actions that allow raising awareness and generating prepared and resilient spaces in the event of an emergency, in coordination with national, regional, and provincial authorities.[312] In 2001, through several resolutions, the National School Safety Commission was created to evaluate and report on the implementation of existing regulations regarding the prevention of school accidents; suggest specific actions at the national or regional level concerning school safety; propose curricular adjustments in educational plans and programs for primary and secondary education; and in preschool curricular foundations, to instill in children, from an early age, the concepts of safety, prevention, and self-care.[313] Following the creation of the commission, Resolution No. 51 established the development of the Comprehensive School Safety Plan, which replaced the Francisca Cooper Plan, known more

widely as Operación Deyse. The Comprehensive School Safety Plan includes templated guides for prevention and response plans at the school level.[314]

Communications

Chile enjoys widespread, digitized communications networks; there are currently 25.3 million mobile telephone subscriptions, an internet penetration that reaches 82.3% of the population (15.78 million people connected), and one of the highest rates of active users on social networks in the region, with 16 million users.[315]

Subsecretaría de Telecomunicaciones de Chile (SUBTEL), the country's telecommunications regulator, operates within MTT. Its main responsibilities include creating telecommunications policies; publishing technical standards on telecommunications and managing compliance; overseeing the radio spectrum; and awarding concessions, permits, and licenses, in accordance with the law. Additionally, SUBTEL is empowered to work with the MND and other entities to regulate the importation and manufacture of telecommunications equipment. The Undersecretary of Telecommunications, who serves as the head of SUBTEL, is appointed by the country's president.[316]

Chile has one of the world's most open online environments, bolstered by strong protections for free expression and widespread access to the internet. While authorities do not censor political, social, or religious online content, journalists sometimes face criminal complaints for investigative or other sensitive work. The risk of lawsuits, harassment, and surveillance can encourage self-censorship online.[317]

Telephone Infrastructure

Chile's telephone infrastructure includes fixed line services, mobile services, and broadband services. The teledensity of fixed-line services has been declining as consumers increasingly opt for mobile networks and fixed broadband for voice and data connectivity. The fixed-line market is now considered underdeveloped due to the dominance of mobile services.[318] Chile has a well-established mobile sector with several significant companies providing a variety of services. The market is moderately consolidated with key players like Telefónica, WOM SA, and others. The deployment of 5G networks contribute to economic growth and enhance the competitiveness of the country, attracting investment, supporting innovation, and driving productivity gains across various sectors. As a result, there is a strong focus on expanding 5G infrastructure in Chile to promote economic development and stay competitive on a global scale.

Internet Access & Digital Connectivity

Approximately 94% of the Chilean population uses the internet, reflecting a substantial increase from 19.1% in 2001. The country has around 17.9 million internet users. Chile's high mobile connection penetration rate, 147% or 28.84 million cellular mobile connections, also facilitates widespread internet access via mobile devices. Approximately 23% of residents have fixed broadband connections, offering faster and more reliable internet services.[319]

Authorities have worked to strengthen legal safeguards for data protection in recent years. For example, in April 2024, the National Congress enacted a law to recognize internet access as a public service, as part of the government's plan to eliminate the digital divide. In September 2023, the Supreme Court ordered internet service provider (ISP) Mundo Pacífico to block 23 illegal gambling sites. Other ISPs reached an agreement with the SUBTEL to implement the block, despite not having received a court order to do so. The incident raised questions about how these sites are regulated in Chile. The Cybersecurity Framework Law, published in April 2024, strengthened data privacy and security standards by explicitly acknowledging a right to encryption and establishing the National Cybersecurity Agency (ANCI). Finally, a new data-protection framework, the Personal Data

Protection Act, was approved by the National Congress in August 2024. The new law will enter into force two years after it is published, and creates an independent Personal Data Protection Agency.[320]

Mass Media

National and local free-to-air TV stations operate alongside extensive cable networks, which offer U.S. and international networks. Radio is a key news source in Chile; there are hundreds of stations, most of them commercial. Spanish-owned Prisa Group is a major player. Two commercial groups, El Mercurio SAP and Grupo Copesa, own the bulk of print titles. The constitution guarantees press freedom, and the media can criticize the government and cover sensitive topics. Chile scores well in the annual press freedom ranking compiled by Reporters Without Borders; however, there are worries about highly concentrated media ownership.[321]

According to the Reuters Institute's 2024 Digital News Report, online platforms remained the most popular overall source for news in Chile, with 77% of respondents indicating that they consume news online, compared to 57% for television, and 14% for print media. The Reuters Institute's report found that 32% of respondents had trust in the news overall, though they expressed notably higher levels of trust in specific outlets, such as Cooperativa and CNN Chile. A separate report published in 2024 by the Pontifical Catholic University of Valparaíso found that evaluations of certain outlets were correlated with an individual's political views, underscoring polarization of the media landscape.[322]

Post

CorreosChile is an autonomous state-run company, governed by Law No. 10, and fulfills the functions of Chile's postal service. CorreosChile has its own legal personality and is associated with the MTT and the Ministry of Finance, with the latter for budget purposes. Services include national and international mail delivery, parcels, and money orders.[323]

Utilities

Chile's utility sectors are characterized by significant private sector involvement and strong regulatory frameworks. Since market-oriented reforms in the 1980s, the utility sectors have significantly improved in both reliability and coverage.

Power

The National Electric System (SEN) was created in 2017, when the former electrical systems of the north (SING) and the south-central (SIC) regions of the country were unified. The National Electrical Coordinator (CEN) is an autonomous, technical, and independent public law body that coordinates the operation of the SEN.[324] The Ministry of Energy (Comisión Nacional de Energía, CNE) oversees the energy sector, ensuring compliance with regulations and efficient energy use.

According to CEN, as of November 2024, the transmission system is comprised of 38,783.9 km (24,099.2 mi) of lines, from Arica to Chiloé, with an annual cumulative energy generation of 78,177.9 gigawatt-hours (GWh). National population coverage in 2024 was 98.5%, with 72,668.4 GWh accumulated sales to end customers. Gross Maximum Power (which includes plants in operation and in testing) was 36,664.3 MW in 2024, with 12,190.5 MWh/hour Maximum Hourly Demand. Annual Cumulative Production of Renewable Energy as of November 2024 was 31,058.1 GWh.[325]

Electricity legislation in Chile divides the Chilean electricity market into three segments: generation, transmission, and distribution. The SEN includes 1,080 generation plants with a total installed capacity of approximately 23,362 MW as of 2024, including a diversified energy mix of hydroelectric, thermoelectric, wind, and solar energy. The operation of this segment is coordinated by CEN, whose most relevant function is to maintain the security of supply with efficient costs.[326]

Chile's transmission networks comprise high-voltage lines, with expansion projects underway to integrate renewable energy and increase

reliability. The transmission segment is defined in Article 73 of the General Electric Services Law as a natural monopoly. The distribution segment, due to its high-density economy, high investment cost, and extensive area of supply to the customer, is also considered a natural monopoly, which implies the concession by the State. As in transmission, particularly with respect to its main segments, it is recognized by the General Electric Services Law as a public service. Therefore, it is regulated similarly to transmission, except that network expansions are not centralized in the state; they are carried out autonomously by the concessionary company.[327]

Renewable energy in Chile is a fast-growing sector. Chile has solar and wind energy, which are located mainly in the Atacama and Coquimbo regions.[328] According to CEN, the supply of renewable energy in Chile has reached almost 64% of the installed capacity, 44% of which is non-conventional renewable energy, mainly solar and wind, the rest being hydroelectric. The rest of the energy matrix is composed of energy generated by fossil fuels. There is no nuclear energy generation in Chile.[329]

Chile aims to reach carbon neutrality by 2050, and power generation companies have formally committed to retiring thermal power plants by 2040.[330] Chile has also been enhancing the cybersecurity of its power infrastructure to address increasing threats.[331]

Water and Sanitation

The Ministry of Public Works oversees water and sanitation infrastructure in Chile. The Ministry's DGA plays a key role in managing water resources and ensuring access to clean water and sanitation.[332]

The Ministry of Health (Ministerio de Salud, MINSAL) is responsible for regulating and monitoring sanitation standards to protect public health. The Superintendence of Health Services (SISS) is considered a partner institution within Chile's water and sanitation framework. Its role is to guarantee adequate quantity and quality of drinking water and sanitation services in urban areas and that the corresponding price is fair and sustainable in the long term. SISS also assures the community that the water, once used, is treated and returned to nature in a way that is compatible with sustainable development.[333]

Water distribution in urban areas in Chile is carried out through concessionaire companies, while SISS regulates and supervises the distribution. Water sector concessions are part of the privatization initiative which began in the 1990s with the aim of attracting investment and improving service efficiency. Major service providers include: Aguas Andinas, serving the Metropolitan Region and 40% of the Chilean population; and ESSBIO and ESVAL, operating in the BioBío and Valparaíso regions, respectively.[334] The water sector in rural areas is managed differently. Rural areas are served by cooperatives, comprised of smaller operators, and committees, called Rural Drinking Water Committees, which are in charge of the provision of drinking water in rural territories.

There are three main threats to water security in Chile: climate change, lack of adequate infrastructure, and weak public management. With climate change, Chile can expect the occurrence of more frequent droughts and floods, threatening the availability of water for the different sectors. The GoC states there is a lack of adequate infrastructure to adapt to projected climate change scenarios. Thus, the government is developing plans to ensure the construction and maintenance of works to mitigate the effects of floods and to take advantage of them by building works that allow access to new sources of water such as desalination, deep aquifers, rainwater, and treated wastewater. The weakness of public management in the water sector is marked by high institutional fragmentation. According to the GoC, there are multiple institutions working in an uncoordinated manner in the water sector, generating duplications and gaps in the management of water resources, both at the central level, and at the regional and basin level.[335]

HEALTH

Chile has made significant progress in eliminating several communicable diseases, such as leprosy, human rabies transmitted by dogs, yaws, and vertical transmission (between mother and child) of HIV, syphilis, and hepatitis B. These diseases have been subject to strict epidemiological surveillance and mandatory reporting, which has allowed the necessary indicators to be maintained to apply for elimination certification. The country is approaching elimination goals for other diseases, such as mother-to-child transmission of Chagas disease, cervical cancer, and viral hepatitis.[336] The MINSAL is implementing a National Health Strategy that includes a focus on communicable diseases with the goal of advancing towards their elimination by 2030. These efforts include intersectoral coordination under the "One Health" principle, expanding universal and targeted screenings, and integrating molecular testing to improve the detection and control of these diseases.[337] Despite its progress, Chile faces challenges in integrating health systems and services, strengthening health surveillance, and overcoming gaps in social and environmental determinants.[338]

Between 2000 and 2020, infant mortality in Chile decreased from 8.9 to 5.6 deaths per 1,000 live births, a decrease of 37.1%. The percentage of low-weight births (less than 2,500 grams / 5.5 pounds) increased from 5.3% to 6.7% between 2000 and 2020. Measles vaccination coverage was 94.0% in 2022, a decrease of 3% from 2000. The maternal mortality ratio in 2020 was estimated at 15 deaths per 100,000 live births, representing a 53.8% reduction compared to the estimated value in 2000. In relation to fertility, it is estimated that, in 2024, women had an average of 1.1 children throughout their reproductive lives. In the specific case of adolescent fertility, there was a 90.8% decrease, from 61.2 live births per 1,000 women aged 15 to 19 years, in 2000, to 5.6 in 2024. In 2020, 99.9% of births were attended by skilled birth personnel.[339]

Health Care System Structure

The MINSAL is comprised of two undersecretaries, the Undersecretary of Public Health (Subsecretaría de Salud Pública) and the Undersecretary of Assistance Networks (Subsecretaría de Redes Asistenciales), and several autonomous agencies who operate with the support of the Ministry, including National Health Fund (Fondo Nacional de Salud, FONASA), Public Health Institute of Chile (Instituto de Salud Pública, ISP), and Supply Center (Central de Abastecimiento del Sistema Nacional de Servicios de Salud, CENABAST), as shown in Figure 7.[340]

The Undersecretary of Public Health focuses on developing and enforcing health policies related to disease prevention, health promotion, and epidemiological surveillance. It oversees regional health authorities and ensures compliance with national health regulations. The Undersecretary of Assistance Networks is responsible for managing the healthcare delivery system, coordinating public hospitals, primary care facilities, and other health services to ensure comprehensive care across the country.[341]

Chile's healthcare system consists of 29 regional networks, each having one hospital. While some administrative regions have only one healthcare network, the more densely populated regions have multiple healthcare networks, such as in Metropolitan Santiago, Valparaíso, and Biobío.[342]

The healthcare network in Chile consists of a primary care level and a secondary care level. Primary care is considered the first level of contact with citizens and is composed of outpatient clinics, such as Health Centers, Family Health Centers, Community Family Health Centers, Rural Health Posts, Primary Emergency Care Service (SAPU), and High-Resolution Emergency Primary Care Service. The secondary level of care is delivered by hospitals, institutes,

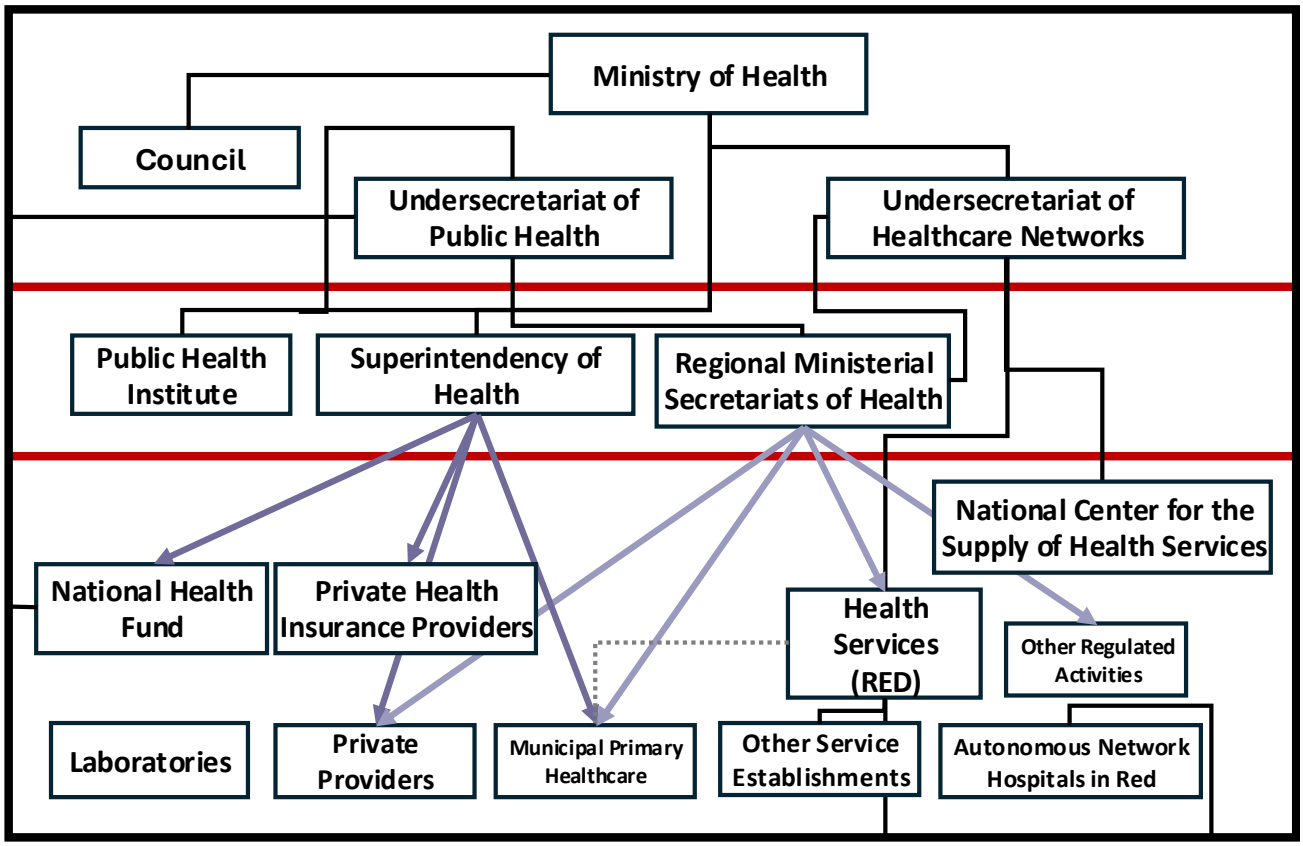


Figure 7: Ministry of Health Organizational Structure

and Diagnostic Centers and Treatment.

