

Chile Earthquake: U.S. and International Response

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Summary

On February 27, 2010, an earthquake of magnitude 8.8 struck off the coast of central Chile. Centered 70 miles northeast of Chile's second-largest city, Concepción, at a depth of 22 miles, the earthquake was the second largest ever recorded in Chile and the fifth largest recorded worldwide since 1900. Over 100 aftershocks of magnitude 5.0 or greater were recorded following the initial earthquake. The earthquake and subsequent tsunami, which struck Chile's coast roughly 20 minutes after the earthquake and moved 2,000 feet onto shore in some places, devastated parts of the country. Although there are reports of varying casualty numbers, according to Chile's Ministry of the Interior, the official death toll is 507 (497 bodies have been identified; 10 remain unidentified). The numbers of missing persons are not yet known. Approximately 200,000 homes have been badly damaged or destroyed. Estimates suggest as many as 2 million people may have been affected by the earthquake, an unknown number of whom were injured or displaced.

The Chilean government, through the Chilean National Emergency Office, is leading the relief operation and coordinating assistance. Despite offers of assistance, thus far the international humanitarian relief operation has been limited pending further requests for assistance from the government. In addition, there are more than 16,000 Chilean military personnel providing humanitarian relief and maintaining public order. At least two elements of the Chilean government's initial response have been criticized in Chile. The first is that the coastal and island communities did not receive timely warning about the tsunami waves that caused so many of the reported casualties. The second Chilean government response that has been widely questioned was the speed with which the Chilean military was deployed to quell looting and violence in the disaster zone. While critics point to weaknesses in the initial response, later assessments by disaster managers gave the Chilean government's response higher marks. Many credited the government of President Michelle Bachelet with success given the scope of the disaster and some labeled the government's response a model. The Chilean government's response to the earthquake has been complicated by the fact that President Bachelet left office on March 11, 2010, and has been succeeded by Sebastián Piñera, the leader of a center-right coalition that won the country's recent presidential election. President Bachelet held meetings with President-elect Piñera in order to ease the transition.

On February 27, 2010, President Barack Obama announced that the U.S. government would assist with earthquake rescue and recovery efforts, pending a request from the Chilean Government. On February 28, 2010, U.S. Ambassador to Chile Paul E. Simons issued a disaster declaration, and through the U.S. Agency for International Development (USAID) Office of Foreign Disaster Assistance (OFDA), authorized \$50,000 for the initial implementation of an emergency response program. OFDA deployed a 16-member USAID Disaster Assistance Response Team. As of March 10, 2010, USAID/OFDA reports that it has provided \$10.7 million for emergency response activities in Chile. The U.S. Department of Defense is also providing limited assistance. Policy issues of potential interest include levels of U.S. assistance to Chile, burdensharing and donor fatigue, tsunamis and early warning systems, and managing risk through building codes. Related legislation includes S.Res. 431, H.Res. 1144, H.R. 4783. For more background on Chile, see CRS Report R40126, *Chile: Political and Economic Conditions and U.S. Relations*.

Contents

Current Conditions
Preliminary Numbers at a Glance
Chilean Government Response
Political Transition: March 11, 20105
Status of the Relief Effort
Humanitarian Needs and Response
Health
Food
Emergency Shelter and Non-Food Items6
Water and Sanitation7
Education7
Early Recovery: Emergency Telecommunications and Infrastructure7
Early Recovery: Fisheries and Agriculture7
International Humanitarian Response and Funding
The Role of the United Nations and Other Organizations
Other Humanitarian Actors
International Funding
Donor Contributions and Pledges9
Private Contributions
Response of International Financial Institutions9
U.S. Humanitarian Assistance
USAID
Department of Defense
Regional Response
Background on Chile and U.SChile Relations
Regular U.S. Bilateral Assistance to Chile
Policy Issues
Budget Priorities and U.S. Assistance to Chile
Burdensharing and Donor Fatigue
Tsunamis and Early Warning
Managing Risk Through Building Codes

Figures

Figure 1. Chile: Regions Affected by Earthquake	2
Figure A-1. Chile: Earthquake Intensity Zones	. 16

Tables

Table 1. FY2009-FY2011 Funding for Chile by Aid Account	12
Table B-1. Donor Contributions and Pledges to Chile	17

Appendixes

Appendix A. Earthquake Zones	16
Appendix B. Donor Contributions and Pledges to Chile in Response to the February 27, 2010, Earthquake	17
Appendix C. The U.S. Government Emergency Response Mechanism for International Disasters	19
Appendix D. Legislation in the 111th Congress	21
Appendix E. How to Search for or Report on American Citizens in Chile and How to Obtain Security Information Updates	22
Appendix F. Links for Further Information	23

Contacts

Author Contact Information	
Key Policy Staff	

Current Conditions

On February 27, 2010, an earthquake of magnitude 8.8 struck off the coast of central Chile. Centered 70 miles northeast of Chile's second-largest city, Concepción, at a depth of 22 miles, the earthquake was the second-largest ever recorded in Chile and the fifth-largest recorded worldwide since 1900.¹ Over 100 aftershocks of magnitude 5.0 or greater were recorded following the initial earthquake.²

The earthquake and subsequent tsunami, which struck Chile's coast roughly 20 minutes after the earthquake and moved 2,000 feet onto shore in some places, have devastated portions of the country.³ Preliminary reports indicate that 2 million people have been affected out of a population of 16.6 million, with some 200,000 homes badly damaged or destroyed and more than 500 people confirmed dead. The Chilean government has declared six regions catastrophe zones: Valparaiso, Metropolitana, Libertador O'Higgins, Araucania, Biobío, and Maule. The Maule region was by far the hardest hit, however, accounting for most of the dead, and the humanitarian situation there remains the most pressing.

Infrastructure across the country has been affected with roads destroyed, bridges and power lines down, and some ports forced to close. Early estimates suggest the economic damage could be between \$15 and \$30 billion U.S. dollars, the equivalent of 10% to 20% of Chile's gross domestic product (GDP). The infrastructure damage could also slow Chile's economy in the near term, jeopardizing the country's nascent recovery from the global financial crisis. Many believe the economic and human toll would have been much worse if not for Chile's stringent building codes and past experience with earthquakes.⁴

The Chilean government is leading the relief operation and coordinating assistance. Despite offers of assistance, thus far the international humanitarian relief operation has been limited pending further requests for assistance from the government. In addition, there are more than 16,000 Chilean military personnel providing humanitarian relief and maintaining public order.

¹ In 1960, southern Chile was struck by a magnitude 9.5 earthquake. Jose Luis Saavedra, "Massive earthquake hits Chile, 214 dead," *Reuters*, February 27, 2010.

