



DISASTER RISK REDUCTION – LATIN AMERICA AND THE CARIBBEAN

OVERVIEW

Countries in Latin America and the Caribbean (LAC) experience a multitude of natural hazards, including earthquakes, hurricanes, floods, tsunamis, landslides, volcanoes, forest fires, and drought. El Niño, a climate pattern that occurs on average once every three to seven years, periodically exacerbates the impacts of hydrometeorological events. Environmental degradation and poor land-use management also increase populations’ vulnerability to natural hazards.

USAID’s Office of U.S. Foreign Disaster Assistance (USAID/OFDA) supports disaster risk reduction (DRR) programs aimed at saving lives, alleviating human suffering, and reducing the social and economic impact of disasters in LAC. These programs include risk identification, prioritization, and reduction, as well as post-disaster recovery and short-term rehabilitation projects. The focus of DRR funding in LAC is to enhance local and national self-sufficiency in disaster preparedness and management throughout the region. To this end, USAID/OFDA’s programs build upon and strengthen the capacity of established national and regional disaster management institutions, many of which are capable of meeting the majority of emergency needs after an event.

Established in 1989, the Regional Disaster Assistance Program (RDAP) is the primary vehicle for USAID/OFDA’s support of disaster risk management in LAC. USAID/OFDA’s team of five regional advisors based in San José, Costa Rica, and a consultant network of 20 disaster risk management specialists dispersed throughout the region, oversee and monitor RDAP and other DRR programs. Since its inception, RDAP has contributed to the increased capacity of disaster management personnel and governments in LAC countries. As this capacity has improved, USAID/OFDA support has shifted from a strictly instructional approach to providing more technical assistance for planning, strengthening, and centralizing the role of national organizations in disaster management. USAID/OFDA’s technical assistance focuses on supporting local disaster management trainers to instruct local disaster responders in emergency response procedures. Through RDAP, USAID/OFDA has helped expand local and regional capabilities, improve intra- and inter-governmental coordination, and strengthen disaster preparedness and mitigation activities, as well as risk management initiatives.

USAID/OFDA supports the development of risk management in LAC through a wide range of programs. During FY 2012, USAID/OFDA provided nearly \$16.9 million for DRR projects throughout LAC, including programs that integrate DRR with disaster response. The programs discussed herein include both FY 2012-funded programs as well as ongoing programs funded in previous fiscal years.

FY 2012 DRR FUNDING IN LAC¹	
Stand-Alone DRR Programs in LAC <i>(see pages 2-8)</i>	\$8,204,854
Programs that Integrate DRR with Disaster Response ² <i>(see page 9)</i>	\$8,680,354
TOTAL DRR Funding in LAC	\$16,885,208

¹ Year of funding indicates the FY of obligation, not appropriation, of funds.

² The figure reported represents the integrated DRR–response portion of larger disaster response programs.

STAND-ALONE DRR PROGRAMS IN LAC

In FY 2012, USAID/OFDA provided more than \$8.2 million for stand-alone DRR initiatives to improve preparedness and to mitigate and prevent the worst impacts of disasters in the LAC region. USAID/OFDA provided additional funding for regional and global stand-alone programs, which include activities in LAC to strengthen disaster preparedness. At the regional and country levels, USAID/OFDA and implementing partners engaged communities, local and national governments, international and regional organizations, and non-governmental organizations to develop effective strategies—tailored to the needs of at-risk populations—to reduce the risk of disasters. These programs reflect USAID/OFDA’s commitment to support capacity development; strengthen linkages between risk identification, monitoring, early warning, and early action; and expand partnerships and joint programming. When possible, USAID/OFDA programs address contributing factors that exacerbate recurrent disasters, including environmental degradation, rapid urban growth, and social, economic, and environmental trends.

