Fire and Forest Monitoring & Forecasting System

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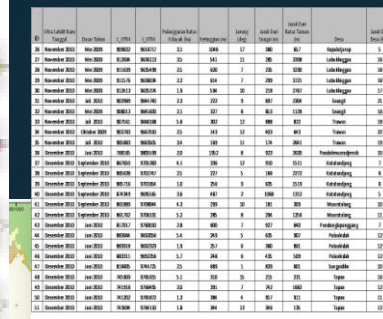Betty and Gordon Moore Center for Science and Oceans

Conservation International

CI-US, CI-Bolivia, CI-Peru, CI-Madagascar, NASA Ames, NASA Goddard, Esri

CONSERVATION INTERNATIONAL

Firecast

http://firecast.conservation.org

Designed to address challenges to reducing wildland fire effects

- lack of timely and accurate information

- limited resources and capacity

- lack of evidence

- not prepared to prevent fire disaster

System requirements

1) *multi-functional platform*

2) *multiple languages*

3) *customized alerts*

4) *variety of products*
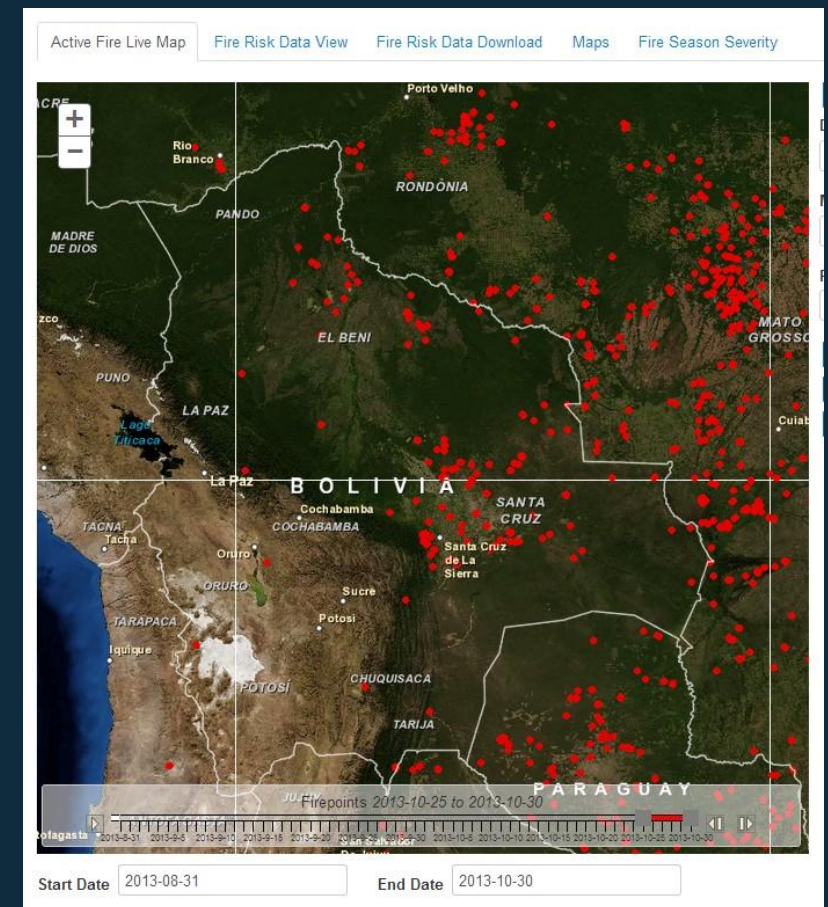
5) *reports and maps*

4) *user input*

1. *Active Fire Alerts*

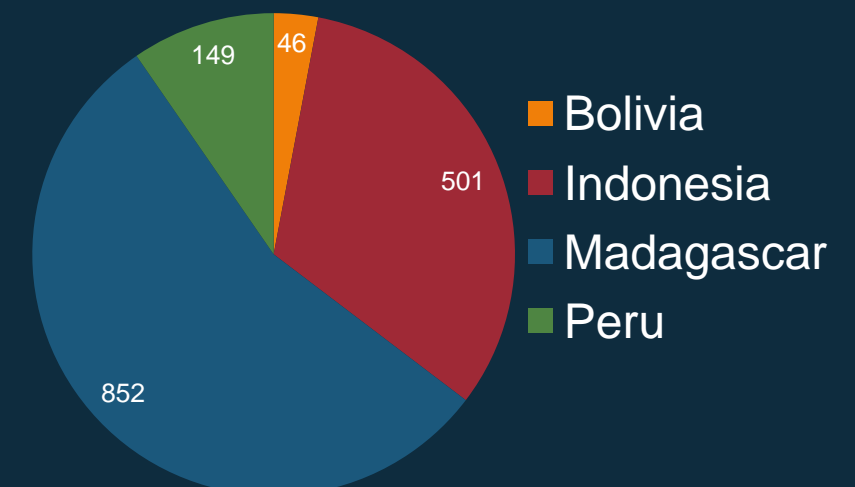Email alerts of MODIS and VIIRS active fires

