

Mainstreaming Disaster Education in School Education

In disaster-prone regions, it is of utmost importance to build schools and other infrastructures with disaster mitigation measures from very early stage of planning. In Nicaragua, school buildings, under the grant aid programme, are being designed with anti-disaster measures.



Youth Champion event in Grenada

In small island states of the Caribbean, disaster education is incorporated in the education system. Mr. Kem Jones, who returned from Japan in 2010 after a training program, has started a competition for disaster preparedness among high schools in Grenada. He is trying to implant a culture to face disasters and be prepared, in self- and mutual-support in the communities.

Recent Projects in the Latin America Region

Country/Region	Project	Type	Duration
Central America	Project on Capacity Development for Disaster Risk Management in Central America, Phase 2	TC	2015~2020 (planned)
Honduras	The Project for Restoration of the Democracia Bridge	GRANT	2013~2015
Honduras	Landslide Prevention in Tegucigalpa Metropolitan Area	GRANT	2011~2015
Honduras	Assistance for Strengthening and Capacity Building of Professional Techniques for the Control and Mitigation of Landslide in Tegucigalpa Metropolitan Area	TC	2015~2016
El Salvador	Department of Adaptation for the Climate Change and Strategic Risk Management for Strengthening of Public Infrastructure in El Salvador	TC	2012~2015
El Salvador	Department of Adaptation for the Climate Change and Strategic Risk Management for Strengthening of Public Infrastructure in El Salvador Phase 2	TC	2015~2020 (planned)
El Salvador	Enhancement of Technology for the Observation of Earthquakes and Tsunamis	TC	2015~2017 (planned)
Nicaragua	Project for the Establishment of the Central American Tsunami Warning Regional Center	TC	2015~2018 (planned)
Caribbean	Disaster Management in the Caribbean Region	TC	2014~2016
Ecuador	The Project for Enhancement of Tsunami-Genetic Earthquake Monitoring Capability	TC	2014~2017
Colombia	Strengthening the National System for Disaster Risk Management by Developing Capacities to Reduce the Risk for the Flood Threats	TC	2015~2018 (planned)
Colombia	Project for Application of State of the Art Technologies to Strengthen Research and Response to Seismic, Volcanic and Tsunami Events, and Enhance Risk Management	SATREPS	2015~2019 (planned)
Peru	The River Basins Flood Protection Project in Coastal Area	LOAN	2014~2019
Peru	Stand-by Emergency Credit for Urgent Recovery (SECURE).	LOAN	2013~
Peru	Project for Enhancement of Earthquake and Tsunami Disaster Mitigation Technology in Peru	SATREPS	2010~2014
Peru	Project for Improvement of Equipment for Disaster Risk Management	GRANT	2014~2016
Chile	Disaster Risk Reduction Training Program for Latin America and the Caribbean	TC	2015~2020 (planned)
Chile	Project on Capacity Building for Seismic Events and Tsunamis	SATREPS	2012~2016
Chile	Updating of Bridge Seismic Regulations	TC	2014~2016
Brazil	Project for Strengthening National Strategy of Integrated Natural Disaster Risk Management	TC	2013~2017

TC: Technical Cooperation; GRANT: Grant Aid; LOAN: Official Development Assistance Loans; SATREPS: Science and Technology Research Partnership for Sustainable Development

JICA's Cooperation on Disaster Management Toward Mainstreaming DRR -Building Disaster Resilient Societies-

JICA's Cooperation Policy

Once a disaster occurs, society loses not only human lives, but also property and assets built by individuals and private companies as well as precious time and chances for various new developments. Moreover, significantly large amounts of funds will be required for emergency response, recovery and reconstruction after the disaster. As a result, it deprives people of opportunities for economic growth and makes it difficult to break away from the cycle of disaster and poverty.

JICA aims at "departure from the repeated poverty cycle caused by disasters" and "the achievement of sustainable development by disaster risk reduction." JICA intends to make strenuous efforts for cooperation in building disaster-resilient societies through "Mainstreaming DRR."



Emergency monitoring center in Brazil (Photo: Atsushi Shibuya/JICA)

Disaster Management Cycle and the Importance of Prior Investment

When a disaster strikes, emergency responses are taken, then recovery and reconstruction work follows. Society learns lessons from the disaster and takes countermeasures for future disasters to prevent and mitigate possible damage. Preparedness is then achieved for future disasters. This cycle is called the "disaster management cycle."

JICA disseminates a concept of "Low Regret Investment," which is to make prior investment for DRR according to the assessment of disaster risk and damage in order to make regret as small as possible instead of allocating budgets for recovery and reconstruction, and to adapt future environment change.



Shoulder protection works at National Road 7 in Bolivia

"Build Back Better" for Disaster Resilient Societies

Generally, it is difficult to invest for future uncertain disasters. After an actual disaster, it is important to prevent the same community or place from repeatedly being trapped in vulnerability. With a clear strategy to "build back better" from the disaster, it becomes possible to break out from the "negative spiral of disaster and poverty," which is a fundamental condition for sustainable development.