Global and Regional Programs Active in LAC

- DRR in the Americas (Year 5 of 5): In FY 2008, USAID/OFDA entered into a five-year cooperative agreement with Florida International University (FIU) in Miami to strengthen existing DRR programs and to reinforce knowledge of DRR practices among public and private sector organizations—including universities—in the LAC region. During the final year of the program, which began in September 2012, FIU will continue to strengthen existing DRR capabilities by supporting the educational and professional development of the next generation of DRR “thinkers” in Latin America through scholarships, student and faculty exchanges, and small grants. Through the DRR in the Americas program, universities throughout Latin America are beginning to graduate professionals—urban planners, land-use managers, and builders—who are knowledgeable about disaster risk management and better able to incorporate DRR into their national plans for sustainable development. In FY 2012, USAID/OFDA provided more than \$880,000 in continued funding for DRR in the Americas, bringing the total to more than \$4.5 million since 2008.
- Paul C. Bell, Jr., Risk Management Initiative: In FY 2012, USAID/OFDA continued to provide support to FIU for Phase V of the Assessment of LAC Risk Management Curricula program, known also as the Paul C. Bell, Jr., Risk Management Initiative. Phases I and II involved assessing the state of disaster, emergency, and risk management instruction in institutions of higher education in the LAC region and selecting three institutions in South America to receive small grants and assistance to strengthen disaster management learning. During Phases III and IV, the program continued to provide scholarships and facilitate faculty and student exchanges, as well as public and private sector internships. In addition, six universities in Costa Rica, Colombia, El Salvador, Guatemala, and Peru received small grants to carry out community DRR projects. In Phase V—a three-year period that began in July 2009—the program has focused on enhancing the sustainability of risk reduction programs. In FY 2012, FIU continued to manage the 2010 Bell Fellowship awards—scholarships given to nine individuals committed to disaster management—and expanded trainings for university professors and practitioners in the LAC region on geographic information systems and remote sensing technology. New programs in FY 2012 included an on-site workshop and online training on disaster risk modeling, with FIU staff guiding Central and South American institutional and university researchers through the process of appropriate data source selection and proposal design. Through the workshop, participants gained a deeper understanding of the potential for remotely sensed data to strengthen disaster risk modeling. To date, total Phase V funding to FIU for the Paul C. Bell, Jr., Risk Management Initiative amounts to more than \$1.6 million.
- Volcano Monitoring in Latin America: The U.S. Geological Survey (USGS) Volcano Disaster Assistance Program (VDAP) provides technical assistance, equipment, and training to volcano observatories in developing countries around the world to strengthen monitoring networks and improve capabilities for assessing volcano hazards and forecasting eruptive behavior. In the LAC region in FY 2012, VDAP provided technical consultation and remote sensing data on eruption and seismic crises for active volcanos in Chile, Colombia, Ecuador, Guatemala, Mexico, and Nicaragua. In addition, VDAP provided on-site crisis responses at Pacaya, Guatemala, and Nevado del Ruiz, Colombia. USAID/OFDA provided more than \$444,000 in FY 2012 to USGS in continued support of VDAP activities in LAC. Since 1986, USAID/OFDA support for VDAP in the LAC region totals more than \$9 million.
- Early Warning Remote Sensing and LAVAS Workshop: USAID/OFDA provided \$135,000 to USGS in FY 2012 both to support volcanic countries in the LAC region with early warning remote sensing data technology and for a workshop of the Latin American Association of Volcano Seismologists (LAVAS)—a group founded through VDAP

that includes the principal volcano seismologists from all the volcanic LAC countries. LAVAS plans to hold the annual workshop in Manizales, Colombia, during February 2013.

- Study Tours to Prepare for Urban Disasters: In FY 2012, USAID/OFDA provided more than \$58,000 to enable selected disaster management professionals in the LAC region to attend two study tours in Haiti focused on urban shelter and settlements issues in post-disaster situations. The tours enabled participants to survey and share urban DRR techniques, including best practices and lessons learned from the 2010 Haiti earthquake response. Upon completion, study tour participants returned to their respective countries with a clearer understanding of viable measures to reduce the potential impacts of urban disasters and assist their own governments in designing appropriate mitigation strategies for urban environments. These two study tours followed the initial tour in October 2011.
- Seismic Hazard Mapping in South America and Prioritization of High Risk Locations across LAC: In FY 2012, USAID/OFDA provided nearly \$110,000 to USGS to support two complementary projects that further develop seismic hazard and risk products for the LAC region. The first project focuses on identifying and quantifying LAC locations with high seismic hazard coupled with high population density. The second project compiles geological and seismological data to serve as the basis of new seismic hazard maps for the Regional Center for Seismology in South America, the Global Earthquake Model (GEM), and USGS to better assess the short- and longer-term hazards facing South America and, in the process, strengthen regional capacity for seismology and engineering earthquake hazard expertise.
- International Cooperative Framework for Disaster Reduction: With \$150,000 in USAID/OFDA assistance in FY 2012, the U.N. International Strategy for Disaster Reduction (UNISDR) coordinated partners working to minimize the adverse impacts of natural hazards through enhancing the capability of vulnerable groups and local communities to prepare for, respond to, and recover from disasters. The USAID/OFDA–UNISDR collaboration further develops government capacities to design and execute actions aimed at building resilience of cities and communities to urban disaster risk. Among other activities in the LAC region, the UNISDR Making Cities Resilient global campaign, launched in May 2010, focuses on developing urban risk management strategies within participating municipalities. Based on the successes and lessons learned in phase one (2010-2011), in 2012 the campaign began phase two activities—active through 2015—which shifted to more program implementation, including city-to-city learning and cooperation, local action planning, and monitoring progress of building resilience in cities.
- 2012 ITIC Training Program: In August 2012, the International Tsunami Information Center (ITIC) hosted an 11-day course in Hawaii to train scientists on standard operating procedures for tsunami warning and emergency response to local and regional tsunamis. USAID/OFDA provided \$35,000 to support the course and the participation of four scientists from the LAC region. Participants reviewed the planned new international tsunami forecast products of the Pacific Tsunami Warning Center, which is based in Hawaii, and learned about the history and operation of the Pacific Tsunami Warning and Mitigation System. The course emphasized the importance of regional and national tsunami warning centers in monitoring and evaluating the potential of earthquakes to cause tsunamis and issuing timely tsunami warning messages to government emergency officials.
- Views from the Frontline: USAID/OFDA provided Tearfund with nearly \$440,000 in FY 2012 to enhance DRR at the community, national, and regional level through support to the Global Network of Civil Society Organizations for Disaster Reduction's Views from the Frontline project. The project seeks to build resilience to disasters by increasing the effectiveness of global civil society groups. Views from the Frontline incorporates the concerns of vulnerable populations into DRR policy and practice by strengthening linkages between local, national, regional, and international groups. In FY 2012, Views from the Frontline focused on local implementation of DRR initiatives; completed a video project, entitled Action at the Frontline, to document strong and weak DRR practices; held regional workshops to build relationships and establish regional action plans; developed a network of community practitioners; and incorporated a multi-risk resilience approach by linking disasters to climate change and development. Views from the Frontline efforts involve 70 countries worldwide, including Costa Rica, the Dominican Republic, Guatemala, Haiti, and Nicaragua in the LAC region.
- Integration of Global and Regional Seismic Risk Modeling Activities: With a global grant from USAID/OFDA in FY 2012, the GEM Foundation continues to coordinate 11 ongoing projects that examine risks, social vulnerability,