Customized for individual users needs

Interactive web map

Website in Spanish, French, Bahasa, & English

Madagascar   Indonesia   Bolivia   Peru

1538 active users

- Bolivia
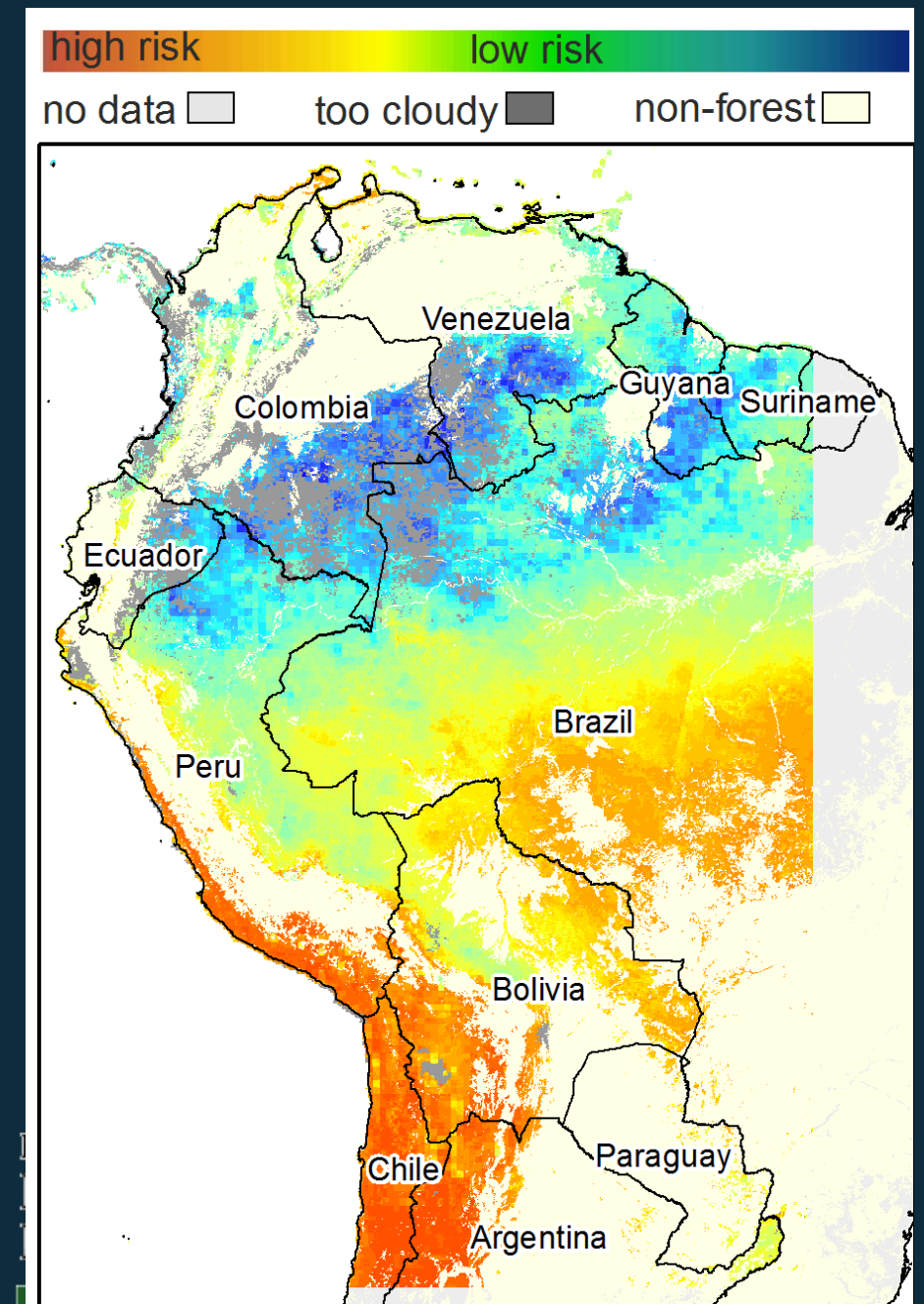- Indonesia
- Madagascar
- Peru

2. *Fire risk forecasting*

Near real-time index of fire risk in the Amazon derived from satellite observations

Automated daily drought/forest flammability index
-based on US forest services NFDRS equations

Education and outreach for fire management strategies and timing of controlled fires

3. *Fire Season Severity Forecasts*

In June 2013, we delivered the 2013 fire season severity alerts to 90 users of the current FAS system in Bolivia and Peru.

The fire season severity forecasts are modeled from the empirical relationship between of SST's in the Atlantic and Pacific and fire incidences across South America (Chen et al. 2011).

Decision Support

Engaging key decision makers, in-country partners, and securing long term support

• Conducted needs assessments of new and existing counterpart institutions

• Engaged key institutions are responsible for in-country monitoring and managing national parks

• Engaged private sector actors

Future Directions

- Expand to new geographies

- Validation through mobile devices

- Provide disturbance (QUICC) and illegal logging and encroachment alerts

- New alerts and forecasts based on available near real-time data (air quality, burn scar, agricultural droughts)

- Continue outreach and engagement to new and current users

Thank You!