Experts surveying a landslide-prone area (Bogota, Colombia)(Photo: Kosuke Okahara/JICA)

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Photo on the front page: Children are delightfully learning disaster prevention, by practicing "Now!KAERU Caravan", which was developed by NPO Plus Arts after the Great Hanshin-Awaji Earthquake. (Guatemala)



Cooperation on Disaster Management in Latin America

~Helping to Build Disaster Resilient Societies~



Japan International Cooperation Agency
Latin America and the Caribbean Department

DRR cooperation for Latin America and the Caribbean

Latin America and the Caribbean are prone to natural disasters of all kinds, including earthquakes, tsunamis, landslides and floods. JICA endeavors to contribute to building a resilient society by supporting reconstruction from disasters, building lasting economic infrastructure and institution-building to cope with disasters, including frameworks to ensure smooth operation of reconstruction.

1 Mainstreaming DRR by knowing disaster risk



Joint Survey in the disaster area of the Great East Japan Earthquake, Minami-Sanrikucho-Utatsu

● **Collaborative Research Works**
Science and technology could be key factors in facing natural disasters. JICA is supporting scientific research projects in Chile, Peru and Colombia on damage during catastrophic events such as earthquakes and tsunamis. In these projects, scientists from both countries are creating measures to reduce damage considering the particular conditions of each location.

● **Community Disaster Management**
Central America is seeking to strengthen resilience at the community level. CEPREDENAC is an intra-regional organization to coordinate disaster management efforts. JICA is assisting projects to strengthen the capacity of the authorities with CEPREDENAC and creating disaster management manuals at local levels with pilot communities. The project will have a second phase to expand this knowledge.



Walls using used tires (Costa Rica)

2 Promoting Investment

● **Bolivia: Integrating Disaster Risk Reduction in Roads and Bridges**
With JICA's cooperation to reduce disaster risks in infrastructure projects, the Bolivian authority for roads (ABC) is beginning to conduct risk analysis and taking countermeasures against road disasters for new projects. The results so far include reduction in the budget for emergency measures while disaster risk reduction works have increased.



Damage on Route 7 after a landslide (Bolivia)



Inauguration of a drainage well in Honduras

● **Honduras: Landslide Protection**
Tegucigalpa, the capital city, is situated in a valley, which makes it vulnerable to landslides. JICA supported the city of Tegucigalpa to elaborate a master plan on disaster management and constructed landslide prevention ditches in priority areas. Ditches were constructed using drainage wells, which were very unique in Latin America, and gained the attention of different countries in the region.

GENSAI Project in El Salvador

In El Salvador, investment prior to disasters was not sufficient compared with reconstruction afterwards, so the Government of El Salvador is trying to fortify advance investment. The Ministry of Public Works, Transportation, Housing and Urban Development has created DACGER: a department responsible for climate change and risk management. JICA has supported the initiatives by DACGER in training capable engineers to implement strengthening of infrastructure based on priorities to institution building to implement prompt restoration measures.



Site inspection after bridge damage caused by high water



Inspecting reconstruction site after hurricane impact

"Considered to be the country most vulnerable to disasters in 2009, El Salvador has developed a strategy to establish a culture of disaster prevention at all levels of society from purely a reactive culture. We have built a strong and harmonious alliance with Japan, a friend and brother country and a leader in disaster prevention, which through the development of projects supported by JICA and with the technology and experience of Japanese experts joined in the spirit and in BOSAI and GENSAI. El Salvador is moving forward with determination and with the vision to become a resilient country".

Minister of Public Works, Transportation, Housing and Urban Planning
Gerson Martinez



Meeting of Minister Martinez with President of JICA

3 Enhancing Seamless Measures



Checking damage after an earthquake (Peru)

● **Haiti: From Reconstruction to Sustainable Development**
An earthquake of magnitude 7.0 on Richter scale hit the capital of Haiti in January 2010. Soon after, JICA sent emergency relief teams followed by reconstruction activities including rehabilitation of water supply systems and elaboration of reconstruction plans. Presently, JICA's support focuses on sustainable development, concentrating on the provision of basic social services.



Re-opening of a water fountain (Haiti)



Prime Minister Shinzo Abe with President Michelle Bachelet at the signing ceremony (Photo: Presidencia de Chile)

A Regional Hub for Human Resources Capacity Development in Latin America

Japan and Chile share devastating memories of disasters, and both have accumulated valuable knowledge in disaster reduction. In order to best utilize what we have learned in the past, JICA and the Chilean International Cooperation Agency (AGCI) agreed in July 2014, witnessed by Prime Minister Abe and President Bachelet, to make Chile a regional hub of excellence in capacitating officials and researchers in Latin America.



Damage Inspection at Talcahuano, Chile

In this project, institutions from Japan and Chile will cooperate in training specialists, capacitating officials, and building networks of disaster management related organs. JICA will invite institutions from different countries to take part in extending cooperation in what they have acquired in cooperation with Japan, as well as calling upon the private sector to introduce their products. Projects will start in March 2015.



Joint Mission at Iquique, Chile

Japan's Disaster Risk Reduction Technology

Emergency Information Network Using Terrestrial Digital TV Broadcasting

In June 2006, Brazil became the first nation in the world to introduce a Japanese-born digital TV broadcasting system. Subsequently, this system (known as ISDB-T) has been introduced throughout Latin America, and today 12 countries have adopted it. The system enables the transmission of emergency information in a time of disaster. Japan has been supporting countries that have introduced the system. In Peru, President Garcia, at the inauguration ceremony, called this system the system of the Sun, which delivers information to all corners of the country, including the Altiplano and deep valleys of the Amazon.



Digital TV in Latin America (as of 2014/05)