and resilience associated with seismic hazards around the world, including in the LAC region. GEM is a public-private partnership focused on applying global best practices for seismic risk assessment at the local and regional levels through developing and deploying standards, databases, and software tools. Through this USAID/OFDA-funded initiative, national and international disaster management organizations, governments, scientific institutions, and individual experts, professionals, and practitioners are working to transfer knowledge of these best practices and earthquake-monitoring technology to a number of regions around the world.

- Regional Climate Variability and Prediction Workshops: In FY 2012, USAID/OFDA and the National Oceanic and Atmospheric Administration (NOAA)—in partnership with the World Meteorological Organization (WMO), the Korean Meteorological Administration, and Costa Rica’s National Meteorological Institute (IMN)—organized the fourth International Training Workshop on Climate Variability and Predictions, which took place in Costa Rica. USAID/OFDA provided approximately \$150,000 in FY 2012 for LAC participants from Argentina, Barbados, Belize, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Peru, and Uruguay, among other countries in the Pacific basin, to attend the international training workshop. The workshop provided practical hands-on training on the use of climate prediction, diagnostics, and monitoring tools to advancing participants’ knowledge and experience in state-of-the-art systems to improve short-term climate predictions. The training was part of a series of workshops conducted since 2009 throughout the world that address the trans-boundary nature of climate change by encouraging cross-continental information exchange among meteorologists and build national and regional capacity to monitor and predict climate variability.

Caribbean Programs

Regional

- Saving Lives in the Caribbean through Preparedness: With previous year funding, the American Red Cross (AmRC) continued to enhance the capacity of more than 75,000 people in 34 communities in the Bahamas, Belize, and Saint Lucia to better mitigate and respond to the adverse effects of climate change and disasters. The Saving Lives in the Caribbean through Preparedness project incorporates lessons learned from the USAID/OFDA-funded Readiness to Respond program and complements and leverages resources invested through other disaster preparedness projects in the Caribbean region. Through the two-year project, AmRC is increasing the resilience of vulnerable communities by raising awareness of local disaster-related risks and assisting communities in mobilizing appropriate preparedness mechanisms and activities.
- Youth-Focused DRR: With USAID/OFDA funding from a previous year, Catholic Relief Services (CRS) continued to engage and train youth in at-risk communities in the Dominican Republic, Grenada, Jamaica, and Saint Lucia on DRR and preparedness principles through the Youth Emergency Action Committees (YEAC) II: Empowering Youth in the Caribbean for Community Disaster Risk Reduction program. The program aims to establish a long-term foundation for DRR and mitigation efforts through the creation and training of YEACs as a means to engage youth as leaders in community risk reduction processes. CRS trained community members in disaster preparedness, mitigation, and management; developed community hazard risk reduction plans; and selected, planned, and implemented hazard risk mitigation activities. In FY 2012, small-scale DRR activities strengthened DRR community awareness, including through informational home visits in the Dominican Republic and gully clean-up events in Jamaica and Grenada.
- Seminar on Seismic Risk Reduction in the Caribbean: USGS staff attended the August 2012 European Commission’s Directorate-General for Humanitarian Aid and Civil Protection-sponsored seminar, which discussed seismic risk reduction in the Caribbean. Approximately 100 representatives from U.N. agencies, International Federation of Red Cross and Red Crescent Societies, national emergency offices of Caribbean countries, and international experts participated in the event. During the seminar USGS staff presented on a USAID/OFDA-funded project that will reduce the seismic risk in Haiti and on a planned project to reduce the seismic risk near the city of Santiago de los Caballeros in the Dominican Republic.
- Regional DRR Coordination: In FY 2012, USAID/OFDA provided \$50,000 to the Caribbean Disaster Emergency Management Agency (CDEMA) to support the sixth annual Comprehensive Disaster Management (CDM) conference. The yearly CDM conference, held immediately following the end of the Atlantic basin hurricane season, provides a forum for networking, training, and sharing information on best practices across the Caribbean disaster

