

Conservation Impacts of a Near Real-time Monitoring and Alert System in the Tropics John Musinsky and Karyn Tabor

Among the most underutilized tools for helping manage and protect forest resources are near real-time (NRT) forest monitoring and alert systems based on remotely sensed data. The use of satellite remote sensing to quickly and accurately detect activities associated with deforestation has great potential for catalyzing local response teams responsible for assessing and interdicting threats to ecosystems and associated environmental services. Conservation International (CI) has a decade of experience developing forest monitoring systems that channel NRT information from satellite observations directly to national and sub-national government agencies, Non-Government Organizations (NGOs), and local communities to facilitate daily conservation decisions. The most recent innovation from CI is Firecast, a web-based, decision support tool that delivers satellite-derived fire risk forecasting and near real-time detection of fires, drought, and deforestation to subscribers through email alerts. From 2006 to 2013 Conservation International conducted a series of surveys and one-on-one interviews with users in four tropical forest countries to learn of the range of applications and perceived value of NRT monitoring technologies for achieving environmental protection and management goals. The most valued conservation applications for these systems were for implementing Reduced Emissions from avoided Deforestation and forest Degradation (REDD+) forest carbon projects, improving tropical forest management, and strengthening environmental law enforcement. This paper presents the lessons learned from deploying these systems to address conservation and sustainable development issues, including major barriers to the use of NRT monitoring data, the demand for other near real-time products, and opportunities for further integrating NRT data into the decisions and actions of national and sub-national institutions.