· TRENDS ·



n February 17, JICA signed a grant agreement with the Government of Nepal to provide grant aid of a maximum of 4 billion yen for The Project on Rehabilitation and Recovery from the Nepal Earthquake.

On April 25, 2015, Nepal was struck by an earthquake of magnitude 7.8, with its epicenter in the Gorkha District, about 80 km northwest of the capital of Kathmandu. According to the Post Disaster Needs Assessment conducted by the Nepali government with assistance from the World Bank, JICA and other developing partners, the earthquake and its aftershocks caused 8,702 dead, 22,303 injured, and 498,852 totally collapsed and 256,697 partially collapsed houses.

The Project includes 4 sub-projects: 1) reconstruction of National Bir Hospital, the largest and oldest hospital in the Kathmandu Valley; 2) recon-

Tsutomu Shimizu, chief representative of the JICA Nepal Office (left) and Baikuntha Aryal, joint secretary of the International Economic Cooperation Coordination Division, Ministry of Finance struction of Paropakar Maternity and Women's Hospital which receives expectant mothers from across Nepal; 3) reconstruction of water transmission pipelines in the most damaged Sindhupalchowk District; and 4) construction of bridges in the Gorkha District, the epicenter of the earthquake.

The Project's goal is to strengthen the public services offered in the severely damaged northern mountain areas.

Based on the Build Back Better concept adopted at the 3rd UN World Conference on Disaster Risk Reduction in Sendai in March 2015, the Japanese government plans not merely to restore the society to how they were before disaster, but to make it more disaster-resilient.

JICA also assists with reconstructing the houses and schools most affected by the earthquake through the Emergency Housing Reconstruction Project and the Emergency School Reconstruction Project, for which a Japanese ODA loan agreement was signed on December 21, 2015.

Forest Monitoring System

Conserve the world tropical forests by a JICA-JAXA Forest Monitoring System -Using ALOS-2 Satellite

n December 1, 2015, JICA and the Japan Aerospace Exploration Agency (JAXA) announced the Initiative for Improvement of Forest Governance at the twenty-first session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris. The initiative will create a new tropical forest monitoring system that tracks deforestation and forest loss with JAXA's Advanced Land Observing Satellite-2 (ALOS-2).

JICA and JAXA signed a partnership agreement in April 2014 with the objective of using



JICA and JAXA expect that private corporations will also join to the initiative for contributing to the conservation of the world's tropical forests. Activities will include building a forest monitoring system, training human resources in developing countries on how to use the system, and spreading knowledge about successful forest conservation projects around the world.

Tropical forests serve as an immense storage tank to hold carbon dioxide. Thus the forest conservation is critical in the fight against climate change. However, the loss of tropical forests continues unabated due to illegal logging and other factors, and implementing measures to stop the loss is a global priority. The forest monitoring system will maintain a constant watch on deforestation and forest loss in tropical regions of the globe and provide open access to its findings. With a resolution to 50 meters, the findings of the monitoring system will be updated about every six weeks on average to the JAXA website and aimed to be made its trial version available in the late 2016. It is expected that these efforts will help countries with serious deforestation issues restrain illegal logging, and in the long term, help control the reduction of forests as an effective measure against climate change.

Aboard the ALOS-2 satellite is PALSAR-2 (Lband Synthetic Aperture Radar-2), a system that uses L band radio waves suitable for forest observation and capable of monitoring the ground surface 24 hours a day regardless of weather. PALSAR-2 can thus monitor for illegal logging and other changes in tropical forests despite the cloud cover that is typical found in such areas.

With technical cooperation provided by JICA in Brazil from 2009 to 2012 and data gathered by ALOS, the predecessor to ALOS-2, illegal foresting was monitored and assistance provided in near-real time. More than 2,000 incidents were discovered and the action taken contributed to a 40 percent reduction in the amount of forest area destroyed. The ALOS-2 uses two types of reflecting radio waves that make it possible to analyze the data and detect deforestation with greater precision.

The use of ALOS-2 observation data to search for illegal logging has heightened interest in Brazil, home to the Amazon rainforest, and other countries with tropical forestland. JICA and JAXA intend to build on this interest with their collaborative development of the forest monitoring system and provide the data to the world. Both agencies will continue to use satellite technology to conserve the world's tropical forests.



Image of an output of the system