In Chile, the Undersecretary of Public Health is primarily responsible for DRR. This Undersecretary oversees public health initiatives, including the development and implementation of policies related to health emergencies and disaster preparedness. The Undersecretary of Public Health oversees the Department of Health Emergency Management (Departamento de Manejo de Emergencias en Salud), which is tasked with coordinating responses to health emergencies, developing disaster preparedness plans, and implementing risk reduction strategies to mitigate the impact of disasters on public health.[343]

Health Strategies and Surveillance

Chile's health sector strategy focuses on four main components: mitigating impacts on population health and well-being; improving capacities to manage risks and emergencies effectively; strengthening resilience for recovery and ensuring health service continuity; and addressing climate change effects on health, including extreme weather, water availability, and reducing disease vectors.[344] Since the 2010 earthquake and tsunami, the GoC has significantly strengthened DRM in the health sector. Key advancements include the creation of emergency medical teams, improved infrastructure resilience, standardized damage assessment protocols, and enhanced coordination through COEs. Additionally, it emphasizes professional training and climate change adaptation strategies.[345]

Within MINSAL, the Department of Risk Management in Emergencies and Disasters (DEGREYD) is responsible for DRR. DEGREYD's purpose is to promote comprehensive risk management in emergencies and disasters in the health sector, according to the guidelines of SINAPRED and the sectoral agreements within the international framework of DRR.[346]

To reduce the risk of reintroduction or increase of communicable diseases, there is integrated work between the Department of Epidemiology, the National Immunization Program, the National Reference Laboratory, and the Public Health Institute. For both measles and rubella, Chile has been reverified in its elimination status, and for polio, Chile was ratified in 2024 by PAHO as a low-risk country for importation, along with Colombia, the only two countries in South America with this status. Regarding cervical cancer, Chile is in the process of evaluating the incorporation of human papillomavirus (HPV) molecular testing for the age range of 35 to 45 years and other modifications to achieve the goals associated with the global elimination strategy. The country is currently developing a strategic plan with elimination goals for the targeted diseases, including a roadmap until 2030.[347]

Communicable Diseases

Chile is burdened with the following communicable diseases:

Tuberculosis (TB)

The etiological or causal agent is a bacteria called Mycobacterium tuberculosis. TB bacteria are transmitted from one person to another through droplets exhaled when sneezing or coughing. TB usually affects the lungs and, from there, it can infect other organs such as the kidneys, spine, and brain. Not all infected people show symptoms, but if the disease is not treated promptly and appropriately, it can be fatal.[348] In 2022, there were 15 new cases of TB per 100,000 population in Chile. In 2019, the overall TB mortality rate (age-adjusted and per 100,000 population) was 1.5 (1.0 in women and 2.2 in men).[349] According to the 2023 Epidemiological and Operational Situation Report by the National Program for the Control and Elimination of TB in Chile, the country reported a total of 3,150 TB cases in 2023. This figure includes 2,973 new cases and 177 relapses, resulting in an incidence rate of 15.8 cases per 100,000 inhabitants, marking an increase from the previous year.[350]

HIV/AIDS and Sexually Transmitted Infections

The etiological or causal agent is the human immunodeficiency virus (HIV). HIV is transmitted through blood, semen, or vaginal secretions. In Chile, approximately 99% of infections occur through sexual transmission. Without treatment with HIV drugs, the infection progresses in phases of acute infection, chronic infection, and acquired immunodeficiency syndrome (AIDS). Although there is no cure for the infection, highly effective drugs called antiretrovirals are available that can prevent the virus from spreading and even make it undetectable. In addition, there are prophylactic therapies that are added to prevention strategies.[351] In 2021, HIV infection incidence rate (new diagnoses) was 25.9 per 100,000 population. The age-adjusted mortality rate for HIV was 2.5 per 100,000 population in 2019. It should be noted that during the 2000-2019 period this indicator decreased by 17.1%.[352] From January to September 2022, Chile confirmed 34.5 HIV cases per 100,000 men and 7.1 HIV cases per 100,000 women. The age group with the highest rate was adults aged 20 to 39 years.[353] In 2017, MINSAL reported a high rate of Syphilis among Sexually Transmitted Infections, and in 2022, there were 8,000 cases of Syphilis, reflecting a 5% increase compared to the previous year, with a national incidence rate of 40 cases per 100,000 inhabitants. The highest rates were observed in the age group from 20 to 39 years, with a higher prevalence among males.[354]

Chagas Disease

The etiological or causal agent of Chagas Disease is a parasite called Trypanosoma cruzi, which is transmitted through the droppings of infected bed bugs. Chagas disease (American trypanosomiasis) may be asymptomatic or progress to Chagasic heart disease and motor disorders of the esophagus and colon (Chagasic megacolon).[355] In 2016, a total of 1,659 cases of Chagas were reported by MINSAL's Department of Health Statistics and Information.[356] Chagas disease is one of the most important neglected diseases affecting Latin America and considered recently as an emergent disease in the region and

in some countries of Europe. Annual incidence varies between 28,000 and 56,000 cases and the mortality between 10,000 and 14,000 annually, affecting 6–11 million individuals with 65–100 million people at risk. The endemic area in Chile extends between the Arica-Parinacota and Libertador Bernardo ÓHiggins regions, with 873,415 people at risk. As of 2014, annual incidence had varied between 3 and 11 per 100,000 inhabitants, and the mortality was about 0.3–0.4 per 100,000 inhabitants. However, Uruguay since 1997, Chile since 1999, and Brazil since 2006 have been recognized as countries that eliminated vector transmission of Chagas disease, which was a consequence of efficient eradication campaigns of the domiciliary vector.[357]

Dengue

The etiologic or causal agent of Dengue is a virus from the Flaviviridae family. There are four different serotypes that cause the disease. It is transmitted by the bite of the female mosquito Aedes aegypti and Aedes albopictus, which is diurnal (active during daytime) and lives in urban areas. This mosquito is distributed in tropical areas, especially in Southeast Asia and Latin America. In Chile, it is found on Easter Island. The first symptoms of dengue usually appear between two and seven days after the mosquito bite. These include high fever (over 39°C / 102.2°F), headache, joint pain, nausea, and vomiting. In countries where the virus circulates commonly, dengue can be complicated by the most severe form known as dengue hemorrhagic fever. There is no specific therapy to treat dengue. The only way to prevent the disease is to protect from mosquito bites by using appropriate repellents, avoiding the use of dark clothing and perfumes, and covering as much skin as possible, among other mitigation behaviors.[358] In 2024, MINSAL confirmed 179 cases of dengue, of which 135 were reported in mainland Chile. All the affected people were infected abroad. The figure is practically double that registered during the whole of 2023, which reached 90 cases. These figures, together with the discovery of the mosquito that transmits dengue at the Los Andes bus terminal, led the authorities to reinforce epidemiological surveillance measures. Of the total number of cases, 54% were women with an average age of 34 years. Approximately 15% of all patients required hospitalization due to risk factors.[359]

On 26 September 2024, Boletín Epidemiológico reported a total of 417 cases, with 62% or 260 being imported cases, and 38% or 157 being autochthonous cases (local transmission). A significant outbreak occurred on Easter Island (Rapa Nui or Isla de Pascua). There was no significant difference between male and female rates of incidence and the median age was 34 years.[360] Notably, as of 23 March 2024, 16 autochthonous cases of dengue were identified on Easter Island, where no cases had been recorded since 2020. Additionally, the reintroduction of the Aedes aegypti mosquito has been detected in the Arica and Parinacota region, where three imported cases of dengue were confirmed on 29 March 2024.[361] The spread of the mosquito has raised concerns in countries like Chile, where its presence has been detected in various regions, prompting MINSAL to issue Decree No. 28 to control the vector and strengthen epidemiological surveillance.[362]

Respiratory Infections

In 2023, Chile experienced a notable increase in respiratory infections, particularly among children and adolescents. MINSAL issued an epidemiological alert in October 2023 due to a rise in cases of atypical pneumonia caused by the bacterium Mycoplasma pneumoniae. Between January and October 2023, 834 infections were reported, with a total of 1,604 cases recorded up to October 2024.[363] By epidemiological week 50 of 2023 (10-16 December), there were 16 reported deaths due to lower respiratory tract infections in infants under one year old in hospitals. The highest incidence rates were observed in the regions of O'Higgins, Maule, and Biobío.[364] Rhinovirus was the most frequent virus, registering 535 cases, with the highest rate of incidence in the age group of 1 to 4 years. Other respiratory viruses observed

include COVID-19, Influenza B, Adenovirus, Parainfluenza, Influenza A, Metapneumovirus, and Respiratory Syncytial Virus.[365]

Non-Communicable Diseases

Non-communicable diseases (NCD) are long-term and slow-progressing diseases such as cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes, among others. NCDs are responsible for the deaths of more than half of Chileans who die in a year. In 2023, the prevalence of tobacco use among Chileans aged 15 and older was 27.2%. In the same age group, the prevalence of overweight and obesity was 78.8% in 2022. In 2016, 26.6% of the population reported insufficient physical activity. In 2015, the reported prevalence of arterial hypertension among people aged 18 years or older was 20.9%, a decrease of 5.8% compared to 2000 (26.7%). The prevalence of diabetes mellitus, which stood at 8.7% in 2000, increased to 10.5% in 2014.[366]

In 2023, NCDs continued to be a significant public health concern in Chile, contributing substantially to morbidity and mortality rates nationwide. Cardiovascular diseases are the leading cause of death in Chile, as in many other countries. Hypertension and coronary heart disease lead this category, affecting a large part of the adult population. Adopting a healthy lifestyle, including a balanced diet and regular exercise, is essential for prevention. Cardiovascular diseases remain the leading cause of death in Chile. MINSAL has implemented the Cardiovascular Health Program to address this issue. In 2016, cardiovascular diseases accounted for 26.1% of total deaths in Chile. Prevalence of risk factors in 2015 included hypertension, diabetes, dyslipidemia, smoking, history of myocardial infarction, and history of cerebrovascular disease.[367]

Cancer is the second leading cause of death in the country. Initiatives are ongoing to enhance early detection and treatment services. In 2022, there were 59,876 cases of cancer, 31,440 deaths related to cancer, and a prevalence of 169,882 (5-year prevalent cases). Prevalence varied among men and women, with 92,089 5-year prevalence cases in men and 77,793 cases in women. The top three leading cancers causing death in men were prostate cancer, stomach cancer, and lung cancer, and in women, breast cancer, colorectum cancer, and lung cancer.[368]

Type 2 diabetes mellitus is another chronic disease that has seen a significant increase in Chile. It is closely related to overweight and obesity health problems that have grown in prevalence in recent decades. In Chile, the prevalence of Type 2 diabetes reaches 12.3% in the adult population and exceeds 30% in people over 65 years of age, which is equivalent to 1.7 million people affected by this disease in the country. Poor metabolic control increases the risk of macro and microvascular complications, shortens life spans and generates a high human, economic, and social cost. More than 10% of total health expenditure in Chile is allocated to the treatment of Type 2 diabetes, especially for the management of its complications.[369]

According to the National Health Survey 2016–2017, the prevalence of tobacco consumption among adults aged 15 and older was 33.3%, with 38% in men and 29% in women. Tobacco use is a leading risk factor for various diseases, including cardiovascular diseases, respiratory conditions, and multiple types of cancer. The MINSAL reports that tobacco use is responsible for approximately 16% of all deaths in Chile, equating to around 16,000 deaths annually.[370]

The National Health Survey 2016-2017 indicates that one in ten individuals engages in risky alcohol consumption. This behavior is more prevalent among adolescents and young adults aged 15 to 24, with a rate of 14.4%. Alcohol consumption is the leading risk factor causing death or disability in Chile, accounting for 12.4% of such cases. This rate is double that of subsequent factors like overweight and high blood pressure. Alcohol use is linked to various health issues, including liver cirrhosis, certain cancers (e.g., oral, esophageal, liver, breast), and contributes to accidents, injuries, and violence.[371]

Training for Health Professionals

In 2021, Chile had a total of 52,000 registered physicians, equating to approximately 2.7 doctors per 1,000 inhabitants (compared to 2 doctors per 1,000 people in LAC, in 2022).[372] Approximately 70,000 registered nurses are actively practicing in Chile, and they play a crucial role in patient care and health education. There are about 15,000 certified midwives, specializing in maternal and neonatal health services. The healthcare system includes around 10,000 medical technologists who perform essential diagnostic and therapeutic procedures. Other health workers number over 50,000 and include physical therapists, occupational therapists, and nutritionists.[373]

In Chile, the training of health professionals is structured through a comprehensive educational framework that encompasses both Technical-Professional Education (ETP) and University Education. ETP includes secondary level education in which students can focus on health-related specialties, and post-secondary education. Post-secondary institutions, such as Technical Training Centers and Professional Institutes, offer programs that train mid-level health technicians. By law, only those who possess the respective degree granted by the University of Chile or another university recognized by the State and are legally authorized to practice their professions may carry out activities related to medicine, dentistry, chemistry, and pharmacy or others related to the preservation and restoration of health, or those who have the authorization of the Director General of Health may practice auxiliary professions.[374] Undergraduate medical education starts after high school, it lasts seven years, with the final two years dedicated to a rotary internship, leading to a Medical Doctoral (M.D.) degree that allows the graduate to enter working activities. The country needs more M.D.s in primary care, but there is also a shortage of specialists, mainly outside of the urban centers. In recent decades, postgraduate programs leading to specialty titles have become competitively chosen by a large proportion of medical graduates.[375]

WOMEN, PEACE AND SECURITY

Disasters, fragility, and conflict affect women, men, girls, and boys in different ways and often have a disproportionate impact on women and girls.[376] Furthermore, women, young children, and youth are among the most vulnerable to hazards, conflict, extreme weather events, and other shocks.

Disasters exacerbate many of the prevailing gender inequalities that exist in society. Heightened disaster vulnerabilities, exposure, risks, and impacts experienced by women are attributed to discrimination and unequal access to opportunities, natural resources, and other productive resources; unequal access to finance, technology, knowledge, and mobility; socially constructed differences in capacities and capabilities; and discriminatory social, cultural, and legal norms and practices.[377] Therefore, in crisis environments, humanitarian assistance, development cooperation, and peacebuilding are essential processes to reduce needs, risks, and vulnerabilities.[378]

Chile has undertaken initiatives in terms of women's inclusion, justice, and security. These activities are in line with the international Women, Peace and Security (WPS) agenda which gained global visibility with United Nations Security Council Resolution (UNSCR)1325, adopted in October 2000. UNSCR 1325 affirmed women's link to the peace and security agenda, the role of women in conflict prevention, the protection of women's rights during and after conflict, and women's specific needs during repatriation, resettlement, rehabilitation, reintegration, and post-conflict reconstruction.

The WPS agenda has since expanded with the adoption of nine additional WPS resolutions. These resolutions together address various issues of gender and security, including the need to stop gender-based violence and to promote women's roles in conflict resolution, recovery, and peacebuilding. The WPS agenda has also broadened to look at women's and men's meaningful participation in humanitarian assistance, disaster management, DRR, and climate security to facilitate a wider range of input and inform decision-making that benefits the whole of society.[379]

In 1991, the National Women's Service (SERNAM) was opened, followed in 2015 by Law No. 20.820, which created the Ministry of Women and Gender Equity (MINMUJERYEG). SERNAM became the National Service for Women and Gender Equity (SERNAMEG), which is functionally decentralized and is in charge of executing the policies, plans, and programs entrusted by the MINMUJERYEG. Chile has integrated a gender and indigenous people approach into the Climate Change National Action Plan (2017-2022) and the National Adaptation Plan (2014).

