

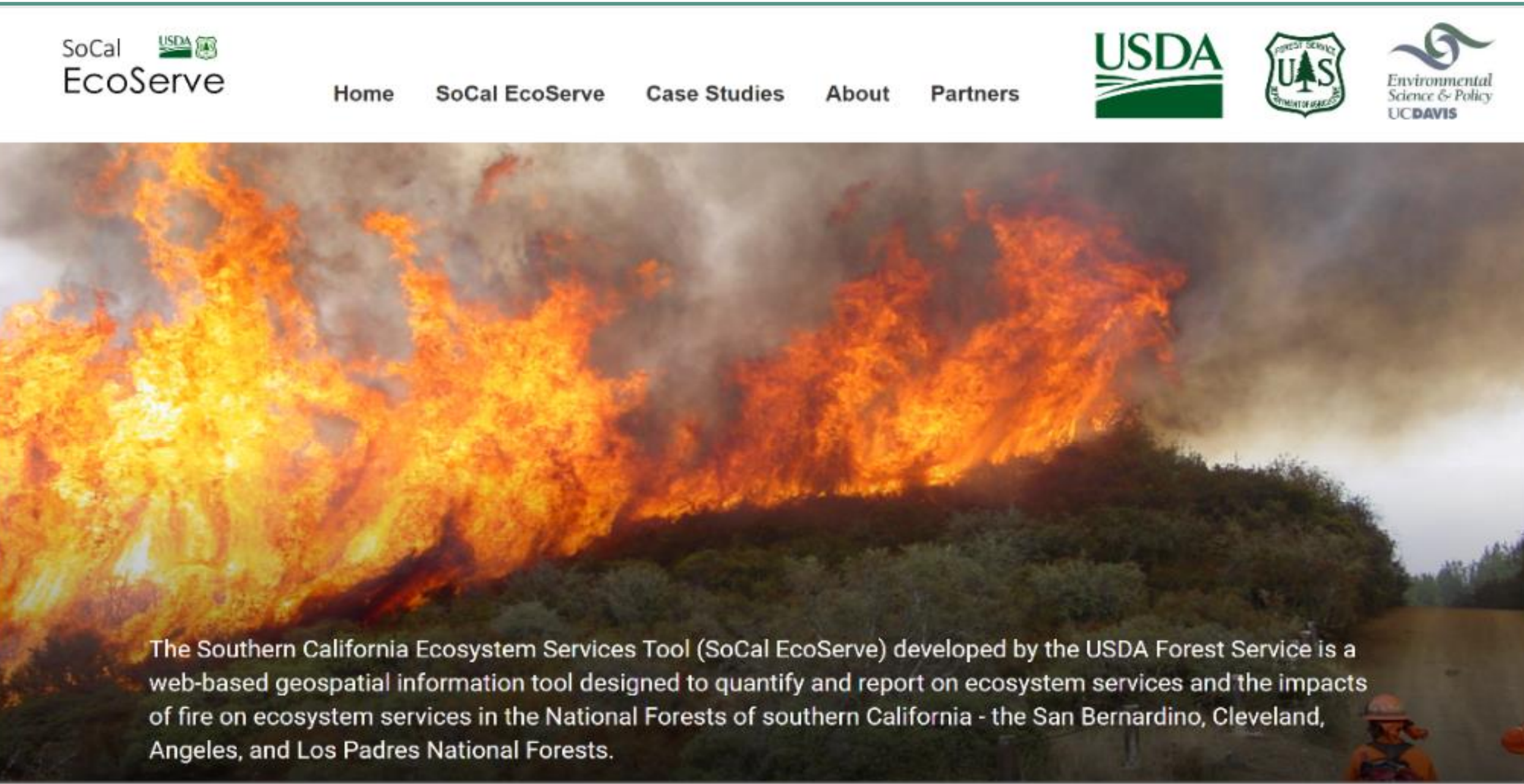
SoCal EcoServe – Tool for Quantifying Wildfire Impacts on Ecosystem Services

Emma Underwood, University of California, Davis & Charlie Schrader-Patton, USDA Forest Service