management spectrum. The 2011 CDM, held in Trinidad during December, included a component focused specifically on promoting and engaging youth in disaster management and preparedness strategies.

Dominican Republic

- Community-Level DRR: With previous year funding, USAID/OFDA continued to support the Dominican Development Institute (IDDI) to decrease vulnerability in Los Mina community in Santo Domingo, Dominican Republic. The Disaster Preparedness to Achieve Communities with Resilience Capacity program focused on reducing vulnerability through community-level DRR training and capacity building exercises. IDDI emphasizes increased disaster preparedness among youth, including through risk reduction training for teachers, risk reduction campaigns in schools, and the development of school emergency plans. A team of volunteer program facilitators, trained by IDDI on DRR mitigation and response activities and education methodologies, grew by 24 persons to more than 80 in total in FY 2012. The volunteer facilitators completed home visits and gave public talks to educate the community on disaster mitigation techniques, and also staffed temporary shelters during Tropical Storm Isaac in August 2012.
- Studying Hispaniola's Septentrional Fault: In FY 2012, USAID/OFDA provided more than \$182,000 to USGS to conduct a technical assistance mission to study the Septentrional fault line in order to assess the seismic hazard risk to the city of Santiago de los Caballeros and other population centers within the rapidly growing Cibao Valley in northern Dominican Republic. The January 2010 earthquake that significantly damaged Haiti demonstrated the vulnerability of Hispaniola to large earthquakes due to its location along the seismically active Caribbean-North American plate boundary. This plate boundary comprises several large, active faults, including the Septentrional Fault, which traverses the Cibao Valley. In addition to excavations along the fault line, the technical assistance mission will train selected Dominican student geologists through hands-on field experience.

Haiti

- Improving Haiti's Seismic Network: USAID/OFDA provided more than \$86,000 in FY 2012 to USGS for the second phase of the USGS Earthquake Disaster Assistance Team (EDAT) mission to Haiti. The EDAT mission collected geological and seismological information to assess the short- and long-term seismic hazards facing Haiti and emphasized capacity building hands-on instruction with instrument deployment and operations in the field, training courses in Port-au-Prince, and short training visits to USGS by local professionals and students. In FY 2012, EDAT expanded on activities from the first phase of the project by maintaining the continuity of seismic monitoring, building on initial outreach efforts with Haitian agencies to establish a permanent seismic monitoring network in Haiti, and providing further training to the Government of Haiti (GoH) Bureau of Mines and Energy.
- Support to the National System for Risk and Disaster Management: In FY 2012, USAID/OFDA provided more than \$300,000 to the U.N. Development Program to support the GoH in further developing its national institutional capacity for disaster mitigation and response. The project provided the GoH Department of Civil Protection (DPC)—the government agency responsible for emergency preparedness and response—with critical technical staff seconded from UNDP that enabled better management of DPC operations during emergencies. The support contributed to more timely preparation for the 2012 hurricane season, particularly through the organization of departmental-level and national-level disaster simulation exercises, which improved national-level coordination with department-level DPC units and incorporating lessons learned from previous responses. 2012 marked the first year that the GoH, with support from USAID/OFDA and others, organized disaster simulation exercises in each of Haiti's 10 departments.
- Community Initiatives in Disaster Risk Reduction: In FY 2012, USAID/OFDA provided more than \$1.6 million to World Concern Development Organization (WCDO) to enable vulnerable urban communities in Port-de-Paix and Anse-à-Foleur in Haiti's Northwest Department to identify risks associated with and reduce the impact of disasters. Utilizing a comprehensive neighborhood approach—defined by USAID/OFDA as an integrated and multi-sectoral analytical framework that centers on the geographic confines of neighborhoods in order to address disaster risks in the urban environment—the project retrofits community infrastructure, including churches and schools, to be hurricane- and earthquake-resistant and also trains local builders on government construction standards. WCDO also promotes public health campaigns and hygiene education and conducted select community rehabilitation projects to reduce the risk of waterborne disease. WCDO works closely with the GoH DPC to identify

vulnerability across communities and conduct participatory training programs with community members. The project is targeting more than 26,000 beneficiaries by early 2014.