As Chile falls within the U.S. SOUTHCOM area of operations, the U.S. SOUTHCOM WPS program maintains the following responsibilities: advising the Commander and staff on the integration of the WPS framework in military operations, activities, and investments (OAI) across the continuum of defense and security sectors within the region; ensuring they accurately represent the roles of women and men in plans and exercises; encouraging partners to implement policies, plans, and structural changes that enhance the meaningful participation of women in decision-making processes related to peace and security; and building relationships, networks, and mutual understanding to enable collaboration and protection. In 2009, Chile became the first country in Latin America to adopt a WPS National Action Plan (NAP). The second iteration was published in 2015, covering the period 2015-2018. Chile is currently engaged in drafting its third NAP, which "will extend its scope of action to situations of natural disasters and humanitarian aid."[380]

Dual themes predominate in the WPS framework literature on disaster management: women as vulnerable or resilient in relation to the environment. Vulnerability influences the ability of some groups to recover. Effective operationalization of the WPS principles will then positively impact the disaster management phases and create the conditions for whole-of-society relief and recovery. Chile has made commendable strides in advancing the WPS agenda through legislative action, international cooperation, and increased female participation in security operations. Continued efforts in policy development, institutional reforms, and societal awareness will be crucial for achieving a full WPS framework, which can be integrated in disaster management.[381]

Chile ranks 47th out of 146 countries assessed on the World Economic Forum's Gender Gap Index and 12th within the LAC region.[382] In Chile, 100% of legal frameworks that promote, enforce, and monitor gender equality under the SDG indicator, with a focus on violence against women, are in place. The adolescent birth rate is 0.4 per 1,000 women aged 15–19 as of 2020, down from 0.49 per 1,000 in 2019. Almost 6% of women aged 15-49 years reported that they had been subject to physical and/or sexual violence by a current or former intimate partner in the previous year. Also, women and girls aged 10+ spend 22.1% of their time on unpaid care and domestic work, compared to 9.9% spent by men,[383] as women carry out a higher percentage of unpaid care work.[384]

Chile has also made progress in the areas of female representation in business and the workforce.[385] As of February 2024, 35.5% of seats in parliament were held by women.[386] According to the 2022/23 Global Board Diversity Tracker, Chile, along with Colombia, Brazil, Argentina, and Mexico, showed a 2.9% increase in board seats held by women in 54 large companies, compared to 2020. The expansion of public childcare has allowed for a significant increase in the percentage of women in the labor force. Chile, along with Uruguay and Costa Rica in the LAC region, stand out for their work in building out childcare provision. The Chile Crece Contigo program boosted childcare coverage by 130% from 2005 through 2007, and almost 96% of Chilean five-year-olds attend preschool.[387]

UNSCR 1325 and WPS principles are explicitly mentioned in the country's key foreign policy and national security documents, and they put forth specific political commitments. In the 2017 Book of Chile's National Defense, the section called "Resolution 1325" highlights Chile's commitment to the WPS agenda. Additionally, in the Sectoral Policy in the Field of Military Policy chapter, the section "Gender Policy" explicitly refers to Resolution 1325, the NAP, and the commitments of the MND, which include increasing the participation of women in the armed forces; promoting women's participation in peacekeeping operations; integrating a gender perspective in the training cycle; and strengthening the institutional framework for the inclusion of gender policies in the defense sector.[388]

CONCLUSION

Due to a combination of political, geographic, and social factors, Chile is recognized as one of the most vulnerable countries in the world. Chile is highly exposed to multiple hazards such as earthquakes, tsunamis, volcanic eruptions, wildfires, floods, and landslides. Chile experiences frequent seismic activity due to the tectonic dynamics along the Nazca-South American plate subduction zone. Notably, the 1960 Valdivia earthquake was the most powerful ever recorded at magnitude 9.5, and it caused major destruction and a tsunami. The 2010 Maule earthquake registered a magnitude of 7.8 and resulted in over 500 deaths, significant infrastructure damage, and economic losses estimated at US$30 billion.

Within its territory, Chile has multiple active volcanoes, and periodic eruptions threaten nearby communities. For example, the 2008 eruption of Chaitén led to the evacuation of thousands and produced extensive ash fall, disrupting air travel and local communities. Chile also experiences periods of drought, and since 1965, four major droughts have occurred; the most severe started in 2010 and continues at present. Such droughts have led to water shortages, affecting urban and rural populations, and the agriculture, mining, and hydro power sectors. Prolonged drought conditions and rising temperatures have intensified wildfire hazard in Chile. In 2024 alone, wildfires affected 300,000 people, damaged 65,000 ha (160,000 acres), and prompted a State of Constitutional Exception of Catastrophe by the government.

Changing precipitation and temperature patterns have also resulted in increased incidences of flood and landslide hazards. Both 2023 and 2024 saw extreme weather events, with heavy rainfall, causing widespread flooding and disruption to communities and transportation networks. Climate change alters the frequency and intensity of these natural hazards and exacerbates their impact on Chile's infrastructure, economy, and population.

Despite Chile's exposure to these increasingly dangerous hazards, the country's vulnerability is mitigated by increased institutional capacity and decades of experience developing its disaster management system. Chile has updated its legal and regulatory framework for DRM through a wave of reforms in the last decade alone. A new legal framework for DRM was established in 2021 to address a previously highly centralized approach, which impacted effective coordination between levels of administration. The new legal framework decentralizes decision-making by strengthening capacity at the sub-national levels, especially through the implementation of DRR committees and through improved coordination between governmental and civil society entities. The new framework established SINAPRED and SENAPRED, which replaced SNPC and ONEMI, respectively.

Aligned with this institutional restructuring, the GoC has demonstrated a commitment to strengthening its DRR and improving its infrastructure resilience. With SENAPRED's leadership and the support of international organizations, Chile has initiated projects across multiple sectors to enhance critical infrastructure and develop comprehensive action plans for DRR. Chile's National Policy for DRR: National Strategic Plan 2020-2030 also highlights priorities such as understanding disaster risk, strengthening governance, investing in critical infrastructure resilience, and providing a framework for sustainable community development. The policy is integrated with important global agendas, such as the 2040 Agenda for Sustainable Development, the New Urban Agenda Habitat III, the Paris Agreement, and the Sendai Framework. These advancements reflect Chile's commitment to building a more resilient society and the country's capability to effectively manage and mitigate the impacts of natural hazards.

APPENDICES

DoD DMHA Engagements in the Past Five Years (FY 2019-2025)

The list below describes DMHA engagements between the U.S. DoD and Chile in the last five years.

U.S. SOUTHCOM Humanitarian Assistance Program – 2025

HAP efforts have grown significantly since 2022, and SOUTHCOM has demonstrated persistent versus episodic presence in its partnership with Chile's disaster management agencies. In FY24, the Security Cooperation Office completed 25 HAP projects valued at US$553,000 alongside Chilean volunteer fire departments and CONAF. As of publication of this handbook, there are 13 ongoing projects with US$250,000 in obligations to support disaster preparedness and mitigation, and to provide response and recovery organizations with uniforms, protective equipment, and tools. Additionally, there is a larger project valued at approximately US$300,000 to procure for a northern Chilean municipality a hyperbaric chamber that will increase public health, worker safety, and emergency preparedness capabilities. Larger projects are also in progress to include the provision of urban search and rescue mobile operations centers, fire department incident command vehicles, and drones for CONAF and the SERNAGEOMIN.[389]

Exercise Southern Fenix – 2024

The inaugural multinational military exercise, Southern Fenix 2024, was conducted from 27 August to 5 September. It involved over 600 representatives from Argentina, Chile, and the U.S., with the aim to enhance interoperability within a desert environment. A key component of this exercise is the collaboration between the TXARNG and Chilean combat medics, facilitated through the SPP. The exercise represents a significant milestone, as it is the first instance of U.S. medics participating alongside their Chilean counterparts in a joint training scenario. During the exercise, the TXARNG and the Chilean army engage in cross-training that covers critical areas such as medical evacuation, emergency medical services, combat lifesaver techniques, and triage procedures. The initiative strengthened medical capabilities and expanded on an existing partnership that encompasses various domains, including disaster and emergency response, aviation operations, and maintenance and engineering activities. The collaborative effort reflects a commitment to enhancing readiness and effectiveness in joint operations among participating nations.[390] Photo 2 shows Texas National Guard and Chilean medics training together at Exercise Southern Fenix 2024.[391]



Photo 2: Texas National Guard and Chilean Medics Training, Exercise Southern Fenix 2024

South American Defense Conference – 2024

On 27 August 2024, the Chairman of the Joint Chiefs of Staff, Air Force General Charles Q. Brown, and Army General Laura Richardson, the commander of SOUTHCOM, joined regional defense leaders to discuss security challenges and regional cooperation during the South American Defense Conference (SOUTHDEC) in Santiago, Chile. The three-day conference brought together defense leaders from Argentina, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, and the U.S. Representatives from Canada, France, and the United Kingdom participated as observers. The 2024 SOUTHDEC discussions focused on leveraging emerging technologies, particularly artificial intelligence and machine learning, to bolster the region's defense capabilities and operational efficiency.[392]

Hurricane Exercise – June 2024

On 25 June 2024, a delegation from Chile observed a hurricane preparedness exercise conducted by the Texas Division of Emergency Management, in collaboration with TXARNG and multiple civilian agencies. These exercises were strategically designed to enhance the overall preparedness, coordination, and response capabilities of the involved entities in anticipation of potential hurricane-related disasters. The hurricane preparedness exercise is in addition to other HADR exchanges between TXARNG and Chile. Such collaborative efforts underscore the importance of inter-agency cooperation in disaster management and serve as a valuable model for improving resilience to natural catastrophes.[393]

Exercise RESOLUTE SENTINEL – 2024

Resolute Sentinel 2024 began on 27 May and is a multinational training exercise that enhances the readiness of U.S. and partner nation militaries through HADR, space domain awareness, cybersecurity, special operations and counter-threat exercises, legal and medical exchanges, and construction projects. The exercise enhanced regional security and interoperability among 1,500 personnel from Brazil, Chile, Colombia, Ecuador, France, Peru, and the U.S. Since 2021, the 12th Air Force, part of the SOUTHCOM area of operations, has led Resolute Sentinel.[394]

4th Fleet Partner Nation Roundtable – February 2021

On 3 February 2021, Rear Admiral Don Gabrielson, Commander of U.S. Naval Forces Southern Command and U.S. 4th Fleet, facilitated a virtual conference that included senior officials from multiple partner nations, such as Argentina, Brazil, Chile, Colombia, Ecuador, El Salvador, Jamaica, Panama, and Peru, alongside representatives from U.S. military commands, including U.S. Marine Forces South (MARFORSOUTH), U.S. Special Operations Command South (SOCSOUTH), and U.S. Coast Guard Headquarters. The primary objective of the discussion was to explore a range of issues pertinent to regional security and cooperation. Key topics included illegal, unreported, and unregulated fishing (IUUF), HADR training, the enhancement of subject matter expert exchanges, the challenges posed by transnational criminal organizations, and emerging threats related to cybersecurity. Representatives discussed the challenges faced by their countries and identified shared regional threats. The discourse emphasized the importance of collaboration on forthcoming military exercises and the sharing of pragmatic solutions to enhance regional stability and security.[395]

South American Defense Conference – 2019

SOUTHDEC, co-hosted by Brazil's Armed Forces and SOUTHCOM, was held from 20 to 22 August 2019 in Natal, Brazil. General Raul Botelho, Chief of the Brazilian Armed Forces Joint Staff, and U.S. Navy Admiral Craig Faller, Commander of SOUTHCOM, jointly inaugurated the conference. This forum gathered defense leaders from several South American nations, including Argentina, Chile, Colombia, Ecuador, Paraguay, Peru, Suriname, and Uruguay, as well as military and civilian representatives from Canada, Portugal, Spain,

the United Kingdom, and the U.S. The opening ceremony included notable attendees such as Brazilian Defense Minister Fernando Azevedo and U.S. Deputy Chief of Mission William Popp. Following the ceremony, participants engaged in two days of intensive dialogue. The conference focuses primarily on enhancing support for humanitarian assistance missions, coordinating disaster relief operations, and fostering international cooperation to address transnational threats. A significant feature of this conference was the inclusion of senior enlisted leaders, who convened concurrently for the third consecutive year to deliberate on similar issues. Their discussions emphasized the pivotal role of the enlisted corps in promoting practical security cooperation among regional armed forces.[396]

Special Purpose Marine Air-Ground Task Force – Southern Command – 2019

On 21 June 2019, the Special Purpose Marine Air-Ground Task Force – Southern Command (SPMAGTF-SC) commenced its deployment with an official opening ceremony held at Soto Cano Air Base, Honduras. Notable attendees included Honduran President Juan Orlando Hernández and U.S. Navy Admiral Craig Faller, the commander of SOUTHCOM. The task force consisted of approximately 300 U.S. Marines and Sailors drawn from various units across the U.S., complemented by a multinational staff that integrated service members from Argentina, Belize, Brazil, Chile, Colombia, Dominican Republic, and Peru. This integration represents a significant milestone in establishing a Multinational Maritime Task Force to enhance disaster response capabilities within the Latin American and Caribbean region. The primary objective of the multinational coalition was to maintain readiness to effectively respond to emergencies resulting from natural disasters, while also providing support to the armed forces of partner nations. SPMAGTF-SC conducted operations throughout the region from June to December, strategically aligning with the hurricane season. Throughout the deployment, partner nation militaries enhanced their regional capacities and facilitated operations during significant disasters. Simultaneously, this initiative aims to bolster interoperability and operational readiness between the U.S. forces and those of the partner nations involved.[397]

EJERCICIOS FUERZAS ALIADAS HUMANITARIAS – 2019

On 6 May 2019, over 300 military forces and HADR personnel gathered for the opening ceremony of EXERCISE FUERZAS ALIADAS HUMANITARIAS, at the Ministry of Defense in Santo Domingo, Dominican Republic. The ceremony inaugurated the 12-day scenario-driven exercise which aimed to simulate natural disasters and man-made crises that threaten the region. The exercise was sponsored by U.S. Army South and was designed to build partner nations' capacity for civil and military response to major disasters and to improve and strengthen regional civil-military collaboration. The multinational exercise involved military and civilian experts in HADR from 14 countries including Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Panama, Peru, and the U.S.[398]

International/Foreign Relations

Chile engages in diplomatic relations with 171 states. The nation operates resident embassies in 65 countries and facilitates direct diplomatic engagement and maintaining concurrent diplomatic relations with an additional 68 countries.[399] Chile actively participates in various regional and global agreements related to trade, environmental protection, human rights, and security. Chile's foreign policy principles and fundamental guidelines are respect for international law, promotion of democracy, respect for human rights, and responsibility to cooperate.[400] The nation's foreign policy reflects an active and cooperative approach, focusing on economic relations and regional collaboration. Key institutions central to this policy include the International Cooperation

Agency (Agencia de Cooperación Internacional, AGCI) and the National Department of State Borders and Boundaries (Dirección Nacional de Fronteras y Límites del Estado, DIFROL), both of which operate under the Foreign Ministry (Ministerio de Relaciones Exteriores, MINREL). The presence of DIFROL highlights ongoing territorial disputes and differing views on historical boundaries that exist between Chile and several neighboring countries.[401]

Territorial boundary deliberations can be traced partly to the formative years following Chile's independence in 1810 when the nation's foreign policy primarily focused on trade and territorial expansion. Around 1837, Chilean ports began challenging the dominance of Callao, Peru's chief seaport and dominant coastal city in the Lima region. This shift toward maritime dominance reached a decisive point when Chile prevailed over the Peru-Bolivia Confederation, during 1836-1839 wars. This victory, which also involved Argentina, significantly increased Chile's geopolitical influence throughout South America. The subsequent War of the Pacific (1879-1883) further solidified Chile's regional dominance and expanded its territorial claims.[402]

Chile and Its Neighbors

Chile engages extensively with its immediate neighbors on various issues, including energy, trade, security, migration, education, technology, and environmental cooperation. The nation's foreign policy towards neighboring countries—Argentina, Bolivia, and Peru—emphasizes peaceful dispute resolution through diplomacy and adherence to international law. Chile prioritizes the strengthening of economic relations through trade agreements while upholding respect for the sovereignty and territorial integrity of each country. This approach extends to active participation in regional initiatives, such as the Pacific Alliance, a regional trade bloc aimed at enhancing economic integration and trade among its members, including Mexico and Colombia. Moreover, Chile's foreign policy extends beyond its immediate neighborhood to encompass the broader Latin American context. It reflects a strategic recognition that enhanced regional cooperation enables Latin American countries to exert significant collective influence on the global stage.[403] Despite these efforts toward collaboration, Chile maintains a steadfast commitment to promoting democracy and human rights in the region.[404]

In January 2010, Chile and Argentina formalized their diplomatic and cooperative relations by signing the Treaty of Maipú. This Treaty established new platforms for ministerial-level dialogue to address various mutual interest issues, including border management, monetary cooperation, security, and energy. Furthermore, the Treaty laid the groundwork for the 2017 signing of an FTA, which bolsters cross-border commerce by enhancing contract enforcement mechanisms and dispute resolution processes, while fostering collaboration in the digital economy.[405] Argentina is one of Chile's primary trading partners, with substantial cross-border trade flows. Chile mainly exports mineral resources such as copper and agricultural products like wine and fruit. In contrast, Argentina's exports include agricultural goods, manufactured products, and natural gas. Both countries are key Southern Common Market (Mercado Común del Sur, MERCOSUR) members, facilitating regional trade integration.[406] Chile and Argentina collaborate in response to global challenges, notably disaster risks, economic volatility, and shifting geopolitical dynamics within the Americas. Both nations share aligned interests in regional security, environmental sustainability, and financial integration, actively pursuing opportunities for enhanced cooperation. Given their historical conflicts, Chile and Argentina have developed a strong commitment to peacefully resolve disputes. Their collaborative efforts extend to regional security initiatives and military cooperation, exemplified by joint operations targeting organized crime, human trafficking, and disaster response efforts. Shared natural resources—particularly the

water resources of the Andes—underscore the necessity for ongoing collaboration, especially in environmental conservation initiatives focusing on shared ecosystems in Patagonia and Antarctica.[407] Both nations engage in joint humanitarian efforts, particularly disaster relief operations, in response to natural disasters like earthquakes, floods, and wildfires. Their geographical proximity allows for practical cross-border assistance during crises, reinforcing their bilateral relationship's importance in addressing regional and global challenges.