² For more information on earthquakes see, CRS Report RL33861, *Earthquakes: Risk, Detection, Warning, and Research*, by (name redacted), and U.S. Agency for International Development, "Chile – Earthquake," March 1, 2010.

³ "Chile earthquake death toll tops 700," *Latin News Daily*, March 1, 2010. "Maps of the Chile Earthquake," *New York Times*, March 1, 2010.

⁴ "Chile: Earthquake could boost medium-term growth," Oxford Analytica, March 1, 2010.



Figure 1. Chile: Regions Affected by Earthquake

Source: ReliefWeb: UN Office for the Coordination of Humanitarian Affairs (OCHA)

Preliminary Numbers at a Glance

Although there are reports of varying casualty numbers, according to the Ministry of the Interior, the official death toll is 507 (497 bodies have been identified; 10 remain unidentified). The numbers of missing persons are not yet known. According to the Chilean government, approximately 200,000 houses have been badly damaged or destroyed. Estimates suggest as many as 2 million people may have been affected by the earthquake, an unknown number of whom were injured or displaced.

Chilean Government Response

Since the earthquake, the Chilean government has rushed to provide relief to the victims. In addition to dispatching search and rescue teams and undertaking preliminary needs assessments, the government has worked to reestablish basic services and has distributed food, blankets, and medical equipment in the affected regions. The Chilean National Emergency Office (ONEMI) is coordinating the relief effort. After its initial assessments, the Chilean government appealed to the international community for aid. Among other items, the Chilean government has requested field hospitals, electric generators, satellite communications equipment, water purification systems, and mobile bridges. Chilean officials have met with United Nations (U.N.) agencies to establish a clear plan for international assistance, and the United States and more than 20 other nations have begun to provide Chile with the aid it has requested.⁵ (See **Appendix B**.) Many aid agencies have offered assistance, pending further instructions from the government.

President Michelle Bachelet called the consequences of the earthquake "an emergency without parallel." She issued a State of Catastrophe declaration for the regions of Maule and Biobío on February 28, 2010. The declaration, issued following increasing reports of riots and looting, restricts civil rights and liberties and places the regions under military control to maintain order and avoid social conflict. This is the first time that a State of Catastrophe measure has been employed by the Chilean government since its return to democracy in 1990.

President Bachelet deployed approximately 14,000 military troops to the two regions to restore order based on outbreaks of looting and violence. The military commanders of the regions, in consultation with the Minister of the Interior and the Minister of Defense, declared a curfew for the city of Concepción. The curfew was extended to three cities in the Maule region—Talca, Cauquenes, and Constitución—on March 1. Enforcement of order has led to at least 160 arrests and one death.⁶

At least two elements of the Chilean government's initial response have been criticized in Chile. The first is that the coastal and island communities did not receive timely warning about the tsunami waves that caused so many of the reported casualties. The first tsunami waves hit the

⁵ United Nations Office for the Coordination of Humanitarian Affairs, "Chile Earthquake: Situation Report #2," March 1, 2010; Gobierno de Chile, "Situación terremoto zona centro sur (Actualiza reporte)," March 1, 2010; Hillary Rodham Clinton, "Remarks With Chilean President Michelle Bachelet," *U.S. Department of State*, March 2, 2010.

⁶ "Bachelet decreta primer Estado de Catástrofe desde terremoto de 1985," *El Mercurio* (Chile), March 1, 2010; "Amplían toque de queda en zonas más afectadas por terremoto en Chile," *Agence France Presse*, March 1, 2010; "160 detained, one killed during curfew in quake-struck Chile," *Agence France Presse*, March 1, 2010; "Troops in Chile quake areas to number 14,000: Bachelet," *Agence France Presse*, March 2, 2010.

coastal city of Valparaiso (330 kilometers northeast of the epicenter) just 34 minutes after the initial earthquake, according to the National Oceanic and Atmospheric Administration (NOAA).⁷ But some claim that the tsunami warnings in coastal areas were not clearly transmitted. The Chilean Navy acknowledged their response was partly at fault and a quicker warning would have saved many lives. According to one report, the Chilean Navy received word of the imminent tsunami threatening the coast just 11 minutes after the initial earthquake. However, no warning was issued locally. The President deflected the criticism saying the time is not right to assign blame. On the morning of the catastrophic quake, the President was unable to communicate with many areas in the country. However, after acknowledging their warning system was faulty, the Navy fired the head of its catastrophic warning unit.⁸ Bachelet's successor, Sebastián Piñera has called for a thorough "modernization" of the tsunami warning system as his government comes into office.⁹

The second Chilean government response that has been widely questioned is the speed with which the Chilean military was deployed to quell looting and violence in the disaster zone. Some critics have argued that President Bachelet moved too slowly, suggesting she was mistrustful of the military because of her imprisonment and torture under General Augusto Pinochet's military dictatorship more than two decades ago. She began to deploy troops within 48 hours of the earthquake and increased their numbers during the week to a total of 14,000. Troops were welcomed by Chileans both for restoring order and assisting with the ongoing disaster response.

The rural poor were the most affected by the earthquake. In some small cities, food was unattainable when poorer customers were priced out of the market because merchants sharply raised prices. Some reports said that services were restored and aid provided first to middle class areas.¹⁰ The urban poor living near Santiago lost their electricity and water for much longer than those living in the capital which recovered quickly.¹¹ One of the most vulnerable populations in Chile is the Mapuche, Chile's largest indigenous group comprising approximately 4% of the Chile's 16.6 million citizens.¹² The Mapuche live mainly in Chile's central and southern regions with their seat of power in La Araucanía. They suffered many of the difficulties after the earthquake as other poor Chileans; water and electricity were cut off and houses were destroyed or seriously damaged.¹³

While critics point to weaknesses in the initial government response, later assessments by disaster managers gave the Chilean government higher marks. Aspects of the response that received special attention included: a careful assessment to target foreign assistance so it would complement Chile's rescue and relief efforts; quick restoration of major roads such as the critical North-South highway; and having the military handle logistics. Within ten days of the earthquake,

⁷ See NOAA web page on tsunami research at http://nctr.pmel.noaa.gov/chile20100227/.

⁸ Terry Wade and Fabian Cambero, "Some Chile quake survivors wait for aid a week on," http://www.alternet.org. March 6, 2010.

⁹ Fred Tasker and Marcela Ramos, "Chileans didn't get warnings of arriving tsunami; The Chilean government is being criticized for not alerting people of a tsunami threat after a powerful earthquake one week ago.," *Miami Herald*, March 6, 2010.

¹⁰ Dom Phillips, "Poor are the last to get aid amid class war in quake's ghost city; chile," *The Times*, March 4, 2010.

