Post Fire Vegetation Monitoring System using Google Earth Engine

Karis Tenneson[1]*, John Dilger[1], Jason Moghaddas[1], Gary Roller[1], Biplov Bhandari[1], David Saah[1,2]

ABSTRACT- Using Google Earth Engine, our team built a Post Wildfire Vegetation Monitoring System. This system provides land managers regular systematic updates for areas burned by wildfire, including changes in vegetation cover, vegetation type, and cover of bare soil, for any time period that data is available (1984-Present). The system integrates operational and legacy Landsat data to produce land cover information at 30-meter spatial resolutions. The system is free and available online providing both public and private land managers with near real time information that may be used to better identify, plan, budget for, and execute post wildfire rehabilitation projects including post wildfire harvest, reforestation and revegetation. The system will allow users to perform custom user-defined data summaries and statistics on their specific geographic area of interest by a polygon drawing tool or uploading a KML file. Custom tools are available for users to do analysis of land cover change between time periods and within and/or between one or more explicit areas within a fire to better track recovery of areas based from the full range of pre/post wildfire management actions. This presentation will describe the development of this system and provide examples of its use for recent wildfires in California.

Keywords: Land cover monitoring; fire monitoring; cloud computing; remote sensing

[1]Spatial Informatics Group, California, USA
[2]University of San Francisco, CA, USA
*Corresponding author: karistenneson@gmail.com