Chile and Bolivia's bilateral relationship is marked by a complex mix of historical grievances and contemporary economic cooperation. A key event in this dynamic was the Bolivian government's decision in 2011 to escalate its claim against Chile to the ICJ. This legal action aimed to compel Chile to acknowledge Bolivian sovereignty over a territory that would restore Bolivia's access to the Pacific Ocean—a coastal region lost to Chile during the War of the Pacific (1879-1884).[408] In 2018, the ICJ delivered a ruling in favor of Chile, further straining diplomatic relations between the two nations. Despite these historical tensions, it is essential to note that Chile and Bolivia have maintained significant economic ties. The two countries cooperate in various areas, including trade, energy, and environmental management. Notably, Bolivia relies on Chilean territory for access to international maritime routes, with the port of Antofagasta serving as a crucial gateway for Bolivian exports, primarily consisting of natural gas and minerals.[409]

The relationship between Chile and Peru has evolved from a historically strained one into a more cooperative and strategic partnership. Both nations share significant economic and cultural connections; however, their interactions have been shaped by past conflicts, notably the War of the Pacific and disputes regarding maritime boundaries. In recent years, both countries have made concerted efforts to address previous grievances and enhance their diplomatic, economic, and social ties. In 2014, the ICJ ruled in favor of Peru concerning contentious maritime territory in the Pacific Ocean, a decision that Chile accepted. This ruling reaffirmed Chile's commitment to fostering amicable relations with Peru. In the aftermath, both nations agreed to respect the ICJ's decision and work collaboratively to resolve other outstanding issues.[410] Peru is one of Chile's primary trading partners in Latin America, exemplified by the 2006 FTA.[411] Bilateral trade encompasses various sectors, including mining, agriculture, and fishery products. Both countries are integral members of the Pacific Alliance. Chile primarily exports copper, fruits, and wine to Peru, while Peru exports textiles, agricultural products, and chemicals to Chile. Both nations play significant roles in the global mining sector, particularly in copper production, and have initiated collaborative efforts to promote sustainable mining practices in the region.[412] Environmental considerations highlight the Chile-Peru relationship, as both countries share critical ecosystems, including parts of the Amazon rainforest and the Andean Mountain range. Ongoing initiatives to preserve these shared environments involve collaborative water resource management, biodiversity conservation, and forest preservation. Chile and Peru have also engaged in joint efforts to address sustainable fishing practices and the protection of Marine Protected Areas, particularly in border regions.[413]

United States

Chile is one of the strongest partners of the U.S. in LAC, with diplomatic relations beginning on 27 January 1823. The two nations consult frequently to address a diverse array of mutual interests, including international commerce, multilateral diplomacy, security, academic exchanges, military cooperation, and scientific collaboration.[414] Following the military coup in Chile in 1973, the U.S. Congress imposed specific restrictions on arms sales and military assistance to the Pinochet regime. Over time, however, the U.S. actively supported the re-establishment of democratic governance in Chile in the late 1980s and early 1990s. Since the political transition, both nations have cultivated robust commercial

and defense ties while also collaborating to promote democracy and human rights across LAC.[415] The relationship was further reinforced by establishing the U.S. Embassy in Santiago on 5 July 1994, a significant milestone in diplomatic ties. On March 2014, Chile was officially designated as a member of the Visa Waiver Program, in which citizens of Chile are granted the ability to enter the U.S. for purposes of tourism or business under the B visa category for up to 90 days without the necessity of obtaining a visa. This program enhances international trade and tourism, reflecting a mutual commitment to bolster travel security while expanding economic and cultural connections between the two nations.[416] The U.S.-Chile Trilateral Development Cooperation initiative has solidified this partnership, enabling collaborative development projects across various countries. The initiatives address pressing issues, including citizen security, social inclusion, the enhancement of agricultural standards, and the promotion of exports.[417]

The U.S.-Chile FTA, established in 2004, plays a pivotal role in facilitating the duty-free export of 100% of U.S. consumer and industrial goods to Chile, thereby strengthening economic ties between the two nations. According to data from the U.S. Department of Commerce, in 2023, total bilateral trade in goods reached approximately US$34.3 billion. U.S. exports to Chile amounted to US$18.8 billion, with key sectors including mineral fuels, machinery, and motor vehicles. Imports to the U.S. from Chile amounted to US$15.6 billion, and included primarily copper, fish, and fruit.[418] In June 2023, the U.S. Senate ratified a bilateral treaty to foster investment between the two nations through mechanisms to prevent double taxation. This treaty, originally ratified by Chile in 2015, came into effect in December 2023 following the approval of specific reservations by the Chilean legislature. The U.S. Bureau of Economic Analysis reported that the accumulated stock of U.S. foreign direct investment in Chile was US$32 billion as of 2023, with predominant investments in the finance, mining, and information sectors.[419]

The U.S. and Chilean governments maintain consistent dialogue on defense-related matters, exemplified by the annual bilateral Defense Consultative Committee meetings. Collaborative military exercises are also conducted to enhance operational capabilities and interoperability between the two nations' armed forces, such as UNITAS, TRADEWINDS, and FUERZAS COMANDO. In September 2024, Chile hosted UNITAS, a U.S.-organized and the longest-running multinational maritime exercise that occurs annually in the LAC region.[420] Beyond routine training, these collaborative efforts addressed transnational criminal organizations and illicit trafficking operations, which pose significant challenges to regional stability. Additionally, SOUTHCOM, through TXARNG, builds partnerships with the Chilean Armed Forces and various organizations as part of the National Guard's SPP, to support humanitarian assistance initiatives and disaster response response, among others.[421]

People's Republic of China

Chile and the PRC established diplomatic relations on 15 December 1970, making Chile (with the socialist government of Salvador Allende in power at the time) the first South American country to recognize the PRC. The PRC made a pragmatic decision to maintain diplomatic relations with the military regime of Augusto Pinochet following the coup that ousted Salvador Allende in September 1973. Chile distinguished itself as a pioneering advocate for the PRC's accession to the World Trade Organization (WTO), a position it formalized in 1999. Furthermore, Chile became the inaugural country to recognize the PRC as a "market economy" in 2004. In 2012, Chile was designated as a "strategic partner" by the PRC, a recognition that was elevated to that of a "comprehensive strategic partner" in 2016. In 2018, Chile became one of the first countries in Latin America to join Beijing's Belt and Road Initiative (BRI). Chile subsequently joined the Asian Infrastructure Investment Bank, an institution dedicated to financing BRI projects.[422]

In 2005, Chile was the first country in Latin

America to sign an FTA with the PRC. This agreement, upgraded in 2017, has fueled a robust economic relationship today, making Beijing Chile's largest trading partner. In 2023, the PRC accounted for 38% of Chile's exports, including copper, lithium, fruits, and wine, with bilateral trade surpassing US$62.5 billion.[423] Since 2010, Chinese companies have invested over US$17.7 billion in Chile, focusing on energy and mining.[424]

European Union (EU)

The EU and Chile have maintained a close partnership since establishing diplomatic relations in 1967, with Chile being the first Latin American country to host a local EU representation. Chile and the EU share the values of freedom, democracy, human rights, the promotion of multilateralism, and a free and rules-based trade. The relationship with EU was further strengthened by the 2002 Association Agreement, encompassing political dialogue, cooperation, and trade. In December 2023, both parties signed the EU-Chile Advanced Framework Agreement, marking Chile as the first nation in the region to enter into a next-generation agreement with the EU. The modernized agreement aims to deepen trade and investment ties, eliminate remaining trade tariffs, and address contemporary challenges such as sustainable trade practices, gender equity, and environmental standards.[425]

In 2023, the EU was Chile's third-largest trading partner, accounting for approximately 10% of Chile's total trade in that year. Two-thirds of Chile's imports from the EU consist of intermediate and capital goods utilized in Chile to produce different products for domestic consumption and export to third countries. Chile's imports from the EU primarily comprise industrial products, like machinery, electrical equipment, vehicles, and aircraft. While Chile's exports to the EU include mining products, copper, and chemicals products, Chile also exports agricultural goods to the EU. Such exports like fruit, wine, and seafood have seen double-digit growth over multiple years and allow Chile to diversify its export portfolio and decrease its reliance on copper exports. The EU is also the leading foreign investor in Chile, with investments spanning various sectors, notably in renewable energy.[426]

Chile and the EU engage in regular dialogues on human rights, ocean governance, and disaster risks to strengthen bilateral and multilateral cooperation. Part of the European Commission, the European Civil Protection and Humanitarian Aid Operations Directorate recognizes South America's high exposure to multiple and combined natural and human-made hazards. The EU Civil Protection Mechanism provides emergency response support and aid, as well as support to strengthen DRR in the region. For example, in 2017, 2019, 2023, and 2024, the EU deployed experts and firefighters to help Chile, Guatemala, and Bolivia fight forest fires. In the first half of 2024, several emergency funds were mobilized in Bolivia, Brazil, Argentina, and Chile to support the response to disasters such as floods and wildfires. Additionally, a Memorandum of Understanding on DRM was established as a new collaboration instrument between the EU and the LAC region. The agreement focuses on disaster preparedness and risk management and became effective in May 2024.[427]

Participation in International Organizations

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

Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL), Asia-Pacific Economic Cooperation (APEC), Bank for International Settlements (BIS), Central American Integration System (SICA, observer), Community of Andean Nations (CAN, associate), Community of Latin American and Caribbean States (CELAC),

Conference on Disarmament (CD), Food and Agriculture Organization of the United Nations (FAO), Forum for the Progress and Integration of South America (PROSUR), Group of 15 (G-15, developing states), Group of 77 (G-77, developing countries), Inter-American Development Bank (IDB), Inter-Parliamentary Union (IPU), International Atomic Energy Agency (IAEA), International Bank for Reconstruction and Development (IBRD), International Chamber of Conference (ICC-national committees), International Civil Aviation Organization (ICAO), International Criminal Court (ICC), International Criminal Police Organisation (INTERPOL), International Development Association (IDA), International Federation of Red Cross and Red Crescent Societies (IFRC), International Finance Corporation (IFC), International Fund for Agricultural Development (IFAD), International Hydrographic Organization (IHO), International Labour Organization (ILO), International Maritime Organization (IMO), International Mobil Satellite Organization (IMSO), International Monetary Fund (IMF), International Olympic Committee (IOC), International Organization for Migration (IOM of the UN), International Organization for Standardization (ISO), International Telecommunications Satellite Organization (ITSO), International Telecommunications Union (ITU), International Trade Union Confederation (ITUC-NGOs), Institute of Catastrophe Risk Management (ICRM), Latin American Economic System (LAES), Latin American Integration Association (LAIA), Multilateral Investment Guarantee Agency (MIGA), Non-Aligned Movement (NAM), Organisation for Economic Cooperation and Development (OECD, enhanced engagement), Organisation for the Prohibition of Chemical Weapons (OPCW), Organization of American States (OAS), Pacific Alliance, Permanent Court of Arbitration (PCA), Southern Common Market (MERCOSUR, associate), Union Latina, Union of South American Nations (UNASUR), United Nations (UN), United Nations Conference on Trade and Development (UNCTAD), United Nations Educational, Scientific, and Cultural Organization (UNESCO), United Nations High Commissioner for Refugees (UNHCR), United Nations Industrial Development Organization (UNIDO), Universal Postal Union (UPU), World Customs Organization (WCO), World Federation of Trade Unions (WFTU, NGOs), World Health Organization (WHO), World Intellectual Property Organization (WIPO), World Meteorological Organization (WMO), World Tourism Organization (UNWTO), World Trade Organization (WTO).

UN peacekeeping missions that Chile is contributing personnel to, as of August 2024:

- United Nations Peacekeeping Force in Cyprus (UNFICYP) – 6 troops
- United Nations Truce Supervision Organization (UNTSO) – 3 experts on mission
- United Nations Verification Mission in Colombia (UNVMC) – 3 experts on mission, 3 individual police[428]

Force Protection/Pre-Deployment Information

The following information is provided for pre-deployment planning and preparations; it can be found in the U.S. State Department's International Travel Portal,[429] *www.travel.state.gov* prior to deployments for further up-to-date information. DoD personnel must review the Foreign Clearance Guide (FCG) for travel to Chile (*www.fcg.pentagon.mil*). All official travel and personal travel for active duty personnel must be submitted through an APACS request. Contact information for the Defense Attaché Office can be found in the FCG if you have additional questions.

Passport/Visa

Arriving visitors must have a passport that is in good condition and valid for the period of the intended stay. U.S. visitors for tourism or business stays of up to 80 days do not need a visa if they are traveling on a tourist passport.

Upon arrival, these visitors will receive a Tourist Card (Tarjeta de Turismo) valid for up to 90 days; the Tarjeta can be extended for another 90-day period for a fee of US$100 via the Chilean Immigration Office. Visitors must return the Tourist Card upon departure. Failure to return it may delay departure from Chile. If the Tourist Card is lost or stolen, it must be replaced at an International Police Office or at the airport before leaving. Visitors who overstay their permitted period may face a fine, and they will not be able to leave Chile until the fine is paid. If applicable, the fine must be paid before departure by going to the Chilean Immigration Office; failure to do so may result in significant delays.

Travel on Diplomatic or Official Passports: U.S. citizens traveling to or through Chile on diplomatic or official passports are required to obtain a visa before travel.

Entry / Exit Requirements for Dual Nationals: Dual nationals must enter and exit Chile using their Chilean passports, and they must enter and exit the United States using their U.S. passports.

Entry / Exit Requirements for Minors (under 18): Parents traveling with a minor must show evidence of their relationship to the child when entering or departing the country. Carry an original apostilled birth certificate. Minors departing Chile must submit to Chilean airport officials an original notarized authorization from any non-traveling parent(s), a photocopy of the authorization, and an original apostilled birth certificate at the time of departure. For non-traveling parent(s) in Chile, the notarization can be done by a local Chilean notary public. For non-traveling parent(s) in the United States, the notarization can be done at the Chilean Embassy or a Chilean Consulate. If a U.S. notary executes the authorization, it must be apostilled to be valid in Chile. An apostille should be obtained well in advance of travel as the process is lengthy.

Safety and Security

Demonstrations occur frequently, especially on 29 March, 1 and 21 May, 11 September, and 18 October. Although most are peaceful, they can become violent. Avoid demonstrations if possible. Strikes are also common and can cause significant travel delays, especially related to travel to remote areas, such as Easter Island, Punta Arenas, or Chiloe.

Anarchist groups have placed explosive and incendiary devices in public spaces throughout Santiago, such as ATMs, metro stations, and government facilities. Remain vigilant and avoid suspicious or unattended packages.

Araucanía Conflict: Some individuals or groups claiming affiliation with the Mapuche indigenous community have sought redress for grievances by burning churches, homes, and pastures, and attacking trucks, buses, and farming/logging equipment, and these attacks have caused property destruction, injuries, and deaths. In 2022, the Government of Chile implemented a State of Emergency of Catastrophe in the area; this status is reevaluated every 15 days. While these groups have mainly targeted forestry corporations and landowners, exercise caution in the Araucanía region.