Jamaica

- Increasing the Resilience of Farming Communities: Previous year funding from USAID/OFDA supported HelpAge International with ongoing programming that assisted farmers in nine communities in Jamaica's St. Catherine and Portland parishes to safeguard their livelihoods from the impact of natural disasters. The project strengthened preparedness and response capabilities of families with children and older persons, farmers, and the communities at large through capacity building, training in crop protection, and livestock protection. The project also employed an inter-generational approach to capacity strengthening, where children are trained and able to pass on information to other household members, particularly older persons with low literacy levels.

Central America Programs

Regional

- Regional Conference on Risk Reduction: In FY 2012, USAID/OFDA provided nearly \$72,000 to the Central American Coordination Center for the Prevention of Natural Disasters (CEPREDENAC) to support the Regional Advisory Forum of the Central American Policy for Integrated Risk Reduction, held in El Salvador on December 14, 2011. During the forum, organized in preparation for the summit of Heads of State of the Central American Integration System on December 16, participants developed recommendations to advance comprehensive disaster risk management and climate change adaptation. During the summit, regional government leaders signed a joint declaration agreeing on various recommendations, including a request for CEPREDENAC to continue promoting the Central American Comprehensive Risk Management Policy. The joint declaration also called for strengthening the Regional Mechanism for Mutual Disaster Assistance and the creation of a Central American fund within the Central American Economic Integration Bank that would provide resources and technical assistance to improve comprehensive disaster risk management for countries in the region.
- Strengthening National Emergency Management Capacities in Central America: In FY 2012, USAID/OFDA provided \$250,000 to CEPREDENAC to strengthen the capacity of national risk management institutions in urban areas in Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. The project supported regional and national efforts to promote comprehensive disaster risk management through educational and training processes in order to reduce the vulnerability of urban environments to natural disasters.

El Salvador

- Community-Level Disaster Preparedness in El Salvador: With funding from a previous year, USAID/OFDA continued to support CRS to strengthen disaster management capacities of vulnerable communities in the sub-watershed of the Acahuapa River in El Salvador. The project focused on training youth on disaster preparedness through creating community risk maps, promoting community awareness, and identifying appropriate community-level risk mitigation projects in coordination with local government officials. Among other activities in FY 2012, 17 local communities improved their capacity for disaster preparedness, impact mitigation, and emergency response. In these communities, CRS supported members of El Salvador's Community Civil Protection Committee (CCPC) to increase leadership skills and knowledge of first aid, as well as their participation in various project-training sessions that enabled them to replicate trainings in their home communities.
- Building Disaster Resilient Communities in El Salvador: In FY 2012, USAID/OFDA continued to fund Save the Children/U.S. (SC/US) with a project that strengthens resilience to disasters of vulnerable communities in rural El Salvador. Given its emphasis on school-based DRR initiatives, the project conducted 30 drills in schools with the participation of more than 5,000 students and adults. With the support of the Government of El Salvador Ministry of the Environment, SC/US also organized a training workshop on early warning systems and contingency planning in the event of a tsunami. In addition, the project enabled the construction of clear evacuation signage in 11 communities located in areas at high risk of floods.

Guatemala

- Securing Neighborhoods Against Natural Disasters in Guatemala: USAID/OFDA provided approximately \$1 million in FY 2012 to CRS to implement the Safer Neighborhoods program in Quetzaltenango city, Guatemala. The two-year program supports beneficiaries, local partners, government officials, and stakeholders in addressing the

needs of vulnerable residents in four Quetzaltenango neighborhoods for disaster mitigation. Through multiple, cross-cutting strategies—including alignment with government plans and policy, linkage with the UNISDR’s Making Cities Resilient campaign, participatory education, and gender mainstreaming—the project aims to benefit approximately 10,000 people through retro-fitting houses against flooding and seismic hazards, improving environmental health, and training and organizing communities and key stakeholders in disaster preparedness and management.

- **Reducing Vulnerability in Urban Guatemala:** In FY 2012, USAID/OFDA provided nearly \$2 million to fund the two-year My Neighborhood program, implemented by Project Concern International (PCI). The program targets nearly 18,500 inhabitants in 17 informal neighborhoods in Mixco, Guatemala, to reduce urban risk in coordination with private-sector partners, national and municipal agencies, universities, and other local communities. Specifically, the My Neighborhood program will reduce neighborhood vulnerability to landslides, floods, high winds, and seismic activity in high-risk informal settlements by developing a scalable model to improve water and sanitation infrastructure, reconfigure settlements, and improve shelters. The program utilizes the neighborhood approach and reinforces the livelihoods of vulnerable urban households by facilitating an integrative, participatory, and consultative planning process with the beneficiary communities.