¹¹ Daniel Hernandez, "Quake exposes social disparities in Santiago, Chile," Los Angeles Times, March 4, 2010.

¹² For more on the Mapuche, see CRS Report R40126, *Chile: Political and Economic Conditions and U.S. Relations*, by (name redacted).

¹³ "La Araucanía Comienza a Ponerse de Pie," from the CONADI website: http://www.conadi.cl/, March 7, 2010.

90% of homes in the disaster area had regular power and water, 500,000 survivors were getting water trucked in, and relief has been distributed by military helicopter, navy ships, and tractor trailers. Many credited the Bachelet government with success given the scope of the disaster and some labeled it a model.¹⁴ In a post quake poll, President Bachelet received an 84% approval rating, leaving office with the highest level of popular support of her presidency.¹⁵

The Chilean government's response to the earthquake has been complicated by the fact that President Bachelet departed office on March 11, 2010, and was succeeded by Sebastián Piñera, the leader of a center-right coalition that won the country's recent presidential election. Piñera was expected to replace all of Bachelet's cabinet ministers and political appointees, including many of those now overseeing relief operations. Recognizing the need for continuity, Piñera had earlier indicated that he would retain the head of ONEMI and would ask some of the subregional authorities of the six regions declared catastrophe zones to stay on temporarily.¹⁶ On March 9, 2010, President-elect Piñera named key regulators and regional authorities (or intendants as they are called in Chile) to his government before his inauguration, including a new deputy Interior Minister.¹⁷ On March 10, Carmen Fernandez, Director of ONEMI in the Bachelet government, resigned citing weaknesses in the agency's response. President Bachelet held a series of meetings with President-elect Piñera in order to ease the transition.

Political Transition: March 11, 2010

Governments and non-governmental organizations (NGOs) are conferring with President Bachelet and incoming President Piñera on the nation's needs to smooth the transition in power. President-elect Piñera has declared his government "will be the government of the reconstruction, not the government of the earthquake."¹⁸ He faces huge challenges in a recovery that has been estimated will take 3-4 years and will cost between \$15 and \$30 billion dollars by the outgoing administration. Piñera has toured the hardest hit regions, and continued to make appointments. He is re-orienting his strategy from promising to return Chile to an annual growth rate of 6% to rebuilding and reconstruction. He has also pledged to improve coordination between authorities and the armed forces; to repair damaged infrastructure such as ports, roads, airports and telecommunication and power lines; and to construct homes in the affected zones.¹⁹ A billionaire, conservative politician and one of Chile's wealthiest investors, will face political challenges such as keeping expectations in check, and keeping right wing elements within his coalition with ties to the Pinochet era under control, in addition to steering Chile out of the disaster.

¹⁴ Michael Warren, "Chile's Bachelet, despite criticism, gets high praise from disaster experts for quake response," *Associated Press Newswire*, March 10, 2010.

¹⁵ The poll was conducted between March 3-March 6 by the firm Adimark and results were released on March 9. See Irenea Renuncio Mateos, "New Chilean President Sworn In, Faces Reconstruction Challenges," *IHS Global Insight Daily Analysis*, March 11, 2010.

¹⁶ In Chile, regional governors are appointed by the president. "Chile: Earthquake could boost medium-term growth," *Oxford Analytica*, March 1, 2010.

¹⁷ Chile Pinera Deputy Interior Min In Office Ahead of Inauguration, *Dow Jones International News*, March 10, 2010.

¹⁸ Daniel Hernandez, "Taking reins, is not office yet; Pinera asserts his authority, though he won't be president of Chile until next week," March 5, 2010.

¹⁹ "Bachelet estimates 3-4 years for reconstruction; Piñera unveils principal strategies," *Business News Americas*, March 4, 2010.

Chile declared three days of national mourning for victims of the quake from March 7 to March 9, 2010. The tone of the ceremony to inaugurate the new president was austere out of respect for the national tragedy and widespread mourning resulting from the earthquake. Public activities and ceremonies for the President-elect have been cancelled although official events—including visits from foreign delegations—will take place. Both leaders anticipate a smooth transition. A country-wide telethon held in Chile on March 7 (with the participation of President Bachelet and President-elect Piñera and visiting U.N. Secretary-General Ban Ki-Moon) was expected to raise \$30 million and brought in almost \$60 million. The funds will go to a local NGO "Un Techo Para Chile" (A Roof For Chile) that plans to use the funds for the construction of 23,000 small wooden shelters in the affected areas.

Status of the Relief Effort

As mentioned above, the Chilean government is leading the relief operation and coordinating assistance. Assessments are ongoing. It remains to be seen how the needs of those affected by the tsunami may differ from those primarily affected by the earthquake and, further, how such differences might be integrated into the overall humanitarian response.

Humanitarian Needs and Response

Health

Of 130 existing health clinics in the affected areas, six hospitals were evacuated, nine were severely damaged, and 115 remain fully operational. Based on these figures, approximately 4,000 beds (or 20 to 25%) have been lost. Regional health services have now returned to normal levels. Psychological and trauma assistance is needed.

Ten field hospitals and a Red Cross mobile unit have been deployed to affected areas. Chilean military personnel are providing medical assistance. On March 1, the government set up a National Committee of Mental Health in Emergencies and Disasters. The Ministry of Health has provided fortified milk, medicines, and vaccines. It has also announced a general vaccine campaign in high risk areas. The Chilean Red Cross and other Red Cross societies are providing medical assistance and conducting assessments for water supplies and relief items.

Food

Many of the affected areas are without regular access to food. The numbers of those needing food assistance have not yet been determined. In addition, the military is distributing food and reportedly some NGOs are also providing food assistance.

Emergency Shelter and Non-Food Items

The Chilean government reports there are an estimated 90 shelter camps with 19,000 people. A further 25,000 people are in temporary shelters (such as schools) and another 50,000 are in makeshift camps. Many others have reportedly staying with family and friends, and in the case of migrant workers, have returned to their homes in other parts of the country. An estimated 200,000 houses have been destroyed or badly damaged. Two regions – Maule and Biobio – were hit

particularly hard by the earthquake and tsunami and in some places 72% of houses were destroyed and 24% require significant repair. In terms of planning for longer-term emergency shelter, the rainy season does not usually start in Chile until May or June.

The International Federation of the Red Cross/Red Crescent (IFRC) has provided relief items to 5,000 families. Volunteers have constructed 300 emergency shelters. The \$60 million collected during a weekend telethon in Chile will support the construction of 23,000 emergency shelters. The U.S. Agency for International Development (USAID) has distributed plastic sheeting for 1,500 family shelters. Assessments of shelter needs are ongoing.