Crime: Street crime, carjackings, telephone scams, credit card fraud, and residential break-ins are common, especially in Santiago, Valparaíso, Viña del Mar, Antofagasta, Calama, and Iquique. Exercise significant caution when touring Cerro Santa Lucia, Cerro San Cristobal, Mercado Central, Plaza de Armas, Bellavista, Yungay, Barrio Lastarria, Persa BioBio, Barrio Meiggs, Patronato, Centro Cultural Estación Mapocho, Los Dominicos in Santiago, and other popular tourist sites as pickpocketing and muggings occur frequently. Small bags and purses have been stolen from hotel lobbies, crowded tourist locations, Santiago's subway, taxis, and the backs of chairs and floors at bars, restaurants, and cafés. Mobile phones are often stolen from restaurant tables. Criminals have drugged and robbed U.S. citizens, leaving them with no memory of events. The murder of a U.S. citizen occurred in 2023 in the neighborhood of Yungay. Carjackings and vehicle thefts are a serious problem in Santiago, Valparaíso, and northern Chile (from Iquique to Arica). Thieves have punctured rental car tires to distract foreigners and steal their belongings from the

vehicle.

Additionally, though not typical touring areas, exercise significant caution when traveling through or in Villa Francia, El Castillo, La Victoria, La Pincoya, Bajos de Mena y Mahuidanche, and the municipalities of Cerro Navia, Pudahuel, Quilicura, and San Bernardo in Santiago,

In particular:

- Keep all valuables on your person when taking buses, especially to or from Calama and San Pedro de Atacama. Thefts are common and are often done by people posing as bus employees.
- Never allow your credit card to be charged outside of your view.
- Do not accept assistance if your clothes are splashed with a wet, sticky substance - keep moving and do not let go of your bags.
- Do not accept any beverages from strangers.
- Do not leave luggage unattended, even in locked vehicles.
- Do not physically resist any robbery attempt. Criminals rarely work alone, and things are not worth the possibility of physical harm or death.
- Do not display signs of wealth, such as expensive watches or jewelry.
- Use caution when walking or driving at night, especially if alone.
- Do not use unauthorized taxi services. Individuals should use regulated taxis with orange or yellow license plates or ride-share applications.
- Always carry a copy of U.S. identification (passport, driver's license) and visa (if applicable). Keep original documents in a secure location.

Victims of Crime: Report crimes to the local police at 133 and contact the U.S. Embassy at +(56) 2 2330-3716. Local authorities are responsible for investigating and prosecuting crimes.

For U.S. victims of crime, the Embassy can:

- Help find appropriate medical care
- Assist in reporting a crime to the police
- Contact relatives or friends with written consent
- Explain the local criminal justice process in general terms
- Provide a list of local attorneys
- Provide information on victim's compensation programs in the U.S.
- Provide an emergency loan for repatriation to the United States and/or limited medical support in cases of destitution
- Help find accommodation and arrange flights home
- Replace a stolen or lost passport

Domestic Violence: U.S. citizen victims of domestic violence may contact the Embassy for assistance or call local police at 149.

Tourism: The tourism industry is generally regulated and rules about best practices and safety inspections are regularly enforced. Hazardous areas/activities are identified with appropriate signage and professional staff is typically on hand to support organized activities. In the event of an injury, appropriate medical treatment is widely available throughout the country. Outside of a major metropolitan center, it may take more time for first responders and medical professionals to stabilize a patient and provide life-saving assistance. U.S. citizens are encouraged to purchase medical evacuation insurance.

Emergency Contact Information

Local police: 133

U.S. Embassy Santiago
Avenida Andres Bello 2800, Las Condes
Santiago, Chile
Tel: +(56)(2) 2330-3000
Emergency Tel: +(56)(2) 2330-3000
Fax: +(56)(2) 2330-3710
E-mail: *SantiagoUSA@state.gov*
Web: *https://cl.usembassy.gov*

Currency Information

Chilean peso (CLP or C$)
CLP 1.00 = US$0.001 or CLP947.7 = US$1.00 (as of 25 October 2024)

Travel Health Information

The CDC provides guidance that all travelers to Chile should be up to date on routine vaccinations. The following are additional recommendations for travel to Chile. The information in Tables 10 and 11 are taken directly from the CDC website under the Travelers Health Section (*https://wwwnc.cdc.gov/travel/destinations/list/*).[430]

Health Alerts for Chile: At the time of writing this handbook (14 January 2025), there are no health risk alerts.

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

Eat and Drink Safely

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

Eat

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

Don't Eat

- Food served at room temperature
- Food from street vendors
- Raw or soft-cooked (runny) eggs
- Raw or undercooked (rare) meat or fish
- Unwashed or unpeeled raw fruits and vegetables
- Unpasteurized dairy products
- "Bushmeat" (monkeys, bats, or other wild game)

Drink

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

Don't Drink

- Tap or well water
- Ice made with tap or well water
- Drinks made with tap or well water (such as reconstituted juice)
- Unpasteurized milk

Take Medicine

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

Prevent Bug Bites

Bugs (like mosquitoes, ticks, and fleas) can spread a number of diseases in Chile. Many of these diseases cannot be prevented with a vaccine or medicine.

To prevent bug bites:

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

For protection against ticks and mosquitoes:

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

Safety and Security

Note that conditions can change rapidly in a country at any time. To receive updated Travel Advisories and Alerts for the countries you choose, sign up at *step.state.gov*.

Routine vaccines (for all travelers)	All travelers should be up-to-date on all routine vaccines before every trip. Some of these vaccines include: • Chickenpox (Varicella) • Diphtheria-Tetanus-Pertussis • Flu (influenza) • Measles-Mumps-Rubella (MMR) • Polio • Shingles
COVID-19	All eligible travelers should be up-to-date with their COVID-19 vaccines.
Hepatitis A	Recommended for unvaccinated travelers one year old or older going to Chile. • Infants 6-11 months old should also be vaccinated against Hepatitis A. The dose does not count toward the routine 2-dose series. • Travelers allergic to a vaccine component should receive a single dose of immune globulin, which provides effective protection for up to 2 months depending on dosage given. • Unvaccinated travelers who are over 40 years old, are immunocompromised, or have chronic medical conditions planning to depart to a risk area in less than 2 weeks should get the initial dose of vaccine and at the same appointment receive immune globulin.
Hepatitis B	Recommended for unvaccinated travelers younger than 60 years old traveling to Chile. Unvaccinated travelers 60 years and older may get vaccinated before traveling to Chile.
Measles	Travelers are at risk of measles if they have not been fully vaccinated at least two weeks prior to departure, or have not had measles in the past, and travel internationally to areas where measles is spreading. All international travelers should be fully vaccinated against measles with the MMR vaccine, including an early dose for infants 6–11 months old, according to CDC's measles vaccination recommendations for international travel.
Rabies	Dogs infected with rabies are not commonly found in Chile. Rabies is present in bats. • If rabies exposures occur while in Chile, rabies vaccines are typically available throughout most of the country. • Rabies pre-exposure vaccination considerations include whether travelers: 1) will be performing occupational or recreational activities that increase risk for exposure to potentially rabid animals; and 2) might have difficulty getting prompt access to safe post-exposure prophylaxis.
Typhoid	Recommended for most travelers, especially those staying with friends or relatives or visiting smaller cities or rural areas.

Table 10: Information on Vaccine- and Prophylaxis-Preventable Diseases in Chile

Chagas disease (American Trypanosomiasis)	Chagas can be contracted if a person accidentally rubs the feces of the triatomine bug into a bug bite or other breaks in the skin, the eyes, or the mouth. It may also pass from a pregnant woman to her baby, via contaminated blood products (transfusions), or via contaminated food or drink. To avoid exposure, avoid bug bites.
Hantavirus	Hanta can be contracted by breathing in air or accidentally eating food contaminated with the urine, droppings, or saliva of infected rodents. It may also come from the bite from an infected rodent or, less commonly, being around someone sick with hantavirus. To avoid exposure, avoid rodents and areas where they live, and avoid sick people.
Leptospirosis	Leptospirosis can be contracted by touching urine or other body fluids from an animal infected with leptospirosis, by swimming or wading in urine-contaminated fresh water or contact with urine-contaminated mud, or by drinking water or eating food contaminated with animal urine. To avoid exposure, avoid contaminated water and soil; avoid floodwaters.
Tuberculosis (TB)	TB can be contracted when one breathes in TB bacteria that is in the air from an infected and contagious person who has coughed, spoken, or sang. To avoid exposure, avoid sick people.

Table 11: Information on Non-Vaccine-Preventable Diseases in Chile

Sendai Framework

The Sendai Framework for Disaster Risk Reduction 2015-2030 is the global blueprint and 15-year plan to build the world's resilience to natural disasters.[431] The Sendai Framework is the successor instrument to the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.[432]

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

The Seven Global Targets include:

- Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality rates in the decade 2020-2030 compared to the period 2005-2015.
- Substantially reduce the number of affected people globally by 2030, aiming to lower average global figure per 100,000 in the decade 2020-2030 compared to the period 2005-2015.
- Reduce direct disaster economic loss in relation to global GDP by 2030.
- Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.
- Substantially increase the number of countries with national and local DRR strategies by 2020.
- Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework by 2030.
- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.[433]

The Four Priorities of Action include:

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

Figure 8 shows the Sendai DRR Framework.[434]

Chile's "National Policy for Disaster Risk Reduction 2020" represents the second iteration of the country's strategic framework to manage and mitigate disaster-related risks. Officially promulgated in 2020, this policy is accompanied by the "National Strategic Plan 2020-2030," which delineates the implementation strategies and goals associated with the policy. The comprehensive framework incorporates commitments from international agreements while emphasizing the critical integration of DRR within the broader contexts of sustainable development, humanitarian responses, and climate change adaptation. SENAPRED oversees the governance and administration of this policy. Aligned with the Sendai Framework for DRR, the National Policy outlines five principal axes, encompassing 25 strategic objectives, 74 actionable measures, and 161 specific goals with established timelines. Table 12 is a detailed overview of the National Policy, which clarifies its multifaceted approach and objectives in DRM.[435]

In 2021, ONEMI (the predecessor to SENAPRED), in collaboration with JICA, published the "Guideline for the Implementation of a Communal Plan for DRR." This comprehensive document addresses the multifaceted needs of diverse subdivisions within Chile, encompassing urban centers, towns, villages, and rural areas. This guideline's primary objective is to enhance communities' capacities to effectively respond to DRR initiatives.[436]

Chile faces a range of adverse events. Among OECD member countries, Chile suffers the most significant damage from disasters, with annual losses approaching 1.2% of GDP over the last three decades. The Chilean government program aims to establish a system that provides a comprehensive perspective, informed by local contexts, and takes a preventive approach

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

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

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

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

Figure 8: UN Sendai Framework for Disaster Risk Reduction 2015-2030

Priority Axis	Recommendations
Understand Disaster Risk	Chile will have organizational and policy structures that allow society to understand, in a predictive and multi-dimensional way, environmental risks their and potential impacts. • Promote DRR awareness and education among the country's stakeholders. • Generate and manage scientific and technical knowledge about the risk of disasters across the national territory for consideration in making decision making. • Have sectoral and territorial tools to make decisions based on disaster • risk scenarios.
Strengthen Governance of Disaster Risk Management	Chile will have an institutional framework that promotes collaboration and coordination among sectors and promotes the active participation of national actors for efficient and effective DRM that contributes to the development of a sustainable country. • Strengthen public institutions' DRM capacity. • Strengthen skills and capacities for DRM at all levels of state. • Incorporate DRR into the State's policies, plans and programs. • Encourage different actors in society to participate in building DRM initiatives. • Promote mechanisms that ensure transparency, accountability, and fiscal responsibility in implementation of national and international DRM agreements ratified by Chile. • Strengthen international cooperation in DRM.
Plan for and Invest in Disaster Risk Reduction via Resilience	Chile will have permanent and efficient mechanisms that promote both investment and financial, public, and private protections to increase resilience. • Implement structural measures for DRR and development of disaster resilient infrastructure. • Implement non-structural measures for DRR that include formal mechanisms for different actors to promote a culture resilience in their territories. • Develop alternative and adequate mechanisms for financing DRR. • Strengthen the DRR approach in planning and ordering instruments across the territory. • Propose DRR strategies for adapting to the impact of climate change.

Table 12: Chile's National Disaster Risk Reduction Policy and Plan Details

to mitigate risks and threats. This system will consider the specific vulnerabilities of each community, enabling timely emergency responses. The country's PNRRD, established in 2012, has strengthened disaster risk governance by promoting the formation of Regional Platforms throughout Chile. On 7 August 2021, the law establishing the National Disaster Prevention and Response System and Service was implemented. This legislation supports a new institutional framework responsible for all phases of risk management involving both public and private entities. It also defines coordination instruments and structures from local to national levels.[437]

In May 2024, a high-level roundtable was convened under the auspices of SENAPRED, with significant support from the UN Office in Chile. The discussions at the high-level roundtable focused on mechanisms to enhance infrastructure governance across national, regional, and local tiers. Central to the roundtable was the Global Methodology for Infrastructure Resilience, developed by the UNDRR in collaboration with the Coalition for Disaster Resilient Infrastructure (CDRI). This methodology articulates a series of imperative initiatives to enhance DRR strategies in Chile while concurrently bolstering the resilience of the country's infrastructure against a spectrum of hazards. Participants shared insights regarding existing plans and identified critical areas necessitating immediate attention and coordinated action among disaster management stakeholders. Furthermore, the Chilean government articulated its national DRR policy and strategic framework, highlighting a comprehensive approach that acknowledges the specific needs of vulnerable population groups. Chile underscored the importance of recognizing women as proactive agents in community engagement and as essential figures in the formulation and implementation of DRR strategies, moving beyond the traditional perspective of women as passive beneficiaries.[438] In advance of this roundtable, SENAPRED conducted a final validation workshop for the project titled "Improving Infrastructure Resilience by Strengthening Governance in Chile." This workshop was instrumental in developing an implementation plan to address the identified gaps within the national context.[439]

Country Profile

The information in the Country Profile section is sourced directly from the CIA World Fact book for Chile. Additional numbers on country comparison to the world can be found by going directly to the CIA website (*https:/www.cia.gov*). It discusses topics including geography, people and society, government, economy, energy, communications, military and security, transportation, terrorism, and transnational issues.[440]

Background

Indigenous groups inhabited central and southern Chile for several thousand years, living in mixed pastoralist and settled communities. The Inca then ruled the north of the country for nearly a century prior to the arrival of the Spanish in the 16th century. In 1541, the Spanish established the Captaincy General of Chile, which lasted until Chile declared its independence in 1810. The subsequent struggle with the Spanish became tied to other South American independence conflicts, with a decisive victory not being achieved until 1818. In the War of the Pacific (1879-83), Chile defeated Peru and Bolivia to win its current northernmost regions. By the 1880s, the Chilean central government cemented its control over the central and southern regions inhabited by Mapuche Indigenous peoples. Between 1891 and 1973, a series of elected governments succeeded each other until the Marxist government of Salvador ALLENDE was overthrown in 1973 in a military coup led by General Augusto PINOCHET, who ruled until a democratically elected president was inaugurated in 1990. Economic reforms that were maintained consistently since the 1980s contributed to steady growth, reduced poverty rates by over half, and helped secure the country's commitment to democratic and representative government. Chile has increasingly assumed regional and international leadership roles befitting its status as a stable, democratic nation.

Geography

Location
Southern South America, bordering the South Pacific Ocean, between Argentina and Peru

Geographic coordinates
30 00 S, 71 00 W

Area
total : 756,102 sq km
land: 743,812 sq km
water: 12,290 sq km
note: includes Easter Island (Isla de Pascua) and Isla Sala y Gomez
comparison ranking: total 39

Area - comparative
slightly smaller than twice the size of Montana

Land boundaries
total: 7,801 km
border countries (3): Argentina 6,691 km; Bolivia 942 km; Peru 168 km

Coastline
6,435 km

Maritime claims
territorial sea: 12 nm
contiguous zone: 24 nm
exclusive economic zone: 200 nm
continental shelf: 200/350 nm

Climate
temperate; desert in north; Mediterranean in central region; cool and damp in south

Terrain
low coastal mountains, fertile central valley, rugged Andes in east

Elevation
highest point: Nevado Ojos del Salado 6,893 m (highest volcano in the world)
lowest point: Pacific Ocean 0 m
mean elevation: 1,871 m

Natural resources
copper, timber, iron ore, nitrates, precious metals, molybdenum, hydropower

Land use
agricultural land: 21.1% (2018 est.)
arable land: 1.7% (2018 est.)
permanent crops: 0.6% (2018 est.)
permanent pasture: 18.8% (2018 est.)
forest: 21.9% (2018 est.)
other: 57% (2018 est.)