Nicaragua

- **Reducing Hydrometeorological Risk in Nicaragua:** Through funding provided in a previous year, USAID/OFDA supported CRS to help ensure that communities residing near the Lower Coco River in Nicaragua have a long-term plan for sustainably reducing risks resulting from chronic flooding and other hydrometeorological disasters. In FY 2012, project activities included the completion of designs for emergency shelters and tender of their construction contract, the commencement of the Vulnerability Analysis and Mapping study, and the initiation of a community-training component to improve community early warning systems and emergency response mechanisms.
- **Community-Level Disaster Preparedness in Nicaragua:** With support from a previous year, USAID/OFDA funded CARE to help strengthen communities in Masaya and Managua departments in Nicaragua in preparing for, mitigating, and responding to geological and hydrometeorological hazards. Among other activities, in FY 2012 CARE facilitated 17 local disaster prevention, mitigation and response committees in La Concepción, Masatepe, Masaya, and Ticuantepe municipalities to organize, train, and create local response plans with a risk-reduction focus, including the strengthening of early warning systems to monitor seismic, volcanic, and flood threats.

South America Programs

Regional

- **Increasing Resilience across South America:** With funding from a previous year, USAID/OFDA provided assistance to the AmRC to increase the resilience of nearly 50 vulnerable communities in Colombia, Ecuador, and Paraguay. In FY 2012, USAID/OFDA’s support continued to help raise the awareness of disaster risks, including those related to climate change, and assisted communities to mobilize appropriate preparedness and response mechanisms. For example, in coordination with local Red Cross societies, AmRC helped organize training workshops for first aid and community-based contingency planning in Ecuador and Paraguay and maintained relationships with key local stakeholders in Colombia through emergency simulations with municipal authorities to test response team skills.

Bolivia

- **Toward Resilience—A Guide to Disaster Risk Reduction and Climate Change Adaptation:** USAID/OFDA supported CRS to develop, on behalf of the Emergency Capacity Building Project Consortium of six NGOs, “Toward Resilience: A Guide to Disaster Risk Reduction and Climate Change Adaptation.” The guide fills an existing resource gap for development and humanitarian response professionals, as well as government disaster management agencies worldwide, by providing suggestions for integrating DRR and climate adaptation concepts into projects. The guide is available at <http://www.ecbproject.org/new-practitioners-guide-to-disaster-risk-reduction-drr/practitioners-guide-to-drr-cca>. USAID/OFDA allocated a portion of total funding from a previous year toward the initiative in Bolivia.

Chile

- **Sustainable National Seismic Monitoring in Chile:** USAID/OFDA provided nearly \$20,000 to USGS in FY 2012 to provide technical assistance to the Chilean National Emergency Office of the Ministry of the Interior and Public

Security and the University of Chile for the establishment of a comprehensive national seismic monitoring system. Technical staff worked with institutional partners on issues related to technology transfer, seismic monitoring, and delivery and use of USGS National Earthquake Information Center (NEIC) products targeted at emergency response applications. In addition, USGS collaborated with research partners on the development of seismic velocity models, identification of ground truth seismic events, and other seismic monitoring parameters required by the NEIC to improve seismic monitoring in support of Chilean efforts.

Ecuador

- Training Mayors in ICS: Through RDAP, USAID/OFDA has supported the training and use of Incident Command System (ICS) in Guayaquil, Ecuador, for several years. Guayaquil's municipal government has enacted a city ordinance establishing ICS as the organizing principal for all emergencies and disaster responses. The Government of Ecuador's National Risk Management Secretariat has adopted the ICS approach and, based on the Guayaquil experience, is committed to implementing ICS in all municipalities. The March 2012 training for national and provincial level representatives supplemented existing knowledge regarding the use of ICS and addressed strategies for incorporating risk management and mitigation in municipal development planning.
- Strengthening Community Preparedness and Response to Disasters in Ecuador: With funding from a previous year, USAID/OFDA supported CARE to help reduce populations' vulnerability to natural and technical disasters by strengthening disaster preparedness and response capabilities of community institutions. The project builds institutional capacity for disaster risk management at the local, provincial, and national level, and also includes the rehabilitation of houses located in high risk areas with a focus on the most vulnerable populations, including women, children, the disabled, and the elderly. In FY 2012, activities targeted 30 communities in rural and urban areas of the municipalities of Cumandá, El Triunfo, General Antonio Elizalde, La Troncal, and Pallatanga.