Water and Sanitation

More than 150 rural water supply systems, affecting approximately 200,000 people, were damaged. Others are not working due to damage to electrical systems. Access to potable water has generally increased in affected areas since the earthquake. However, in Concepción, where 55% of inhabitants have access to potable water and in Arauco where 50% have access, bottled water is urgently needed. In addition, the Chilean military is providing bottled water in water tankers. Three airplane loads of potable water have also been sent from Bolivia.

Education

It is estimated that up to 33% of the schools in the six areas most affected by the earthquake are either not operational at all or only partially operational. In areas less affected, such as Santiago, classes were suspended until March 8 when approximately 80% of the children returned to school. Classes in areas more affected by the earthquake are likely to start mid March or later.

Early Recovery: Emergency Telecommunications and Infrastructure

It is reported that mobile and land telecommunications have improved significantly in affected areas. In the city of Concepción services are up to 65-70%.

The Chilean Minister of Public Health has said that rehabilitation of roads and other infrastructure will cost \$1.2 billion. The Chilean government has identified some structures for rehabilitation. The government of Sweden has offered eight portable bridges. Various international structural engineers are conducting assessments. Electricity and natural gas conduits are being restored to affected areas.

Early Recovery: Fisheries and Agriculture

The government reports that more than 26,000 fisherman lost their homes and basis for livelihood (boats and equipment) as a result of the tsunami. The government is providing assistance for coastal towns and has promised agricultural assistance. Some wine-producing areas have also been affected.

International Humanitarian Response and Funding

The Role of the United Nations and Other Organizations

The United Nations has a country team in Santiago, which is lead by the Economic Commission for Latin America and the Caribbean (ECLAC). The U.N. country team includes agencies such the U.N. Development Program (UNDP), the U.N. Children's Fund (UNICEF), the Office of the High Commissioner for Human Rights (OHCHR), the Pan-American Health Organization (PAHO), the U.N. Educational, Scientific, and Cultural Organization (UNESCO), the Food and Agriculture Organization (FAO), and the International Labor Organization (ILO), as well as other entities such as the European Union and International Organization for Migration (IOM).

The Chilean government did not make a specific request to the U.N. Office for the Coordination of Humanitarian Assistance (OCHA) until days after the initial earthquake. At that point, the government made targeted requests for specific assistance such as communication equipment, water purification apparatus, and field hospitals, which were met largely through bilateral support. OCHA did send a small assessment team to Santiago and Concepción. OCHA remains on stand-by should assistance be requested by the Chilean government. A revised request may be forthcoming from the Chilean government with the March 11 transition of power.

Other Humanitarian Actors

International recovery efforts are typically complex because they require coordination among numerous different actors. Apart from U.N. agencies, those responding to humanitarian crises include international organizations, NGOs, private voluntary agencies (PVOs), and bilateral and multilateral donors. A great deal of assistance is provided by other governments and international entities.

The International Federation of the Red Cross and Red Crescent Societies (IFRC) is working with the Chilean Red Cross Society and other national red cross societies to provide assistance to earthquake survivors.

Various international NGOs have also mobilized to respond to the crisis.

International Funding

Many international actors have offered relief assistance to Chile, either through pledges of financial support to the government of Chile or aid organizations or by directly offering relief supplies and emergency personnel.

Donor Contributions and Pledges

The U.N.'s Central Emergency Response Fund (CERF) has pledged \$10 million.²⁰ The U.N. Country Team in Chile is drafting proposals for use of the CERF funds which are focused on health, water and sanitation, emergency shelter, education and emergency telecommunications.

So far, through governments and the private sector, the international community has pledged millions of dollars in aid, materials, and technical support. **Appendix B** highlights donor contributions and in-kind pledges. At least 29 countries from around the world have contributed to the relief effort. Obtaining an up-to-date record of all international contributions is not possible—in part because some assistance is not reported to governments or coordinating agencies—and in part because of the delay in their recording.

Private Contributions

Private sector assistance has been given at a much slower rate than private contributions following the earthquake in Haiti. Some reports attribute the slower pace to the fact that Chile is much better prepared to deal with the destruction; others point to the fact that the damage is much less severe. In addition, the Chilean government requested assistance from the United Nations but not so far from international humanitarian groups. Aid groups remain on stand-by pending requests for assistance. Moreover, reports also indicate that Chileans are donating and volunteering in large numbers to fill gaps in the earthquake response. As stated above a weekend telethon organized by a local organization raised \$60 million.²¹

Response of International Financial Institutions

Rebuilding in the aftermath of the massive earthquake will take years and require an investment in the reconstruction of as much as \$30 billion dollars, or between 15-20% of Chile's current GDP. After an initial assessment, President Bachelet stated that Chile will need loans from the World Bank and other multilateral sources to pay for recovery.²² The World Bank, the Inter-American Development Bank (IDB) and the International Monetary Fund (IMF) all offered assistance to Chile immediately following the earthquake. The World Bank and the IDB have opened credit lines for Chile.

As one of the region's strongest economies and democracies, Chile is likely to receive the loans it seeks. The country's growth projections for 2010 are estimated at 5 to 5.5% (J.P. Morgan actually bumped up its prediction of Chile's growth rate to 5.5% following the earthquake in anticipation of economic activity during a vigorous reconstruction effort).²³ Chile's credibility in international

²⁰ As part of the United Nations' reform process, in March 2006, the CERF was launched based on several earlier resolutions approved by the U.N. General Assembly to strengthen the United Nations' capacity to respond to natural disasters and humanitarian emergencies. It is managed by the Emergency Relief Coordinator and head of UNOCHA.

²¹ Andy Markowitz, "Chileans Give in Record Numbers to Fill Quake-Relief Gaps," *The Chronicle of Philanthropy*, March 11, 2010.

²² Terry Wade and Mario Naranjo, "Chile wants loans, scours for quake survivors," http://www.alertnet.org, March 4, 2010.

²³ Samuel Logan, "Chile After the Quake," ISN Security Watch, March 5, 2010. Accessed at:

http://www.isn.ethz.ch/isn/Current-Affairs/Security-Watch/Detail/?lng=en&id=113384.

markets, strong macroeconomic policies, and open markets will be seen favorably.²⁴ In addition, Chile has reserved more than \$11 billion in a sovereign fund, mostly during President Bachelet's administration, earned from copper exports.²⁵ These emergency reserves are likely to be used to help finance the nation's recovery.

U.S. Humanitarian Assistance

Selected activities of key U.S. government agencies—USAID and the Department of Defense (DOD)—are described briefly below.