Irrigated land
11,100 sq km (2012)

Major lakes (area sq km)
freshwater lake(s): Lago General Carrera (shared with Argentina) - 2,240 sq km; Lago O'Higgins (shared with Argentina) - 1,010 sq km; Lago Llanquihue - 800 sq km; Lago Fagnano (shared with Argentina) - 590 sq km

Population distribution
90% of the population is located in the middle third of the country around the capital of Santiago; the far north (anchored by the Atacama Desert) and the extreme south are relatively underpopulated

Natural hazards
severe earthquakes; active volcanism; tsunamis
volcanism: significant volcanic activity due to more than three-dozen active volcanoes along the Andes Mountains; Lascar (5,592 m), which last erupted in 2007, is the most active volcano in the northern Chilean Andes; Llaima (3,125 m) in central Chile, which last erupted in 2009, is another of the country's most active; Chaiten's 2008 eruption forced major evacuations; other notable historically active volcanoes include Cerro Hudson, Calbuco, Copahue, Guallatiri, Llullaillaco, Nevados de Chillan, Puyehue, San Pedro, and Villarrica; see note 2 under "Geography - note"
Geography - note 1: the longest north-south trending country in the world, extending across 39 degrees of latitude; strategic location relative to sea lanes between the Atlantic and Pacific Oceans (Strait of Magellan, Beagle Channel, Drake Passage)

Geography note 2: Chile is one of the countries along the Ring of Fire, a belt of active volcanoes and earthquake epicenters bordering the Pacific Ocean; up to 90% of the world's earthquakes and some 75% of the world's volcanoes occur within the Ring of Fire

Geography note 3: the Atacama Desert -- the driest desert in the world -- spreads across the northern part of the country; Ojos del Salado (6,893 m) in the Atacama Desert is the highest active volcano in the world, Chile's tallest mountain, and the second highest in the Western Hemisphere and the Southern Hemisphere -- its small crater lake (at 6,390 m) is the world's highest lake

People and Society

Population
total: 18,664,652
male: 9,169,736
female: 9,494,916 (2024 est.)
comparison rankings: female 67; male 67; total 67

Nationality
noun: Chilean(s)
adjective: Chilean

Ethnic groups
White and non-Indigenous 88.9%, Mapuche 9.1%, Aymara 0.7%, other Indigenous groups 1% (includes Rapa Nui, Likan Antai, Quechua, Colla, Diaguita, Kawesqar, Yagan or Yamana), unspecified 0.3% (2012 est.)

Languages
Spanish 99.5% (official), English 10.2%, Indigenous 1% (includes Mapudungun, Aymara, Quechua, Rapa Nui), other 2.3%, unspecified 0.2% (2012 est.)

Religions
Roman Catholic 42%, Evangelical 14%, other 6%, none 37% (2021 est.)

Demographic profile
Chile is in the advanced stages of demographic transition and is becoming an aging society - with fertility below replacement level, low mortality rates, and life expectancy on par with developed countries. Nevertheless, with its dependency ratio nearing its low point, Chile could benefit from its favorable age structure. It will need to keep its large working-age population productively employed, while preparing to provide for the needs of its growing proportion of elderly people, especially as women - the traditional caregivers - increasingly enter the workforce. Over the last two decades, Chile has made great strides in reducing its poverty rate, which is now lower than most Latin American countries. However, its severe income inequality ranks as the worst among members of the Organization for Economic Cooperation and Development. Unequal access to quality education perpetuates this uneven income distribution.

Chile has historically been a country of emigration but has slowly become more attractive to immigrants since transitioning to democracy in 1990 and improving its economic stability (other regional destinations have concurrently experienced deteriorating economic and political conditions). Most of Chile's small but growing foreign-born population consists of transplants from other Latin American countries, especially Peru.

Age structure
0-14 years: 19.2% (male 1,822,908/female 1,751,528)
15-64 years: 67.3% (male 6,274,620/female 6,278,467)
65 years and over: 13.6% (2024 est.) (male 1,072,208/female 1,464,921)

Figure 9 is the 2023 population pyramid for Chile. A population pyramid illustrates the age and sex structure of a country's population and may provide insights about political and social stability, as well as economic development. The shape of a population pyramid gradually evolves over time based on fertility, mortality, and international migration trends.[441]

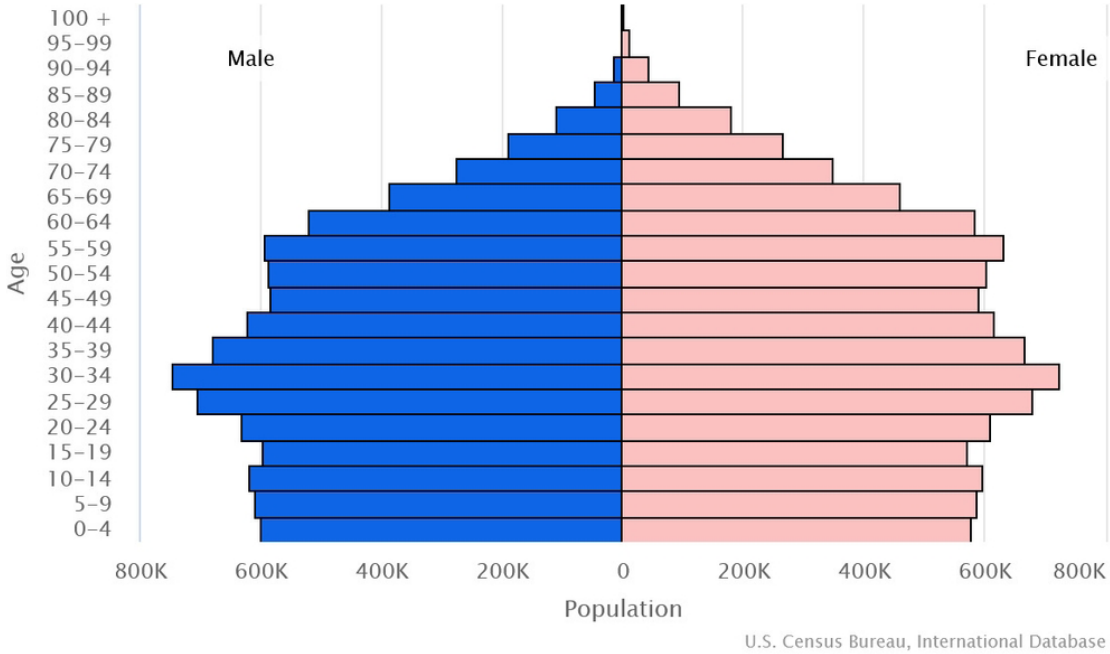


Figure 9: Population Pyramid, Chile (2023)

Dependency ratios
total dependency ratio: 45.2
youth dependency ratio: 26.8
elderly dependency ratio: 18.4
potential support ratio: 5.4 (2021 est.)

Median age
total: 36.9 years (2024 est.)
male: 35.8 years
female: 38.2 years
comparison ranking: total 85

Population growth rate
0.61% (2024 est.)
comparison ranking: 136

Birth rate
12.4 births/1,000 population (2024 est.)
comparison ranking: 140

Death rate
6.6 deaths/1,000 population (2024 est.)
comparison ranking: 133

Net migration rate
0.3 migrant(s)/1,000 population (2024 est.)
comparison ranking: 74

Population distribution
90% of the population is located in the middle third of the country around the capital of Santiago; the far north (anchored by the Atacama Desert) and the extreme south are relatively underpopulated

Urbanization
urban population: 88% of total population (2023)
rate of urbanization: 0.78% annual rate of change (2020-25 est.)
total population growth rate v. urban population growth rate, 2000-2030
Major urban areas - population
6.903 million SANTIAGO (capital), 1.009 million Valparaíso, 912,000 Concepcion (2023)

Sex ratio
at birth: 1.04 male(s)/female
0-14 years: 1.04 male(s)/female
15-64 years: 1 male(s)/female
65 years and over: 0.73 male(s)/female
total population: 0.97 male(s)/female (2024 est.)

Maternal mortality ratio
15 deaths/100,000 live births (2020 est.)
comparison ranking: 136

Infant mortality rate
total: 6.3 deaths/1,000 live births (2024 est.)
male: 6.9 deaths/1,000 live births
female: 5.7 deaths/1,000 live births
comparison ranking: total 166

Life expectancy at birth
total population: 80.3 years (2024 est.)
male: 77.3 years
female: 83.3 years
comparison ranking: total population 55

Total fertility rate
1.75 children born/woman (2024 est.)
comparison ranking: 148

Gross reproduction rate
0.85 (2024 est.)

Contraceptive prevalence rate
76.3% (2015/16)

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

Current health expenditure
9.8% of GDP (2020)
Physician density
2.84 physicians/1,000 population (2020)

Hospital bed density
2.1 beds/1,000 population (2018)

Sanitation facility access
improved: urban: 100% of population
rural: 100% of population
total: 100% of population
unimproved: urban: 0% of population
rural: 0% of population
total: 0% of population (2020 est.)

Obesity - adult prevalence rate
28% (2016)
comparison ranking: 32

Alcohol consumption per capita
total: 7.8 liters of pure alcohol (2019 est.)
beer: 2.76 liters of pure alcohol (2019 est.)
wine: 2.61 liters of pure alcohol (2019 est.)
spirits: 2.43 liters of pure alcohol (2019 est.)
other alcohols: 0 liters of pure alcohol (2019 est.)
comparison ranking: total 47

Tobacco use
total: 29.2% (2020 est.)
male: 31.6% (2020 est.)
female: 26.8% (2020 est.)
comparison ranking: total 34

Children under the age of 5 years underweight
0.5% (2014)
comparison ranking: 122

Currently married women (ages 15-49)
46.3% (2023 est.)

Education expenditures
5.6% of GDP (2019 est.)
comparison ranking: 53

Literacy
definition: age 15 and over can read and write
total population: 97%
male: 97.1%
female: 97% (2021)

School life expectancy (primary to tertiary education)
total: 17 years
male: 16 years
female: 17 years (2020)

Environment

Environment - current issues
air pollution from industrial and vehicle emissions; water pollution from raw sewage; noise pollution; improper garbage disposal; soil degradation; widespread deforestation and mining threaten the environment; wildlife conservation

Environment - international agreements
party to: Antarctic-Environmental Protection, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Climate Change-Paris Agreement, Comprehensive Nuclear Test Ban, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping-London Convention, Marine Dumping-London Protocol, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Wetlands, Whaling

Climate
temperate; desert in north; Mediterranean in central region; cool and damp in south

Land use
agricultural land: 21.1% (2018 est.)
arable land: 1.7% (2018 est.)
permanent crops: 0.6% (2018 est.)
permanent pasture: 18.8% (2018 est.)
forest: 21.9% (2018 est.)
other: 57% (2018 est.)

Urbanization
urban population: 88% of total population (2023)
rate of urbanization: 0.78% annual rate of change (2020-25 est.)
total population growth rate v. urban population growth rate, 2000-2030

Revenue from forest resources
0.49% of GDP (2018 est.)
comparison ranking: 67

Revenue from coal
0.01% of GDP (2018 est.)
comparison ranking: 46

Air pollutants
particulate matter emissions: 20.49 micrograms per cubic meter (2019 est.)
carbon dioxide emissions: 85.82 megatons (2016 est.)
methane emissions: 15.97 megatons (2020 est.)

Waste and recycling
municipal solid waste generated annually: 6.517 million tons (2009 est.)
municipal solid waste recycled annually: 24,113 tons (2009 est.)
percent of municipal solid waste recycled: 0.4% (2009 est.)

Major lakes (area sq km)
freshwater lake(s): Lago General Carrera (shared with Argentina) - 2,240 sq km; Lago O'Higgins (shared with Argentina) - 1,010 sq km; Lago Llanquihue - 800 sq km; Lago Fagnano (shared with Argentina) - 590 sq km

Total water withdrawal
municipal: 1.29 billion cubic meters (2020 est.)
industrial: 1.66 billion cubic meters (2020 est.)
agricultural: 29.42 billion cubic meters (2020 est.)

Total renewable water resources
923.1 billion cubic meters (2020 est.)

Geoparks
total global geoparks and regional networks: 1
global geoparks and regional networks: Kutralkura (2023)

Government

Country name
conventional long form: Republic of Chile
conventional short form: Chile
local long form: República de Chile
local short form: Chile
etymology: derivation of the name is unclear, but it may come from the Mapuche word "chilli" meaning "limit of the earth" or from the Quechua "chiri" meaning "cold"

Government type
presidential republic

Capital
name: Santiago; note - Valparaíso is the seat of the national legislature
geographic coordinates: 33 27 S, 70 40 W
time difference: UTC-3 (2 hours ahead of Washington, DC, during Standard Time)
daylight saving time: +1hr, begins second Sunday in August; ends second Sunday in May; note - Punta Arenas observes DST throughout the year
time zone note: Chile has three time zones: the continental portion at UTC-3; the southern Magallanes region, which does not use daylight savings time and remains at UTC-3 for the summer months; and Easter Island at UTC-5
etymology: Santiago is named after the biblical figure Saint James (ca. A.D. 3-44), patron saint of Spain, but especially revered in Galicia; "Santiago" derives from the local Galician evolution of the Vulgar Latin "Sanctu Iacobu"; Valparaíso derives from the Spanish "Valle Paraiso" meaning "Paradise Valley"

Administrative divisions
16 regions (regiones, singular - region); Aysen, Antofagasta, Araucania, Arica y Parinacota, Atacama, Biobio, Coquimbo, Libertador General Bernardo O'Higgins, Los Lagos, Los Rios, Magallanes y de la Antartica Chilena (Magallanes and Chilean Antarctica), Maule, Nuble, Region Metropolitana (Santiago), Tarapaca, Valparaíso
note: the US does not recognize any claims to Antarctica

Independence
18 September 1810 (from Spain)

National holiday
Independence Day, 18 September (1810)

Legal system
civil law system influenced by several West European civil legal systems; judicial review of legislative acts by the Constitutional Tribunal

Constitution
history: many previous; latest adopted 11 September 1980, effective 11 March 1981; in September 2022 and again in December 2023, referendums presented for a new constitution were both defeated, and the September 1980 constitution remains in force
amendments: proposed by members of either house of the National Congress or by the president of the republic; passage requires at least four-sevenths majority vote of the membership in both houses and approval by the president; passage of amendments to constitutional articles, such as the republican form of government, basic rights and freedoms, the Constitutional Tribunal, electoral justice, the Council of National Security, or the constitutional amendment process, requires at least four-sevenths majority vote by both houses of Congress and approval by the president; the president can opt to hold a referendum when Congress and the president disagree on an amendment; amended many times, last in 2022

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

Citizenship
citizenship by birth: yes
citizenship by descent only: yes
dual citizenship recognized: yes
residency requirement for naturalization: 5 years

Suffrage
18 years of age; universal

Executive branch
chief of state: President Gabriel BORIC (since 11 March 2022)
head of government: President Gabriel BORIC (since 11 March 2022)
cabinet: Cabinet appointed by the president
elections/appointments: president directly elected by absolute majority popular vote in 2 rounds if needed for a single 4-year term; election last held on 21 November 2021 with a runoff held on 19 December 2021 (next to be held on 23 November 2025 with runoff if needed on 20 December)
election results:
2021: Gabriel BORIC elected president in second round; percent of vote in first round - Jose Antonio KAST (FSC) 27.9%; Gabriel BORIC (AD) 25.8%; Franco PARISI (PDG) 12.8%; Sebastian SICHEL (ChP+) 12.8%; Yasna PROVOSTE (New Social Pact) 11.6%; other 9.1%; percent of vote in second round - Gabriel BORIC 55.9%; Jose Antonio KAST 44.1%
2017: Sebastian PINERA Echenique elected president in second round; percent of vote in first round - Sebastian PINERA Echenique (independent) 36.6%; Alejandro GUILLIER (independent) 22.7%; Beatriz SANCHEZ (independent) 20.3%; Jose Antonio KAST (independent) 7.9%; Carolina GOIC (PDC) 5.9%; Marco ENRIQUEZ-OMINAMI (PRO) 5.7%; other 0.9%; percent of vote in second round - Sebastian PINERA Echenique 54.6%, Alejandro GUILLIER 45.4%
note: the president is both chief of state and head of government

