BUREAU FOR DEMOCRACY, CONFLICT, AND HUMANITARIAN ASSISTANCE (DCHA)
OFFICE OF U.S. FOREIGN DISASTER ASSISTANCE (OFDA)

VOLCANO DISASTER ASSISTANCE PROGRAM (VDAP)

OVERVIEW

Since 1980, volcanic activity has killed more than 29,000 people globally and displaced more than 1 million others. With more than 1,500 potentially active volcanoes worldwide, an average of 10 eruptions a year cause significant damage and casualties, while major volcanic events occur several times a decade. Following the 1985 eruption of Nevado del Ruiz volcano in Colombia, which resulted in approximately 23,000 deaths, USAID/OFDA and the U.S. Geological Survey (USGS) established the Volcano Disaster Assistance Program (VDAP) to respond to international volcanic events. Funded by USAID/OFDA and implemented by USGS, VDAP has provided technical assistance to national volcano monitoring organizations since 1986. VDAP staff serve on the only international rapid-response volcano crisis team in the world. VDAP contributes to the enhancement of risk reduction and response capacity in developing countries through donating volcano-monitoring equipment to local volcano observatory staff to track changes at volcanoes, developing early warning plans, and monitoring technology and hazard assessment training. VDAP has supported capacity building programs in many countries, mainly in East Asia and the Pacific and Latin America and the Caribbean, where many of the most potentially deadly volcanoes are located. To date, VDAP has responded to 25 major crises and worked to build capacity in 12 countries, helping to save lives and protect property. USAID/OFDA has provided nearly $16.7 million worldwide to VDAP since its inception, including approximately $1.6 million in Fiscal Year (FY) 2009. The success of VDAP underscores the value of preparedness and long-term international partnerships and the establishment and maintenance of national monitoring networks.

VDAP Website: http://volcanoes.usgs.gov/vhp/vdap.php

WORLDWIDE VDAP TEAM DEPLOYMENTS

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Responding to Crisis in Tanzania

VDAP volcanologists collect ash samples with GST scientists at Ol Doinyo Lengai volcano, Tanzania (Photo courtesy of Gari Mayberry, USAID and USGS).

Between September 2007 and April 2008, Ol Doinyo Lengai volcano in northern Tanzania erupted explosively several times, following 40 years of low-level activity. The eruptions showered ash on nearby villages, contaminating the water supply. damaging grasslands, and forcing the temporary evacuation of villagers. In December 2008, the Government of Tanzania (GoT) requested U.S. Government technical assistance to conduct an assessment of hazards and risks resulting from the volcano. In January 2009, a three-person VDAP technical assistance team traveled to Tanzania. The team recommended disaster risk reduction education for local villagers to reduce the impact of hazards associated with potential future eruptions. In 2009, VDAP worked with the Geological Survey of Tanzania (GST), briefed the President of Tanzania on the volcano, conducted analysis on Ol Doinyo Lengai ash samples, and coordinated the translation of the International Volcanic Health Hazard Network ash guidelines pamphlet into Swahili. VDAP plans to prepare an in-depth volcano hazard map of the volcano in FY 2010.

Building Capacity in Indonesia

A CVGHM geologist uses a surveying instrument to monitor deformation at Lokon volcano, Sulawesi (Photo courtesy of John Ewert, USGS VDAP).

Since 2004, VDAP's capacity building project in North Sulawesi Province, Indonesia, has helped to strengthen local volcano monitoring, mitigation, and response capacity through technical assistance to the Center of Volcanology and Geological Hazard Mitigation (CVGHM). VDAP's capacity building work in Indonesia was enhanced by a rapid response in April 2006 when a four-person VDAP team assisted the CVGHM during the crisis response at Mt. Merapi volcano on Java Island by providing seismic data processing equipment, eruption forecasts, and remotely-sensed data. VDAP's technical assistance helped improve the Government of Indonesia and CVGHM's ability to respond to subsequent eruptions, including a partial collapse of Mt. Merapi's lava dome in June 2006. Since 2007, CVGHM and VDAP have increased the number of seismic volcano monitoring stations at volcanoes in North Sulawesi from 4 to 14, providing higher quantity and quality of data on small volcano-related earthquakes that serve as precursors to eruptions. The information enables CVGHM to forecast eruptions more accurately and quickly. In FY 2009, VDAP and CVGHM worked on a regional monitoring network in North Sulawesi, installing new stations on the volcanoes in the Sangihe Islands and a global positioning system for monitoring deformation at Lokon-Empung volcano on Sulawesi. In FY 2010 VDAP plans to continue helping strengthen the monitoring networks in North Sulawesi and Java. In total, USAID/OFDA has provided nearly $4.3 million, including $550,000 in FY 2009, to support VDAP in Asia.