USAID

On February 27, President Barack Obama announced that the U.S. government would assist with earthquake rescue and recovery efforts, pending a request from the Chilean Government. USAID set up a Washington, DC-based Response Management Team (RMT) through the Office of Foreign Disaster Assistance (OFDA) to coordinate and facilitate the humanitarian response to the earthquake. On February 28, 2010, U.S. Ambassador to Chile Paul E. Simons issued a disaster declaration, and through OFDA, authorized \$50,000 for the initial implementation of an emergency response program. OFDA deployed a 16-member USAID Disaster Assistance Response Team (DART). The RMT is supporting the USAID/DART.

To date, the overall focus of the U.S. government's response has been conducting needs assessments, working with the U.S. embassy in Chile and the Chilean government on priority humanitarian needs, coordinating delivery of USAID/OFDA-funded relief supplies, and providing communications support. See **Appendix C** for further information about the U.S. Government humanitarian response mechanism.

On March 2, Secretary of State Hillary Clinton met with Chilean President Michelle Bachelet and President-elect Sebastián Piněra in Santiago as part of a pre-planned regional trip to Latin America. Secretary of State Clinton delivered 20 satellite phones provided by USAID/OFDA and DOD to assist with communications in areas affected by the earthquake. An additional 40 phones have since been provided.

As of March 10, 2010, USAID/OFDA reports that it has provided \$10.7 million for emergency response activities in Chile. USAID/OFDA issues regular situation reports assessing the progress of relief operations.²⁶

²⁴ Irenea Renuncio Mateos, "New Chilean President Sworn In, Faces Reconstruction Challenges," *IHS Global Insight Daily Analysis*, March 11, 2010.

²⁵ "Counting the Costs," *Economist*, March 6, 2010.

²⁶ See USAID website:

http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/chile/template/index.html.

Department of Defense²⁷

DOD contributions to the earthquake relief efforts in Chile are on a much more limited scale than Operation Unified Response in Haiti. As with Haiti, the U.S. Southern Command (SOUTHCOM) is overseeing DOD's efforts with a command and control team based in Santiago. The U.S. Air Force has deployed two C-130 cargo aircraft and 50 support personnel to provide airlift to affected areas. The Air Force has also deployed an Emergency Medical Expeditionary Support Team with 84 personnel to the city of Angol. The U.S. Navy has dispatched an engineering assessment team to the Chilean naval base Talcahuano to survey and assess damages to the harbor facilities.

Regional Response

Offers of assistance by countries in the region came quickly. On March 1, President Lula of Brazil was the first foreign leader to visit Chile, and at a meeting with President Bachelet pledged all possible Brazilian assistance. Brazil has sent helicopters and C-130 planes carrying a field hospital and staff. Damage to Chile's power supply was widespread. Because both of Chile's main oil refineries were damaged, President Bachelet pledged to increase gasoline, diesel and fuel oil imports. Neighboring Argentina quickly doubled its normal supply of natural gas to Chile to 5.5 million cubic meters per day on March 3.²⁸ Argentina also sent an Air Force hospital, food, water, medical supplies, electricity power generators and four water purification plants. Many Latin American countries sent in-kind donations with leaders of Ecuador and Bolivia explaining they were cash-strapped. For example, in the first week following the earthquake Venezuela sent seven tons of food and Bolivia sent 40 tons of drinking water. Cuba provided a 26-member medical team and field hospital. (For more details, see **Appendix B**).

These quick offers of aid are significant in light of Chile's history of sometimes mistrustful relations with its neighbors due to unresolved border disputes. At the summit of the Union of South American Nations (a regional cooperation body) held in the aftermath of the Haitian earthquake in early February, Latin American leaders agreed to set up a \$300 million fund for Haiti's reconstruction and to assist one another in future natural disasters.²⁹ The response by Latin American countries to Chile's earthquake and tsunami seems to be evidence of this commitment.

Background on Chile and U.S.-Chile Relations³⁰

Following a violent coup against democratically elected Marxist President Salvador Allende in 1973, Chile experienced 17 years of military rule under General Augusto Pinochet before reestablishing democratic rule in 1990. A center-left coalition of parties known as the Concertación has governed Chile over the two decades since the end of the dictatorship. In

²⁷ Prepared by Steven Bowman, CRS Specialist in National Security, Foreign Affairs, Defense, and Trade Division.

²⁸ "Argentina doubles natgas flow to quake-hit Chile," *Reuters-AlterNet*, March 3, 2010.

²⁹ "Chile 'quake prompts Argentine help," *Latin News Daily*, March 9, 2010; Christian Völkel, "UNASUR to Rally Around in Support of Haiti's Reconstruction," *IHS Global Insight Daily Analysis*, February 10, 2010.

³⁰ This summary is drawn from CRS Report R40126, *Chile: Political and Economic Conditions and U.S. Relations*, by (name redacted).

addition to addressing human rights violations from the Pinochet era, the coalition has enacted a number of constitutional changes designed to strengthen civilian democracy. Chile made significant economic progress under the Concertación's free market economic policies and moderate social programs, and produced notable economic growth and considerable reductions in poverty.

On January 17, 2010, Sebastián Piñera of the center-right Alianza coalition was elected president in a second-round runoff vote, defeating former President Eduardo Frei (1994-2000) of the Concertación. Piñera's election was the first for the Chilean right since 1958, and his inauguration on March 11, 2010, will bring an end to 20 years of Concertación governance. Throughout his campaign, Piñera pledged to largely maintain Chile's social safety net while implementing policies designed to boost the country's economic growth. Even before the earthquake, Piñera was expected to work closely with Concertación to enact his policy agenda because his coalition does not enjoy absolute majorities in either house of Congress.

Chile has enjoyed close relations with the United States since its transition back to democracy. Both countries have emphasized similar priorities in the region, designed to strengthen democracy, improve human rights, and encourage trade. Chile and the United States have also maintained strong commercial ties, which have become more extensive since a bilateral free trade agreement between them entered into force in 2004. Additionally, U.S. officials have expressed appreciation for Chile's leadership and moderating influence in a region increasingly characterized by political unrest and anti-American populism.

Regular U.S. Bilateral Assistance to Chile

Because Chile is an advanced developing country the small amount of current assistance the country receives is focused on modernizing the Chilean military to improve its capacity to act as a peacekeeping force and to conduct joint operations with the U.S. military. U.S. assistance also goes to programs that deter weapons of mass destruction, improve civilian control over the military, and upgrade military equipment. Chile received \$1.2 million in U.S. assistance in FY2009, an estimated \$1.7 million in FY2010, and would receive \$2.2 million in FY2011 under the Obama Administration's request. **Table 1** shows the distribution between three foreign assistance accounts for Chile.

Account	FY2009 (Actual)	FY2010 (Estimate)	FY2011 (Request)
FMF	400	400	750
IMET	525	900	960
NADR	300	450	500
Total	1,225	1,750	2,210

 Table 1. FY2009-FY2011 Funding for Chile by Aid Account

 (\$ in thousands)

Source: U.S. Department of State, FY2011 Congressional Budget Justification for Foreign Operations.