Legislative branch
description: bicameral National Congress or Congreso Nacional consists of:
Senate or Senado (50 seats); members directly elected in multi-seat constituencies by open party-list proportional representation vote to serve 8-year terms with one-half of the membership renewed every 4 years)
Chamber of Deputies or Camara de Diputados (155 seats; members directly elected in multi-seat constituencies by open party-list proportional

representation vote to serve 4-year terms)
elections: Senate - last held on 21 November 2021 (next to be held on 23 November 2025)
Chamber of Deputies - last held on 21 November 2021 (next to be held on 23 November 2025)
election results: Senate - percent of vote by party/coalition - NA; seats by party/coalition - ChP+ 12 (RN 5, UDI 5, EVOPOLI 2), NPS 8 (PS 4, PPD 2, PDC 2), AD 4 (PCCh 2, FREVS 2), PLR 1, independent 2; composition - men 37, women 13, percentage women 26%
Chamber of Deputies - percent of vote by party/coalition - NA; seats by party/coalition - ChP+ 53 (RN 25, UDI 23, EVOPOLI 4, PRI 1), AD 37 (PCCh 12, CS 9, RD 8, Commons 6, FREVS 2), NPS 37 (PS 13, PDC 8, PPD 7, PL 4, PRSD 4, CIU 1), FSC 15 (PLR 14, PCC 1), PDG 6, PH 3, PEV 2, IU 1, independent 1; composition - men 100, women 55, percentage women 35.5%; total National Congress percentage women 33.2% as of January 2024
note: Senate seats by party/coalition as of May 2022 - ChP+ 24 (RN 12, UDI 9, EVOPOLI 3), NPS 18 (PS 7, PPD 6, PDC 5), AD 6 (PCCh 2, FREVS 2, RD 2), PLR 1, independent 1

Judicial branch
highest court(s): Supreme Court or Corte Suprema (consists of a court president and 20 members or ministros); Constitutional Court (consists of 10 members and is independent of the rest of the judiciary); Elections Qualifying Court (consists of 5 members)
judge selection and term of office: Supreme Court president and judges (ministers) appointed by the president of the republic and ratified by the Senate from lists of candidates provided by the court itself; judges appointed for life with mandatory retirement at age 70; Constitutional Court members appointed - 3 by the Supreme Court, 3 by the president of the republic, 2 by the Chamber of Deputies, and 2 by the Senate; members serve 9-year terms with partial membership replacement every 3 years (the court reviews constitutionality of legislation); Elections Qualifying Court members appointed by lottery - 1 by the former president or vice president of the Senate and 1 by the former president or vice president of the Chamber of Deputies, 2 by the Supreme Court, and 1 by the Appellate Court of Valparaíso; members appointed for 4-year terms
subordinate courts: Courts of Appeal; oral criminal tribunals; military tribunals; local police courts; specialized tribunals and courts in matters such as family, labor, customs, taxes, and electoral affairs

Political parties
Approve Dignity (Apruebo Dignidad) coalition or AD (included PC, FA, and FREVS); note - dissolved 2023
Broad Front Coalition (Frente Amplio) or FA (includes RD, CS, and Comunes)
Chile We Can Do More (Chile Podemos Más) or ChP+ (coalition includes EVOPOLI, PRI, RN, UDI)
Christian Democratic Party or PDC
Common Sense Party or SC
Commons (Comunes)
Communist Party of Chile or PCCh
Democratic Revolution or RD
Democrats or PD
Equality Party or PI
Green Ecological Party or PEV (dissolved 7 February 2022)
Green Popular Alliance or AVP
Humanist Action Party or PAH
Humanist Party or PH
Independent Democratic Union or UDI
Liberal Party (Partido Liberal de Chile) or PL
National Renewal or RN
New Social Pact or NPS (includes PDC, PL, PPD, PRSD, PS)
Party for Democracy or PPD
Party of the People or PDG
Political Evolution or EVOPOLI
Popular Party or PP
Progressive Homeland Party or PRO
Radical Party or PR
Republican Party or PLR
Social Christian Party or PSC
Social Convergence or CS
Social Green Regionalist Federation or FREVS
Socialist Party or PS
Yellow Movement for Chile or AMAR

International organization participation
APEC, BIS, CAN (associate), CD, CELAC, FAO, G-15, G-77, IADB, IAEA, IBRD, ICAO, ICC (national committees), ICCt, ICRM, IDA, IFAD, IFC, IFRCS, IHO, ILO, IMF, IMO, IMSO, Interpol, IOC, IOM, IPU, ISO, ITSO, ITU, ITUC (NGOs), LAES, LAIA, Mercosur (associate), MIGA, MINUSTAH, NAM, OAS, OECD (enhanced engagement), OPANAL, OPCW, Pacific Alliance, PCA, PROSUR, SICA (observer), UN, UNASUR, UNCTAD, UNESCO, UNFICYP, UNHCR, UNIDO, Union Latina, UNMOGIP, UNTSO, UNWTO, UPU, WCO, WFTU (NGOs), WHO, WIPO, WMO, WTO

Diplomatic representation in the US
chief of mission: Ambassador Juan Gabriel VALDES Soublette (since 7 June 2022)
chancery: 1732 Massachusetts Avenue NW, Washington, DC 20036
Tel: [1] (202) 785-1746
Fax: [1] (202) 887-5579
E-mail: echile.eeuu@minrel.gob.cl
Web: https://chile.gob.cl/estados-unidos/en/
consulate(s) general: Chicago, Houston, Los Angeles, Miami, New York, San Francisco

Diplomatic representation from the US
chief of mission: Ambassador Bernadette M. MEEHAN (since 30 September 2022)
embassy: Avenida Andres Bello 2800, Las Condes, Santiago
mailing address: 3460 Santiago Place, Washington DC 20521-3460
Tel: [56] (2) 2330-3000
Fax: [56] (2) 2330-3710
E-mail: *SantiagoUSA@state.gov*
Web: *https://cl.usembassy.gov/*

Flag description
two equal horizontal bands of white (top) and red; a blue square the same height as the white band at the hoist-side end of the white band; the square bears a white five-pointed star in the center representing a guide to progress and honor; blue symbolizes the sky, white is for the snow-covered Andes, and red represents the blood spilled to achieve independence
note: design influenced by the US flag

National symbol(s)
huemul (mountain deer), Andean condor; national colors: red, white, blue

National anthem
name: "Himno Nacional de Chile" (National Anthem of Chile)
lyrics/music: Eusebio LILLO Robles and Bernardo DE VERA y Pintado/Ramon CARNICER y Battle
note: music adopted 1828, original lyrics adopted 1818, adapted lyrics adopted 1847; under Augusto PINOCHET's military rule, a verse glorifying the army was added; however, as a protest, some citizens refused to sing this verse; it was removed when democracy was restored in 1990

National heritage
total World Heritage Sites: 7 (all cultural)
selected World Heritage Site locales: Rapa Nui National Park; Churches of Chiloe; Historic Valparaíso; Humberstone and Santa Laura Saltpeter Works; Sewell Mining Town; Qhapaq Ñan/Andean Road System; Chinchorro archeological sites

Economy

Economic overview
export-driven economy; leading copper producer; though hit by COVID-19, fairly quick rebound from increased liquidity and rapid vaccine rollouts; decreasing poverty but still lingering inequality; public debt rising but still manageable; recent political violence has had negative economic consequences

Real GDP (purchasing power parity)
$579.201 billion (2023 est.)
$577.937 billion (2022 est.)
$566.279 billion (2021 est.)
note: data in 2021 dollars
comparison ranking: 44

Real GDP growth rate
0.22% (2023 est.)
2.06% (2022 est.)
11.33% (2021 est.)
note: annual GDP % growth based on constant local currency
comparison ranking: 184

Real GDP per capita
$29,500 (2023 est.)
$29,500 (2022 est.)
$29,100 (2021 est.)
note: data in 2021 dollars
comparison ranking: 79

GDP (official exchange rate)
$335.533 billion (2023 est.)
note: data in current dollars at official exchange rate

Inflation rate (consumer prices)
7.58% (2023 est.)
11.64% (2022 est.)
4.52% (2021 est.)
note: annual % change based on consumer prices
comparison ranking: 148

Credit ratings
Fitch rating: A- (2020)
Moody's rating: A1 (2018)
Standard & Poor's rating: A+ (2017)
note: The year refers to the year in which the current credit rating was first obtained.

GDP - composition, by sector of origin
agriculture: 3.5% (2023 est.)
industry: 29.7% (2023 est.)
services: 56.9% (2023 est.)
note: figures may not total 100% due to non-allocated consumption not captured in sector-reported data
comparison rankings: services 108; industry 68; agriculture 133

GDP - composition, by end use
household consumption: 60.6% (2023 est.)
government consumption: 15.1% (2023 est.)
investment in fixed capital: 23.8% (2023 est.)
investment in inventories: -0.9% (2023 est.)
exports of goods and services: 31.1% (2023 est.)
imports of goods and services: -29.8% (2023 est.)
note: figures may not total 100% due to rounding or gaps in data collection

Agricultural products
grapes, milk, apples, wheat, potatoes, chicken, tomatoes, sugar beets, maize, oats (2022)
note: top ten agricultural products based on tonnage

Industries
copper, lithium, other minerals, foodstuffs, fish processing, iron and steel, wood and wood products, transport equipment, cement, textiles

Industrial production growth rate
1.56% (2023 est.)
note: annual % change in industrial value added based on constant local currency
comparison ranking: 126

Labor force
9.848 million (2023 est.)
note: number of people ages 15 or older who are employed or seeking work
comparison ranking: 56

Unemployment rate
9.04% (2023 est.)
8.3% (2022 est.)
9.33% (2021 est.)
note: % of labor force seeking employment
comparison ranking: 156

Youth unemployment rate (ages 15-24)
total: 22% (2023 est.)
male: 20.2% (2023 est.)
female: 24.5% (2023 est.)
note: % of labor force ages 15-24 seeking employment
comparison ranking: total 56

Population below poverty line
10.8% (2020 est.)
note: % of population with income below national poverty line

Gini Index coefficient - distribution of family income
43 (2022 est.)
note: index (0-100) of income distribution; higher values represent greater inequality
comparison ranking: 30

Average household expenditures
on food: 18% of household expenditures (2022 est.)
on alcohol and tobacco: 3.3% of household expenditures (2022 est.)

Household income or consumption by percentage share
lowest 10%: 2.3% (2022 est.)
highest 10%: 34.5% (2022 est.)
note: % share of income accruing to lowest and highest 10% of population

Remittances
0.02% of GDP (2023 est.)
0.02% of GDP (2022 est.)
0.02% of GDP (2021 est.)
note: personal transfers and compensation between resident and non-resident individuals/households/entities

Budget
revenues: $55.16 billion (2020 est.)
expenditures: $73.176 billion (2020 est.)

Public debt
23.6% of GDP (2017 est.)
comparison ranking: 178

Taxes and other revenues
21.27% (of GDP) (2022 est.)
note: central government tax revenue as a % of GDP
comparison ranking: 77

Current account balance
-$11.899 billion (2023 est.)
-$26.162 billion (2022 est.)
-$22.962 billion (2021 est.)
note: balance of payments - net trade and primary/secondary income in current dollars
comparison ranking: 196

Exports
$104.349 billion (2023 est.)
$107.071 billion (2022 est.)
$100.448 billion (2021 est.)
note: balance of payments - exports of goods and services in current dollars
comparison ranking: 48

Exports - partners
China 39%, US 14%, Japan 8%, South Korea 6%, Brazil 5% (2022)
note: top five export partners based on percentage share of exports

Exports - commodities
copper ore, refined copper, carbonates, fish, raw copper (2022)
note: top five export commodities based on value in dollars

Imports
$99.808 billion (2023 est.)
$118.941 billion (2022 est.)
$102.637 billion (2021 est.)
note: balance of payments - imports of goods and services in current dollars
comparison ranking: 47

Imports - partners
China 26%, US 22%, Brazil 10%, Argentina 5%, Germany 3% (2022)
note: top five import partners based on percentage share of imports

Imports - commodities
refined petroleum, cars, crude petroleum, garments, trucks (2022)
note: top five import commodities based on value in dollars

Reserves of foreign exchange and gold
$46.377 billion (2023 est.)
$39.102 billion (2022 est.)
$51.252 billion (2021 est.)
note: holdings of gold (year-end prices)/foreign exchange/special drawing rights in current dollars
comparison ranking: 47

Exchange rates
Chilean pesos (CLP) per US dollar -
Exchange rates:
840.067 (2023 est.)
873.314 (2022 est.)
758.955 (2021 est.)
792.727 (2020 est.)
702.897 (2019 est.)

Energy

Electricity access
electrification - total population: 100% (2022 est.)

Electricity
installed generating capacity: 35.598 million kW (2022 est.)
consumption: 86.628 billion kWh (2022 est.)
transmission/distribution losses: 4.313 billion kWh (2022 est.)
comparison rankings: transmission/distribution losses 156; consumption 37; installed generating capacity 34

Electricity generation sources
fossil fuels: 43.4% of total installed capacity (2022 est.)
solar: 15.3% of total installed capacity (2022 est.)
wind: 10.3% of total installed capacity (2022 est.)
hydroelectricity: 25.3% of total installed capacity (2022 est.)
geothermal: 0.5% of total installed capacity (2022 est.)
biomass and waste: 5.1% of total installed capacity (2022 est.)

Coal
production: 499,000 metric tons (2022 est.)
consumption: 8.637 million metric tons (2022 est.)
exports: 23,000 metric tons (2022 est.)
imports: 8.09 million metric tons (2022 est.)
proven reserves: 1.181 billion metric tons (2022 est.)

Petroleum
total petroleum production: 11,000 bbl/day (2023 est.)
refined petroleum consumption: 405,000 bbl/day (2023 est.)
crude oil estimated reserves: 150 million barrels (2021 est.)

Natural gas
production: 1.2 billion cubic meters (2022 est.)
consumption: 6.916 billion cubic meters (2022 est.)
exports: 159.558 million cubic meters (2018 est.)
imports: 5.137 billion cubic meters (2022 est.)
proven reserves: 97.976 billion cubic meters (2021 est.)

