



Using satellite images and SMS to warn of forest fires in Nepal

Highlights

S&T Innovation: Near real time satellite images track fires; forest rangers receive alerts via SMS

Sector: Climate, Natural Resources

Program: SERVIR

Development Challenges: Climate Change, Disaster Management

Location: Nepal

Potential for Replication: In progress – Bhutan and Bangladesh; possibly Myanmar.

Implementing Partners: The International Centre for Integrated Mountain Development (ICIMOD)

Host Country Counterpart: Ministry of Forests and Soil Conservation - Department of Forests

Private Sector Partners: N/A

Other Donors: Norwegian Government

Other Partners/Affiliates: NASA

A program that analyzes satellite data in near real time and converts information into instant messages and email alerts to track forest fires is a winner of the 2013 USAID Science and Technology Pioneer Prize competition. Offered for the first time by the USAID Office of Science and Technology, the prize recognizes excellence in the use of science and technology to solve development challenges.

Satellite imagery is fed into the new forest fire detection and monitoring system developed with support from the joint USAID and NASA Regional Visualization and Monitoring System program known as SERVIR-Global. SERVIR-Global was designed to improve capacity of decision-makers to access and use earth observation technologies. SERVIR operates through three different hubs around the world. The International Centre for Integrated Mountain Development (ICIMOD) in Kathmandu partners with USAID and NASA on SERVIR-Himalaya

Working with the Nepal Department of Forests, ICIMOD helped design a system that uses satellite data to monitor and assess the damage of forest fires and then automatically sends SMS messages and emails to district forest officers and rangers so they are better able to monitor a fire's growth and direction and alert populations when there may be a need to evacuate. The Nepal Department of Forests is also using data generated by the system to analyze forest fire patterns and better prepare for future fire seasons.