Notes: FMF=Foreign Military Financing; IMET=International Military Education and Training; NADR=Non-proliferation, Anti-terrorism, Demining and Related Programs.

Policy Issues

Many Members have already expressed a strong desire to support Chile and provide it with necessary assistance.

Budget Priorities and U.S. Assistance to Chile

Humanitarian assistance generally receives strong bipartisan congressional support and the United States is typically a leader and major contributor to relief efforts in humanitarian disasters.³¹ When disasters require immediate emergency relief, the Administration may fund pledges by depleting its disaster accounts intended for worldwide use throughout a fiscal year. The United States has so far provided \$10.7 million in immediate aid for Chile. That aid is drawn from existing funds. The international community is also making donations toward meeting immediate needs.

Finding the resources to sustain U.S. aid pledges may be difficult, particularly amid efforts to tackle rising budget deficits by, among other measures, slowing or reducing discretionary spending. After the 2004 tsunami disaster, some Members of Congress publicly expressed concern that funding for tsunami relief and reconstruction, which depleted most worldwide disaster contingency accounts, could jeopardize resources for subsequent international disasters or for other aid priorities from which tsunami emergency aid had been transferred. These accounts were fully restored through supplemental appropriations. At the time, others noted the substantial size of U.S. private donations for tsunami victims and argued that because of other budget pressures, the United States government did not need to transfer additional aid beyond what was already pledged.

In Haiti, the full extent and cost of the disaster is not yet known. Disaster accounts are currently being drawn down to provide relief to Haiti. The State Department reports that in order to respond to future humanitarian crises, these resources would need to be replenished by June 1, 2010. If not replenished, U.S. capacity to respond to other emergencies could be curtailed. Congress will also likely consider a major request to help fund Haiti's recovery and reconstruction. Should substantial funds be required for Chile as well, it is possible this would be added to the request for Haiti.

Burdensharing and Donor Fatigue

The earthquake in Chile appears to require far less assistance from the international community than in Haiti. It is not always evident whether figures listing donor amounts represent pledges of support or more specific obligations.³² Pledges made by governments do not necessarily result in actual contributions. It also cannot be assumed that the funds committed to relief actually represent new contributions, since the money may previously have been designated to provide support for the affected country. It will take time to obtain a more complete picture of the actual costs of the disasters in Haiti and Chile and how they will be shared among international donors.

³¹ For background information see CRS Report RL33769, *International Crises and Disasters: U.S. Humanitarian Assistance, Budget Trends, and Issues for Congress*, by (name redacted).

³² Relief Web is a good source of information. See http://www.reliefweb.int.

Comparing U.S. and international aid is also difficult because of the often dramatically different forms the assistance takes (in-kind contributions vs. cash, for instance). As the situation in Haiti stabilizes, and attention turns to early recovery and reconstruction, sustaining donor interest in Haiti (and commitment to honor existing pledges) could be a challenge. Moreover, this challenge is compounded by the need to maintain funding priorities and secure funds needed for other disaster areas, such as the recent earthquake in Chile.

Tsunamis and Early Warning³³

Due to the fact that the earthquake in Chile occurred offshore, it generated a tsunami which struck parts of the Chilean coastline and offshore islands, causing damage and fatalities. Tsunami warnings were issued by the National Weather Service Pacific Tsunami Warning Center for Hawaii, Japan, and other regions bordering the Pacific Ocean that may have been vulnerable to a damaging tsunami, although most regions far from the epicenter did not experience any serious damage. A tsunami caused significant damage to the city of Hilo, Hawaii, following the May 1960 magnitude 9.5 earthquake that also occurred along the subduction zone fault about 143 miles south of the February 27, 2010, earthquake. Why the 1960 earthquake generated a tsunami that caused damage and fatalities in Hawaii, Japan, and the Philippines while the 2010 earthquake did not is not yet well understood and is being actively studied. In addition, these studies will likely consider the effectiveness of existing early warning systems.

Subduction zone megathrust faults generate the largest earthquakes in the world. The Cascadia Subduction Zone megathrust that stretches from mid-Vancouver island in southern British Columbia southward to Cape Mendocino in northern California has the potential to generate a very large earthquake, similar in magnitude to the February 27 Chilean earthquake. The fault's proximity to the northwestern United States coastline—approximately 50-100 miles offshore—also poses a significant tsunami hazard; destructive waves from a large earthquake along the fault could reach the coast of Oregon and Washington in less than an hour, possibly as soon as tens of minutes.

The Cascadia Subduction Zone fault forms the boundary between the subducting Juan de Fuca tectonic plate and the overriding North American plate, very similar to the relationship between the Nazca Plate and the South American Plate off the Chilean coast. If the Cascadia Subduction Zone megathrust were to "unzip" or rupture along a large section of its entire length, it would likely generate a megathrust earthquake near magnitude 9 or more, similar to the 1964 Alaskan earthquake, the 1960 and 2010 Chilean earthquakes, and the 2004 Indonesian earthquake. Scientists have documented that the last time this occurred along the Cascadia Subduction Zone fault was in 1700. The 1700 earthquake spawned a tsunami that traveled across the Pacific Ocean and struck Japan. Because of the tectonic similarities between the Cascadia Subduction Zone megathrust and the Nazca-South American plate megathrust, scientists hope to learn a great deal about the seismic hazard in the Pacific Northwest by studying the unique strong ground motion recordings from the 2010 Chilean magnitude 8.8 earthquake.

³³ Prepared by (name redacted), CRS Specialist in Energy and Natural Resources Policy, Resources, Science, and Industry Division.

Managing Risk Through Building Codes³⁴

The potential damage to Chile's buildings and infrastructure in urban areas was mitigated by the adoption and enforcement of advanced building codes; these codes include requirements aimed at reducing damage from earthquakes' shaking. Assessments of the damage in Chile will provide valuable information on whether changes to Chile's building codes or their enforcement are in order for better managing seismic and tsunami risks. The National Science Foundation and other U.S. federal agencies are supporting or participating in various engineering teams to collect and analyze data from the February 27 event that could inform improvements to international and domestic model building codes.³⁵

Chile has demonstrated its willingness and capacity to create, implement, and enforce building codes and other hazard mitigation measures to reduce loss and injury. Chile has the mechanisms and technical capacity to learn from the quake to improve its codes and policies to support more resilient structures and communities (e.g., improving tsunami warning and communication technologies and protocols). Construction that complies with location appropriate building codes can make structures more resistant to collapse and damage; however, structures are never earthquake proof, and increased structural resiliency typically increases construction costs.