Carbon dioxide emissions
79.689 million metric tonnes of CO2 (2022 est.)
from coal and metallurgical coke: 15.94 million metric tonnes of CO2 (2022 est.)
from petroleum and other liquids: 50.15 million metric tonnes of CO2 (2022 est.)
from consumed natural gas: 13.599 million metric tonnes of CO2 (2022 est.)
comparison ranking: total emissions 47

Energy consumption per capita
69.194 million Btu/person (2022 est.)
comparison ranking: 72

Communications

Telephones - fixed lines
total subscriptions: 2.217 million (2022 est.)
subscriptions per 100 inhabitants: 11 (2022 est.)
comparison ranking: total subscriptions 51

Telephones - mobile cellular
total subscriptions: 26.415 million (2022 est.)
subscriptions per 100 inhabitants: 135 (2022 est.)
comparison ranking: total subscriptions 50

Telecommunication systems
general assessment: the market for fixed and mobile telephony is highly competitive and rapidly evolving; the mobile rate is among the highest in South America; LTE infrastructure is extensive and 5G spectrum auctions which took place in February 2021 prompted deployment of 5G networks, following extensive trials held by the MNOs; fixed broadband is relatively high for the region, with services among the fastest and least expensive in Latin America; government initiatives such as the National Fiber Optic project and Fibra Óptica Austral are providing high-capacity connectivity across the country and will further increase fixed-line broadband; there is a strong focus on fiber broadband, with the number of fiber subscribers having increased 61.7% in 2020, year-on-year; technological improvements have allowed operators to provide a variety of services via their networks, giving rise to a number of bundled packages at competitive prices, including access to video on demand services which in turn is increasing fixed-line broadband; traditional fixed-line teledensity continues to fall as consumers switch to mobile networks and to fixed broadband for voice and data connectivity; more than 8,300 schools receive free broadband as part of the 'Connectivity for Education 2030' project (2021)
domestic: number of fixed-line connections 13 per 100, mobile-cellular usage continues to increase, reaching 136 telephones per 100 persons (2021)

international: country code - 56; landing points for the Pan-Am, Prat, SAm-1, American Movil-Telxius West Coast Cable, FOS Quellon-Chacabuco, Fibra Optical Austral, SAC and Curie submarine cables providing links to the US, Caribbean and to Central and South America; satellite earth stations - 2 Intelsat (Atlantic Ocean) (2019)

Broadcast media
national and local terrestrial TV channels, coupled with extensive cable TV networks; the state-owned Television Nacional de Chile (TVN) network is self-financed through commercial advertising revenues and is not under direct government control; large number of privately owned TV stations; about 250 radio stations

Internet country code
.cl

Internet users
total: 17.1 million (2021 est.)
percent of population: 90% (2021 est.)
comparison ranking: total 46

Broadband - fixed subscriptions
total: 3,763,826 (2020 est.)
subscriptions per 100 inhabitants: 20 (2020 est.)
comparison ranking: total 41

Transportation

National air transport system
number of registered air carriers: 9 (2020)
inventory of registered aircraft operated by air carriers: 173
annual passenger traffic on registered air carriers: 19,517,185 (2018)
annual freight traffic on registered air carriers: 1,226,440,000 (2018) mt-km

Civil aircraft registration country code prefix
CC

Airports
374 (2024)
comparison ranking: 18

Heliports
114 (2024)

Pipelines
3,160 km gas, 781 km liquid petroleum gas, 985 km oil, 722 km refined products (2013)

Railways
total: 7,281.5 km (2014)
narrow gauge: 3,853.5 km (2014) 1.000-m gauge
broad gauge: 3,428 km (2014) 1.676-m gauge
(1,691 km electrified)
comparison ranking: total 30

Roadways
total: 77,801 km (2016)
comparison ranking: total 64

Merchant marine
total: 249 (2023)
by type: bulk carrier 3, container ship 5, general cargo 66, oil tanker 14, other 161
comparison ranking: total 64

Ports
total ports: 39 (2024)
large: 0
medium: 2
small: 10
very small: 27
ports with oil terminals: 25
key ports: Antofagasta, Bahia de Valdivia, Bahia de Valparaíso, Coronel, Iquique, Mejillones, Puerto Montt, Puerto San Antonio, Rada de Arica, Rada Punta Arenas, Talcahuano, Tocopilla

Military and Security

Military and security forces
Armed Forces of Chile (Fuerzas Armadas de Chile): Chilean Army (Ejército de Chile), Chilean Navy (Armada de Chile, includes marine units and coast guard or Maritime Territory and Merchant Marine Directorate (Directemar)), Chilean Air Force (Fuerza Aerea de Chile, FACh) (2024); the National Police Force (Carabineros de Chile) are responsible to both the Ministry of Defense and the Ministry of the Interior and Public Security

Military expenditures
1.5% of GDP (2023 est.)
1.6% of GDP (2022 est.)
2% of GDP (2021 est.)
2% of GDP (2020 est.)
1.9% of GDP (2019 est.)
comparison ranking: 91

Military and security service personnel strengths
approximately 80,000 active armed forces personnel (45,000 Army; 25,000 Navy; 10,000 Air Force); approximately 50,000 Carabineros (2023)

Military equipment inventories and acquisitions
the Chilean military inventory is comprised of a wide mix of mostly Western equipment and some domestically produced systems; in recent years, it has received military hardware from a variety of countries, including Australia, Germany, New Zealand, the UK, and the US; Chile's defense industry has capabilities in military aircraft, ships, and vehicles (2023)

Military service age and obligation
18-45 years of age for voluntary military service for men; 17-24 for women; selective compulsory service (there are usually enough volunteers to make compulsory service unnecessary); service obligation is a minimum of 12 months for Army and 22 months for Navy and Air Force (2023); as of 2021, women comprised approximately 18% of the armed forces

Military note: the Chilean military's primary responsibility is territorial defense and ensuring the country's sovereignty; it also assists with disaster and humanitarian relief and some internal security duties such as border security or maintaining public order if required; a key focus in recent years has been assisting with securing the border area with Bolivia and Peru; it trains regularly and participates in bilateral and multinational training exercises, as well as international peacekeeping operations
Chile and Argentina have a joint peacekeeping force known as the Combined Southern Cross

Peacekeeping Force (FPC), designed to be made available to the UN; the FPC is made up of air, ground, and naval components, as well as a combined logistics support unit
the Chilean Army was founded in 1810, but traces its origins back to the Army of the Kingdom of Chile, which was established by the Spanish Crown in the early 1600s; Chile's military aviation was inaugurated in 1913 with the creation of a military aviation school; the Navy traces its origins to 1817; it was first led by a British officer and the first ships were largely crewed by American, British, and Irish sailors; by the 1880s, the Chilean Navy was one of the most powerful in the Americas, and included the world's first protected cruiser (a ship with an armored deck to protect vital machine spaces) (2024)

Space

Space agency/agencies
the Chilean Space Agency was established in 2001 and dissolved in 2014, at which time the space program became part of the Ministry of Defense; the Ministry of Science also participates in Chile's space program (2024)

Space program overview
has a space program with a considerable history and largely focused on the acquisition and operation of satellites; operates foreign-built satellites and satellite ground stations; building small remote sensing (RS) satellites; researching and developing additional capabilities and technologies associated with the production of satellites and satellite sub-systems; is a world leader in astronomy and astrophysics (Chile's Atacama Desert, where the skies are exceptionally clear and dry for more than 300 days a year, is home to more than a dozen astronomical observatories including the Cerro Tololo Inter-American Observatory, the Las Campanas Observatory, and the European Southern Observatory); Chile is also home to several astronomy institutes; has established relations with space agencies and industries of Canada, China, France, India, Israel, Mexico, Russia, the UK, and the US (2024)
Space note: further details about the key activities, programs, and milestones of the country's space program, as well as government spending estimates on the space sector, appear in the Space Programs reference guide

Transnational Issues

Refugees and internally displaced persons
refugees (country of origin): 444,423 (Venezuela) (economic and political crisis; includes Venezuelans who have claimed asylum or have received alternative legal stay) (2023)

Illicit drugs
transshipment country for cocaine destined for Europe and the region; some money laundering activity, especially through the Iquique Free Trade Zone; imported precursors passed on to Bolivia; domestic cocaine consumption is rising, making Chile a significant consumer of cocaine

Acronyms and Abbreviations

°	degree(s) – of temperature (Celsius [C] or Fahrenheit [F]) or of latitude and longitude (North [N], South [S], East [E], and West [W])
$	Dollar(s) – U.S.
27F	2010 Maule earthquake
ACERA	Chilean Association of Renewable Energies and Storage
AGCI	Chilean International Cooperation Agency
ANCI	National Cybersecurity Agency
APAN	All Partners Access Network
APR	Rural Drinking Water Committees
ASPE	Area-Specific Protected Ecosystem
BRI	Belt and Road Initiative
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosives
CDC	U.S. Centers for Disease Control and Prevention
CDE	Environmental Superintendency
CDMA	Code Division Multiple Access
CDRI	Coalition for Disaster Resilient Infrastructure
CEN	National Electrical Coordinator
CENABAST	Supply Center
CFE-DM	Center for Excellence in Disaster Management and Humanitarian Assistance
CIGIDEN	National Research Center for Integrated Disaster Management
CMAS/WEA	Commercial Mobile Alert System/ Wireless Emergency Alerts
CNE	Ministry of Energy
COE	Emergency Operations Committee
COGRID	Disaster Management Committee; Comites GRD
CONAF	National Forestry Service
COSOC	Civil Society Councils
COVID-19	Coronavirus Disease 2019
CPRA	Child Protection Rapid Assessment
CSO	civil society organizations
CTC	Chile Telephone Company; Compañía de Teléfonos de Chile
DASP	Disaster Assistance Support Program
DCC	Defense Consultative Committee
DEGREYD	Department of Risk Management in Emergencies and Disasters
DGA	General Water Directorate
DGAC	General Directorate of Civil Aeronautics
DHN	Declaration of Humanitarian Need
DIFROL	National Department of State Borders and Boundaries
DIRECTEMAR	Chile's Maritime Authority

DKI-APCSS	Daniel K. Inouye Asia-Pacific Center for Security Studies
DLCh	Lift Up Chile Challenge
DMC	Chilean Meteorological Directorate
DMC	Disaster Management Centre
DMHA	Disaster Management and Humanitarian Assistance
DoD	Department of Defense
DOE	U.S. Department of Energy
DREF	Disaster Response Emergency Fund
DRM	disaster risk management
DRR	Disaster Risk Reduction
ECLAC	Economic Commission for Latin America and the Caribbean
ECLP	Long-Term Climate Strategy (2050)
ECMPO	Marine Coastal Spaces of Indigenous Peoples
EECC	State of Constitutional Exception of Catastrophe
EFE	State Railways Company
EIS	Emergency Information System
EM-Dat	Emergency Event Database
EMPORCHI	Port Company of Chile; Empresa Portuaria de Chile
ENAPU	National Ports Company S.A.; Empresa Nacional de Puertos S.A.
ENO	notifiable diseases
ENSO	El Niño Southern Oscillation
EPA	Port Company of Antofagasta; Empresa Portuaria de Antofagasta
EPAUSTRAL	Austal Port Company; Empresa Portuaria Austral
EPI	Iquique Port Company; Empresa Portuaria Iquique
ER4	early recovery, risk reduction, and resilience
ETP	Technical-Professional Education
EU	European Union
EWS	early warning system
FAO	Food and Agriculture Organization
FCG	Foreign Clearance Guide
FDI	Foreign Direct Investment
FDR	Foreign Disaster Response
FDT	Telecommunications Development Fund
FONASA	National Health Fund
ft / ft^2	feet / square feet
FTA	Free Trade Agreement
FY	Fiscal Year
GDACS	Global Disaster Alert and Coordination System
GDP	gross domestic product
GHG	greenhouse gas

GIS	geographic information system
GNI	gross national income
GoC	Government of Chile
GORE	regional government
GSM	Global System for Mobile Communications
GWh	gigawatt-hour
ha	hectare(s)
HAA/M	Humanitarian Assistance Advisors to the Military
HADR	Humanitarian Assistance and Disaster Response
HART	Humanitarian Assistance and Response Training
HCT	Humanitarian Country Teams
HDX	Humanitarian Data Exchange
HF	high frequency
HIV	human immunodeficiency virus
IADB	Inter-American Development Bank
IASC	Inter-Agency Standing Committee
ICC	Integrated Command and Control
ICJ	International Court of Justice
ICRC	International Committee of the Red Cross
IFRC	International Federation of Red Cross and Red Crescent Societies
IHR	International Health Regulation
ILO	International Labour Organization
in	Inch(es)
INSARAG	International Search and Rescue Advisory Group
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
ISP	internet service provider
ISP	Public Health Institute of Chile
ITU	International Telecommunication Union
IUUF	illegal, unreported, and unregulated fishing
JEMCO	Chief of the Joint Chiefs of Staff
JICA	Japan International Cooperation Agency
k / km^2	kilometer(s) / square kilometer(s)
km/h	kilometers per hour
KW	kilowatts
LAC	Latin America and the Caribbean
LOA	Maximum Length Overall
m / m^2	meter(s) / square meter(s)
M.D.	Doctor of Medicine
MARFORSOUTH	U.S. Marine Forces South

MERCOSUR	Southern Common Market
MERVAL	Valparaíso Regional Metro
mi / mi2	mile(s) / square mile(s)
MINEDUC	Ministry of Education
MINMUJERYEG	Ministry of Women and Gender Equity
MINREL	Chile Ministry of Foreign Affairs
MINSAL	Ministry of Health
mm	millimeter(s)
MMR	Measles-Mumps-Rubella
MND	Ministry of National Defense
MOP	Ministry of Public Works
MPCA	Multi-Purpose Cash Assistance
mph	miles per hour
MRF	Multi-Hazard Response Framework
MTT	Ministry of Transport and Telecommunications
MVNO	mobile virtual network operator
MW	Megawatts
NAP	National Action Plan
NCD	Non-communicable disease
NCRE	non-conventional renewable energy
NDC	Nationally Determined Contribution
ND-GAIN	Notre Dame Global Adaptation Initiative
NGO	Non-governmental Organizations
NOAA	National Oceanic and Atmospheric Administration
NWR	National Water Roundtable
OAIs	operations, activities, and investments
OECD	Organization for Economic Cooperation and Development
OHDACA	Overseas Humanitarian, Disaster, and Civic Aid
ONEMI	National Emergency Office of the Ministry of the Interior
PAHO	Pan American Health Organization
PCU	Central Unified Platform
PDO	Pacific Decadal Oscillation
PENRRD	National Strategic Plan 2020-2030
PISA	Programme for International Student Assessment
PNE	National Emergency Plan
PNRRD	National Platform for Disaster Risk Reduction
PPP	public-private partnership
PRC	People's Republic of China
PTWC	Pacific Tsunami Warning Center
PUC	Pontifical Catholic University of Chile; Pontifica Universidad Catolica de Chile

RC	Resident Coordinator
RCP	Representative Concentration Pathway
RNVV	National Volcanic Watch Network
ROLAC	Regional Office for Latin America and the Caribbean
SAE	Emergency Alert System
SAPU	Primary Emergency Care Service
SBAP	Service for Biodiversity and Protected Areas
SDG	Sustainable Development Goals
SECDEF	Secretary of Defense
SEN	National Electric System
SENADIS	National Service for Persons with Disabilities
SENAPRED	National Service for Disaster Prevention and Response
SEREMI	Regional Ministerial Secretariat
Seremi MINVU	Regional Ministerial Secretariat of Housing and Urban Development
SERNAGEOMIN	National Geological and Mining Service
SERNAM	National Women's Service
SERNAMEG	National Service for Women and Gender Equity
SHOA	Hydrographic and Oceanographic Service of the Chilean Navy
SIC	former electrical systems of the south-central
SINAPRED	National System for the Prevention and Response to Disasters
SINEA	Andean Electrical Interconnection Initiative
SING	former electrical systems of the north
SISS	Superintendence of Health Services
SMA	Environmental Superintendency
SNPC	National Civil Protection System
SOCSOUTH	U.S. Special Operations Command South
SOUTHCOM	U.S. Southern Command
SOUTHDEC	South American Defense Conference
SPMAGTF-SC	Special Purpose Marine Air-Ground Task Force – Southern Command
SPP	State Partnership Program
SSR	Rural Sanitation Services
STEM	science, technology, engineering, and mathematics
STI	San Antonio Terminal International
STI	Sexually Transmitted Infections
SUBREI	Undersecretariat of International Economic Relations
SUBTEL	Undersecretariat of Telecommunications of Chile; Subsecretaría de Telecomunicaciones de Chile
t	tonnages
TB	tuberculosis
TECHO	Un Techo para mi País

TEU	twenty-foot equivalent unit
TPS	Valparaíso Pacific Terminal; Terminal Pacífico Valparaíso
TPV	Valparaíso Port Terminal
TTP	Talcahuano Terminal Portuario SA
TXARNG	Texas Army National Guard
U.S.	United States
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDAC	United Nations Disaster Assessment and Coordination
UNDMT	United Nations Disaster Management Team
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNDSS	United Nations Department of Safety and Security
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNETE	United Nations Emergency Technical Team
UNFICYP	United Nations Peacekeeping Force in Cyprus
UNFPA	United Nations Population Fund
UNHCR	United Nations Refugee Agency
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNITU	United Nations International Telecommunication Union
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNODC	United Nations Office on Drugs and Crime
UNOHCHR	United Nations Office of the High Commissioner for Human Rights
UNS	United Nations System
UNSCR	United Nations Security Council Resolution
UNTSO	United Nations Truce Supervision Organization
UNVMC	United Nations Verification Mission in Colombia
USAID	U.S. Agency for International Development
USAID/BHA	USAID Bureau for Humanitarian Assistance
USGS	Hydrographic and Oceanographic Service of the Chilean Navy
USINDOPACOM	U.S. Indo-Pacific Command
VHF	very high frequency
VMLA	Virgin Mobile Latin America
VTR	Via Trans Radio Communications SpA; Vía Trans Radio Comunicaciones SpA
W/m^2	watts per square meter
WASH	water, sanitation, and hygiene
WFP	World Food Program
WHO	World Health Organization

WPS	Women, Peace and Security
WTO	World Trade Organization
ZAC	Zones Affected by Catastrophe
ZEAL	Logistics Support Extension Zone

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