Peru

- Supporting Urban Risk Reduction in Peru: USAID/OFDA provided nearly \$1.2 million in FY 2012 to SC/US to help inhabitants of high-risk areas in urban Lima become more resilient to disasters. The two-year program targets approximately 17,500 people in Sector VII, Villa El Salvador district—one of Lima's 42 districts—located south of the metropolitan center. With USAID/OFDA support, the program mobilizes neighborhoods around integrated DRR strategies that include livelihoods, shelter, gender, and child protection. The program is aligned with municipal and national DRR strategies, including decentralization, and works closely with the Government of Peru and other stakeholders.
- Reducing Vulnerability to Natural and Technological Risks in Peru: With funding from a previous year, USAID/OFDA supported CARE in FY 2012 to enhance preparedness in shelter and help produce national guidelines for community-based early warning systems in coordination with the Government of Peru's National Institute for Civil Defense and National Meteorology and Hydrology Service (SENAMHI). As part of the project in FY 2012, SENAMHI received scientific equipment for 10 conventional and two automatic weather stations, which will strengthen the weather forecast service and early warning system capacities. In addition, CARE worked with the private sector to design and facilitate shelter options for various disaster scenarios, in conjunction with national officials.
- Developing Public–Private Sector Partnerships: An important element USAID/OFDA's DRR work is to support regional events to facilitate knowledge exchange and increase public and private sector cooperation in disaster risk management. In FY 2012, USAID/OFDA provided nearly \$34,000 in funding for the Partnerships between the Public and Private Sectors for Disaster Risk Management: Continuity of Government and Continuity of Operations during Disaster Situations seminar in Lima, Peru, on June 7 and 8. The Latin American and Caribbean Economic System and UNISDR organized the event, with additional support from the Government of Peru's National Civil Defense Institute (INDECI) and USAID/OFDA. The seminar underscored the importance of adopting a preventive approach to disaster risk management that emphasizes participation and the collective and coordinated efforts of governments and other actors, including the private sector.
- Disaster Preparedness Training: In FY 2012, USAID/OFDA provided \$3,000 through INDECI to support national disaster preparedness training for emergency management officials and authorities in Ica city, the area most affected

by a magnitude 8.0 earthquake in 2007. The training was held in coordination with the fifth anniversary of the earthquake, which resulted in more than 500 deaths.

PROGRAMS THAT INTEGRATE DRR WITH DISASTER RESPONSE

In addition to stand-alone DRR programs implemented to prevent or mitigate the effects of hazards in the region, USAID/OFDA integrates preparedness and mitigation into disaster response, early recovery, and transition programs. These initiatives, which are in accordance with regional DRR strategies, incorporate risk reduction objectives into a broad range of sectoral interventions to increase the resilience of communities to future shocks. In FY 2012, USAID/OFDA provided nearly \$8.7 million to develop response capacity in the LAC region.

Global and Regional Programs Active in LAC

- **RDAP:** In FY 2012, USAID/OFDA provided more than \$6 million to the International Resources Group to continue RDAP activities in the LAC region. Through RDAP, USAID/OFDA maintains a network of disaster risk management specialists throughout LAC who provide technical assistance on disaster preparedness and mitigation activities, as well as oversee a multi-course DRR program with instruction in disaster management concepts, training methodology, and technical disciplines as described above. In FY 2012, RDAP continued to provide emergency response support, including for monitoring and evaluating the following events and emergencies throughout the LAC region: activity at Nevado del Ruiz Volcano in Colombia and Tungurahua Volcano in Ecuador; earthquakes in Guatemala and Costa Rica; fires in Ecuador; heavy rains in Costa Rica, Haiti, and Panama; Pacific Hurricane Carlotta in Mexico; Hurricane Ernesto in the eastern Caribbean and Mexico; and Tropical Storm Isaac in the Caribbean.
- **Emergency Health Preparedness Program:** In FY 2012, USAID/OFDA provided \$1.15 million to the Pan American Health Organization (PAHO) for activities including advocacy, increasing the capacity of health professionals, and improving technical information services and human resources training in health, environment, and related sectors in the LAC region. The program, which began in January 2009, is focused on increasing preparedness capacity in the health sector through the continuous training of partner organization staff and health ministry personnel, in addition to advocacy and technical support to update or improve health policy and legislation. USAID/OFDA has supported PAHO to promote improved disaster preparedness and response in the health sector throughout LAC since 1998.
- **Improving Resilience in Urban Disasters:** With funding from a previous year, USAID/OFDA supported the U.N. Office for the Coordination of Humanitarian Affairs (OCHA) to develop the capacity of local governments in the LAC region to design and execute actions aimed at building the resilience of cities and communities to urban disaster risks.