Although the Chilean quake was of a larger magnitude than the January 2010 Haitian quake, Chile's urban centers of Concepcion and Santiago experienced less severe shaking than the violent shaking in Port-au-Prince.³⁶ A combination of more intense shaking, weak building codes and enforcement, and limited preparedness and response capabilities contributed to Haitians facing significantly higher risk than Chileans. How the United States and other nations provide aid to Chile and Haiti is likely to reflect the understanding that multiple actions can reduce risks, including adoption of building codes, in-country technical capacity building, expert technical assistance, and sharing of preparedness and response knowledge and technology.

³⁴ Prepared by Nicole Carter, CRS Specialist in Natural Resources Policy, Resources, Science, and Industry Division.

³⁵ Since the mid-1990s, Chile has adopted parts of the U.S. model building code. Assessment of the performance of buildings constructed following these codes allows researchers to examine the efficacy of many aspects of the U.S. model code.

³⁶ The Haiti quake focused its energy into a few seconds of violent motion close to a highly vulnerable population center. In contrast, the depth of the Chilean quake and its distance from population centers meant that the high-frequency energy had dissipated before it reached the built environment. That said, the shaking in Chile lasted up to two minutes with much of the energy in long-period waves that resonate with tall buildings and critical infrastructure. U.S. researchers will be analyzing how Chile's infrastructure and buildings fared and what can be learned for managing similar risk in the United States, including the Pacific Northwest.

Appendix A. Earthquake Zones



Figure A-I. Chile: Earthquake Intensity Zones

Source: USAID

Appendix B. Donor Contributions and Pledges to Chile in Response to the February 27, 2010, Earthquake

Country/Agency Donor	Monetary Pledge (USD)	In-kind Support Pledge	
Argentina		delivery of 1800 tons of food, a half million liters of water, four water purification plants and four electricity power generators, Argentine Air Force hospital composed of 12 modules, ten thousand doses of vaccine against hepatitis A	
Australia	4,413,063	fifty generators, 150 family tents and 1,060 collapsible beds	
Bolivia		40 tons drinking water	
Brazil		Two C-130s from Brazilian Air Force transporting 18 tons of equipment for a field hospital, and 66 military staff	
Canada		provided 150 tents with capacity for 10 people each.	
China	2,000,000	chartered plane with quake-relief: carrying 700 tents, 10,000 blankets, 100 portable generators and two water purifiers, for a total of 96 tons	
Cuba		26-member medical team and field hospital	
Finland	539,811		
France		chartered a special plane to bring to Chile a scientific, technical and humanitarian assistance mission, (including a team of seismological experts and a team of infrastructure experts), plus one ton of seismological material (27 seismological stations, solar panels;, GPS), a complete satellite equipment and 10 Iridium telephones, a dialysis and water filtration machine, first aid medicines, community tents, and five water purification stations	
Germany		4-member rescue team	
Greece	269,906		
Indonesia	1,000,000		
Japan	3,336,625	dispatch of international emergency medical team, electric generators, tents, water purifiers	
Korea, Republic of		dispatch of a plane with medical equipments and non-perishable food	
Malta		pills for the treatment of 17,000 liters of drinking water and further relief goods	
Mexico		3 tons of water purification equipment (chlorine, etc.) and a team of 8 specialists to evaluate structures	
New Zealand	343,407		
Norway	1,675,042		

Table B-I. Donor Contributions and Pledges to Chile

(as of March 10, 2010)

Country/Agency Donor	Monetary Pledge (USD)	In-kind Support Pledge	
Peru		2 airplanes with 30 tons of relief items including tents, plastic sheets, water purification unit; search and rescue team of 35 specialists; one field hospital with surgical capacity and in-patient hospital care; 21 doctors	
Russia		one plane with 28 MT of relief items (100 tents, 10 portable power generators, 2,000 blankets and 7 tons of food)	
Singapore	50,000		
Spain		7.5 tons of relief items, one field hospital, and a team of 75 experts (firefighters and sanitation experts)	
Sweden	720,041		
Switzerland	276,753	dispatched a 3-person regional Rapid Response Team	
United Kingdom	382,263	600 tents for up to 3,000 people	
United States of America	a	a	
Uruguay		two water purification machines	
Venezuela		7 tons of relief supplies and an assessment team of 27 experts	
Vietnam	150,000		
Other:			
Organization of American States	25,000	20 satellite telephones	
Red Cross/Red Crescent	946,939		
Private (individuals & organizations)	3,828,3		

Source: OCHA at http://www.reliefweb.int/fts. Prepared by (name redacted), Information Research Specialist, Knowledge Services Group.

a. For U.S. assistance, please see section on "U.S. Humanitarian Assistance."

Appendix C. The U.S. Government Emergency Response Mechanism for International Disasters

The United States is generally a leader and major contributor to relief efforts in response to humanitarian disasters.³⁷ The President has broad authority to provide emergency assistance for foreign disasters and the U.S. government provides disaster assistance through several U.S. agencies. The very nature of humanitarian disasters—the need to respond quickly in order to save lives and provide relief—has resulted in a rather unrestricted definition of what this type of assistance consists of at both a policy and an operational level. While humanitarian assistance is assumed to provide for urgent food, shelter, and medical needs, the agencies within the U.S. government providing this support typically expand or contract the definition in response to circumstances. Funds may be used for U.S. agencies to deliver services or to provide grants to international organizations (IOs), international governmental and non-governmental organizations (NGOs), and private or religious voluntary organizations (PVOs). The U.S. Agency for International Development (USAID) is the U.S. government agency charged with coordinating U.S. government and private sector assistance. It also coordinates with international organizations, the governments of countries suffering disasters, and other governments.

The Office of Foreign Disaster Assistance (OFDA) in USAID's Bureau for Democracy, Conflict and Humanitarian Assistance (DCHA) provides immediate relief materials and personnel, many of whom are already abroad on mission. It is responsible for providing non-food humanitarian assistance and can quickly assemble Disaster Assistance Response Teams (DARTs) to assess conditions. OFDA has wide authority to borrow funds, equipment, and personnel from other parts of USAID and other federal agencies. USAID has two other offices that administer U.S. humanitarian aid: Food For Peace (FFP) and the Office of Transition Initiatives (OTI). USAID administers emergency food aid under FFP (Title II of P.L. 480) and provides relief and development food aid that does not have to be repaid. OTI provides post-disaster transition assistance, which includes mainly short-term peace and democratization projects with some attention to humanitarian elements but not emergency relief.

The Department of Defense (DOD) Overseas Humanitarian, Disaster and Civic Aid (OHDACA) funds three Dodd humanitarian programs: the Humanitarian Assistance Program (HAP), Humanitarian Mine Action (HMA) Program, and Foreign Disaster Relief and Emergency Response (FDR/ER). OHDACA provides humanitarian support to stabilize emergency situations and deals with a range of tasks including providing food, shelter and supplies, and medical evacuations. In addition the President has the authority to draw down defense equipment and direct military personnel to respond to disasters. The President may also use the Denton program to provide space-available transportation on military aircraft and ships to private donors who wish to transport humanitarian goods and equipment in response to a disaster.³⁸

Generally, OFDA provides emergency assistance for 30 to 90 days after a disaster. The same is true for Department of Defense humanitarian assistance. After the initial emergency is over,

³⁷ For more information, see CRS Report RL33769, *International Crises and Disasters: U.S. Humanitarian Assistance, Budget Trends, and Issues for Congress*, by (name redacted).

³⁸ Section 402 of Title 10, named after former Senator Jeremiah Denton, authorizes shipment of privately donated humanitarian goods on U.S. military aircraft provided there is space and they are certified as appropriate for the disaster by USAID/OFDA. The goods can be bumped from the transport if other U.S. government aid must be transported.

assistance is provided through other channels, such as the regular country development programs of USAID.

The State Department also administers programs for humanitarian relief with a focus on refugees and the displaced. The Emergency Refugee and Migration Account (ERMA) is a contingency fund that provides wide latitude to the President in responding to refugee emergencies. Assistance to address emergencies lasting more than a year comes out of the regular Migration and Refugee Account (MRA) through the Population, Migration and Refugees (PRM) bureau. PRM assists refugees worldwide, conflict victims, and populations of concern to the United Nations High Commissioner for Refugees (UNHCR), often extended to include internally displaced people (IDPs). Humanitarian assistance includes a range of services from basic needs to community services.

Appendix D. Legislation in the 111th Congress

S.Res. 431. A resolution expressing profound concern, deepest sympathies, and solidarity on behalf of the people of the United States to the people of Chile following the massive earthquake. Introduced March 3, 2010 and agreed to in the Senate March 4, 2010.

H.Res. 1144. A resolution expressing condolences to the families of victims of the February 27, 2010, earthquake in Chile, as well as solidarity and support for the people of Chile as they plan for recovery and reconstruction. Introduced on March 9, 2010, and agreed to in the House on March 10, 2010.

H.R. 4783. The Act to accelerate the income tax benefits for charitable cash contributions for relief of victims of the earthquake in Chile, and to extend the period from which such contributions for the relief of victims of the earthquake in Haiti may be accelerated. Contributors may deduct their donations made by April 15, 2010 from their 2009 tax return. Introduced in the House March 9, 2010, and passed in the House and introduced in the Senate on March 10, 2010.

Appendix E. How to Search for or Report on American Citizens in Chile and How to Obtain Security Information Updates

This section prepared by (name redacted), Information Research Specialist, Knowledge Services Group.

The Department of State has provided phone numbers and an e-mail address for reporting on American citizens who have been living or travelling in Chile:

The Chile Task Force phone number is 1-888-407-4747 and its e-mail address is ChileEarthquake@state.gov.

In order to expedite your request, provide the individuals full name, birth date, birthplace, location and contact information in Chile as well as any special circumstances.

American citizens living or travelling in Chile may register via the Department of State website at https://travelregistration.state.gov/ibrs/ui/, or may register in person at the U.S. Embassy in Santiago, located at Avenida Andres Bello 2800, Las Condes. The embassy phone number is 56-2-330 30 00, the fax number is 56-2-330 30 05. Their after-hours emergency phone number is 56-2 330-3000, and email address is SantiagoAmcit@state.gov.

Information about making phone calls from Chile to the United States and from the United States to Chile may be found at http://chile.usembassy.gov/calling-us-chile.html.

The Department of State frequently updates security conditions using the following phone numbers: 1-888-407-4747 (from inside the United States) and 1-202-501-4444 (from outside the United States).

Appendix F. Links for Further Information

This section prepared by (name redacted) and (name redacted), Information Research Specialist, Knowledge Services Group

U.S. Government Agencies

U.S. Agency for International Development (USAID)

http://www.usaid.gov/helpchile/

U.S. Department of State

http://www.state.gov/chilequake

U.S. Department of State Travel Warnings and How to Locate or Report Status of American Citizens

http://travel.state.gov/travel/cis_pa_tw/pa/pa_4737.html

U.S. Department of State Embassy, Santiago Chile

http://chile.usembassy.gov/2010press0304-relief.html

U.S. Geological Survey

http://earthquake.usgs.gov/earthquakes/recenteqsww/Quakes/us2010tsa6.php#details

White House

http://www.whitehouse.gov/blog/2010/02/27/information-chilean-earthquake-and-tsunamiwarnings

Other Resources

Center for International Disaster Information (CIDI)

http://www.cidi.org/incident/chile-10b/

Embassy of Chile, Washington DC

http://www.chile-usa.org/

European Commission for Humanitarian Aid (ECHO)

http://ec.europa.eu/echo/index_en.htm

InterAction

http://www.interaction.org/crisis-list/interaction-members-respond-earthquake-chile

Inter American Development Bank

http://www.iadb.org/countries/home.cfm?id_country=CH

International Monetary Fund

http://www.imf.org/external/country/chl/index.htm

Organization of American States/Pan American Development Foundation

http://www.panamericanrelief.org/ht/d/sp/i/19624/pid/19624

Pan American Health Organization/World Health Organization

http://new.paho.org/disasters/index.php?option=com_content&task=view&id=1133&Itemid=103 6

Red Cross Movement

American Red Cross

http://www.redcross.org/portal/site/en/menuitem.1a019a978f421296e81ec89e43181aa0/?vgnextoid=d0206aafe5517210VgnVCM10000089f0870aRCRD

Chilean Red Cross

http://www.cruzroja.cl/

International Committee of the Red Cross

http://www.icrc.org/Web/Eng/siteeng0.nsf/htmlall/chile?OpenDocument

International Federation of the Red Cross

http://www.ifrc.org/where/country/cn6.asp?countryid=46

Relief Web

http://www.reliefweb.int/rw/dbc.nsf/doc104?OpenForm&rc=2&cc=chl

United Nations

United Nations Children's Fund (UNICEF) http://www.unicef.org/infobycountry/chile_52861.html

United Nations News Center

http://www.un.org/apps/news/story.asp?NewsID=34043&Cr=chile&Cr1=

United Nations World Food Program (WFP)

http://www.wfp.org/content/immediate-response-earthquake-chile

World Bank

http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/CHILEEXTN/0,,menu PK:325279~pagePK:141159~piPK:141110~theSitePK:325273,00.html

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