Caribbean Programs

Haiti

- **2012 Storm Season Preparation and Capacity Building in Haiti:** To continue to improve disaster preparedness and response in Haiti, USAID/OFDA provided \$1.5 million to the International Organization of Migration (IOM) in FY 2012 for pre-positioning, warehousing, and post-emergency distribution of USAID/OFDA-funded emergency relief commodities in four strategic locations around the country. In FY 2012, IOM distributed a range of relief commodities—including hygiene kits, blankets, water containers, kitchen sets, and plastic sheeting for shelter—to communities affected by heavy rains, floods, and Tropical Storm Isaac. The project also worked to build critical GoH capacity to manage emergency relief supplies and facilities through the development of an operational preparedness and response plan for improved warehousing and distribution of relief supplies and commodities in the event of an emergency. In addition, IOM conducted small- and larger-scale mitigation projects to reduce the risk of flooding in Port-au-Prince. These projects included the provision of tools and training to displacement camp committees for digging and maintaining small drainage canals, both in preparedness for floods and after rains and storms had hit. IOM also supported the installation of gully-plugs and retaining walls and the planting of water-retaining foliage, such as bamboo, in smaller tributaries in the hills above Port-au-Prince that feed into larger ravines downstream in urban areas. Furthermore, IOM conducted community mobilization and raised awareness of disaster risks in vulnerable neighborhoods outside displacement camps, including neighborhoods along ravines.

USAID/OFDA DRR FUNDING IN LAC IN FY 2012³

USAID/OFDA STAND-ALONE DRR PROGRAMS IN LAC					
Country/ Region	Program	Activity	Partner	Subtotal	Total
Caribbean	Regional DRR Coordination	Humanitarian Coordination and Information Management	CDEMA	\$50,000	\$50,000
Central America	Regional Conference on Risk Reduction	Humanitarian Coordination and Information Management	CEPREDENAC	\$71,691	\$321,691
	Strengthening Emergency Management Capacity of National Systems	Natural and Technological Risks	CEPREDENAC	\$250,000	
Chile	Sustainable National Seismic Monitoring System	Natural and Technological Risks	USGS	\$19,765	\$19,765
Dominican Republic	Paleoseismic study of the Septentrional Fault	Natural and Technological Risks	USGS	\$182,400	\$182,400
Ecuador	Ecuador Municipalities Meeting; Introduction to ICS	Administrative Support	USAID/Ecuador	\$8,259	\$8,259
Guatemala	Urban DRR in Guatemala	Economic Recovery and Market Systems, Shelter and Settlements, WASH	PCI	\$1,982,151	\$3,033,841
	Urban DRR in Guatemala	Natural and Technological Risks, Shelter and Settlements, WASH	CRS	\$1,051,690	
Haiti	Phase II EDAT Mission in Haiti	Natural and Technological Risks	USGS	\$86,127	\$1,995,927
	DRR in Northwest Haiti	Natural and Technological Risks, Shelter and Settlements, WASH	WCDO	\$1,608,992	
	Support one UNDP staff position seconded to DPC	Natural and Technological Risks	UNDP	\$300,808	
LAC	DRR in the Americas (Year 5 of 5)	Humanitarian Studies, Analysis, or Applications	FIU	\$880,507	\$1,376,267

³ Year of funding indicates the FY of obligation, not appropriation, of funds.

LAC (continued)	ITIC Hawaii 2012 Tsunami Training Program	Natural and Technological Risks	NOAA	\$35,000	
	VDAP Remote Sensing and LAVAS Meeting	Natural and Technological Risks	USGS	\$135,000	
	Preliminary Assessment of Risk in Central and South America and South America Hazard Assessment	Natural and Technological Risks	USGS	\$109,438	
	Support to UNISDR activities	Natural and Technological Risks	UNISDR	\$150,000	
	Haiti Study Tours II and III	Administrative Support	USAID/Haiti and USAID/EI Salvador	\$58,195	
	DRR Project Monitoring	Administrative Support		\$8,127	
Peru	Disaster Preparedness Training	Administrative Support	INDECI	\$3,000	\$1,216,704
	DRR Seminar to Support Public-Private Alliance	Administrative Support	USAID/Peru	\$33,974	
	Urban DRR in Peru	Economic Recovery and Market Systems, Shelter and Settlements, WASH	SC/US	\$1,179,730	
TOTAL USAID/OFDA STAND-ALONE DRR FUNDING IN LAC				\$8,204,854	
USAID/OFDA PROGRAMS THAT INTEGRATE DRR WITH DISASTER RESPONSE IN LAC⁴					
Country/Region	Program	Activity	Partner	Subtotal	Total
Haiti	Capacity Building misc.	Logistics and Relief Commodities	IOM	\$1,500,000	\$1,500,000
LAC	RDAP	Logistics and Relief Commodities	IRG	\$6,030,354	\$7,180,354
	Capacity Building misc.	Humanitarian Studies, Analysis, or Applications	PAHO	\$1,150,000	
TOTAL USAID/OFDA INTEGRATED DRR FUNDING IN LAC				\$8,680,354	
TOTAL USAID/OFDA DRR FUNDING IN LAC IN FY 2012				\$16,885,208	

USAID/OFDA bulletins appear on the USAID web site at <http://www.usaid.gov/what-we-do/working-crises-and-conflict/disaster-risk-reduction>

⁴ The figure reported represents the integrated DRR–response portion of larger disaster response programs.