INTRODUCTION

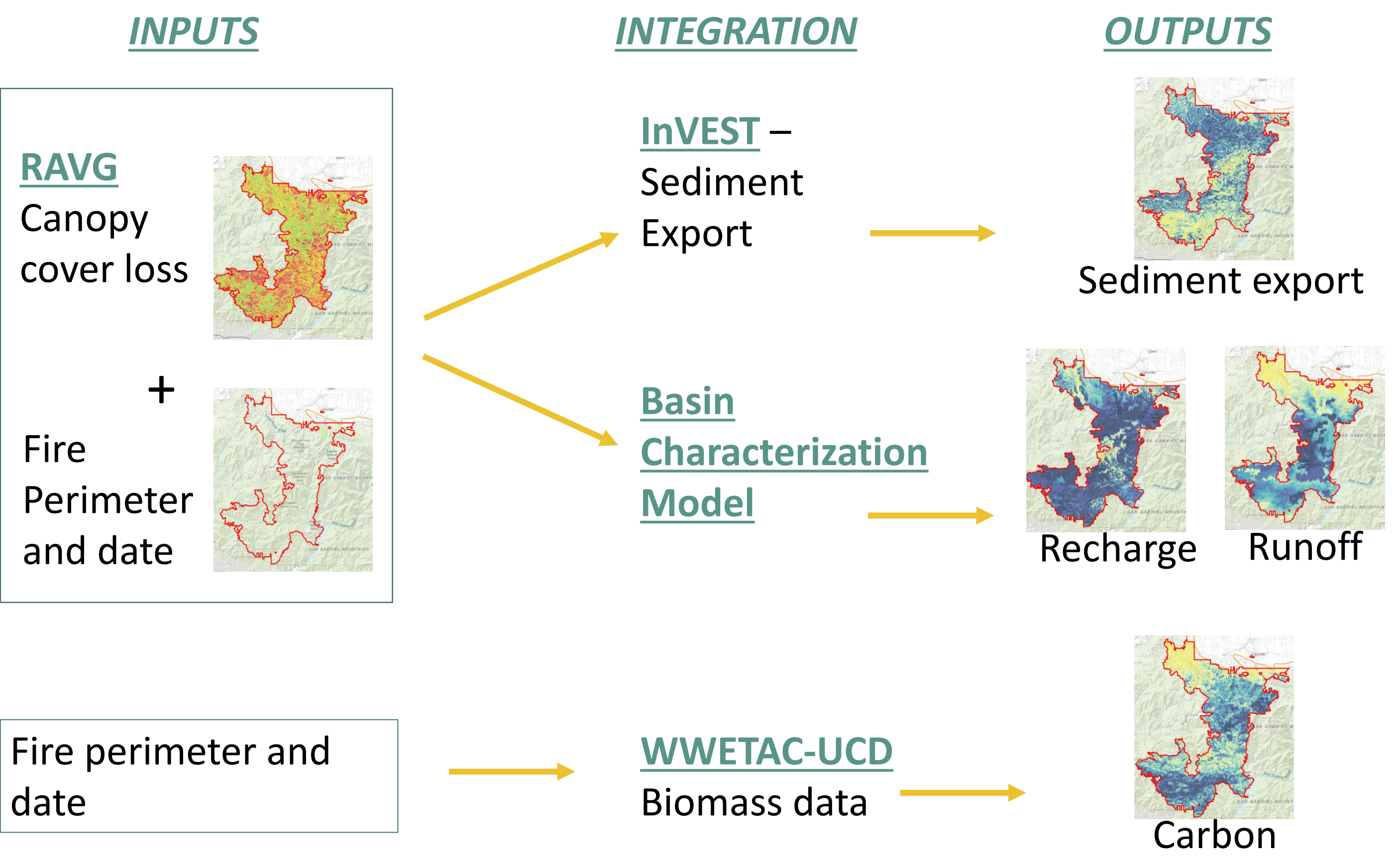
Shrublands dominate southern California and provide valuable ecosystem services including carbon storage, water regulation, sediment retention, wildlife habitat and biodiversity. However, shrublands are experiencing longer and more intense wildfires. We developed the [SoCal EcoServe](#) tool for resource managers to quantify the impacts of wildfire on ecosystem services.

METHODS



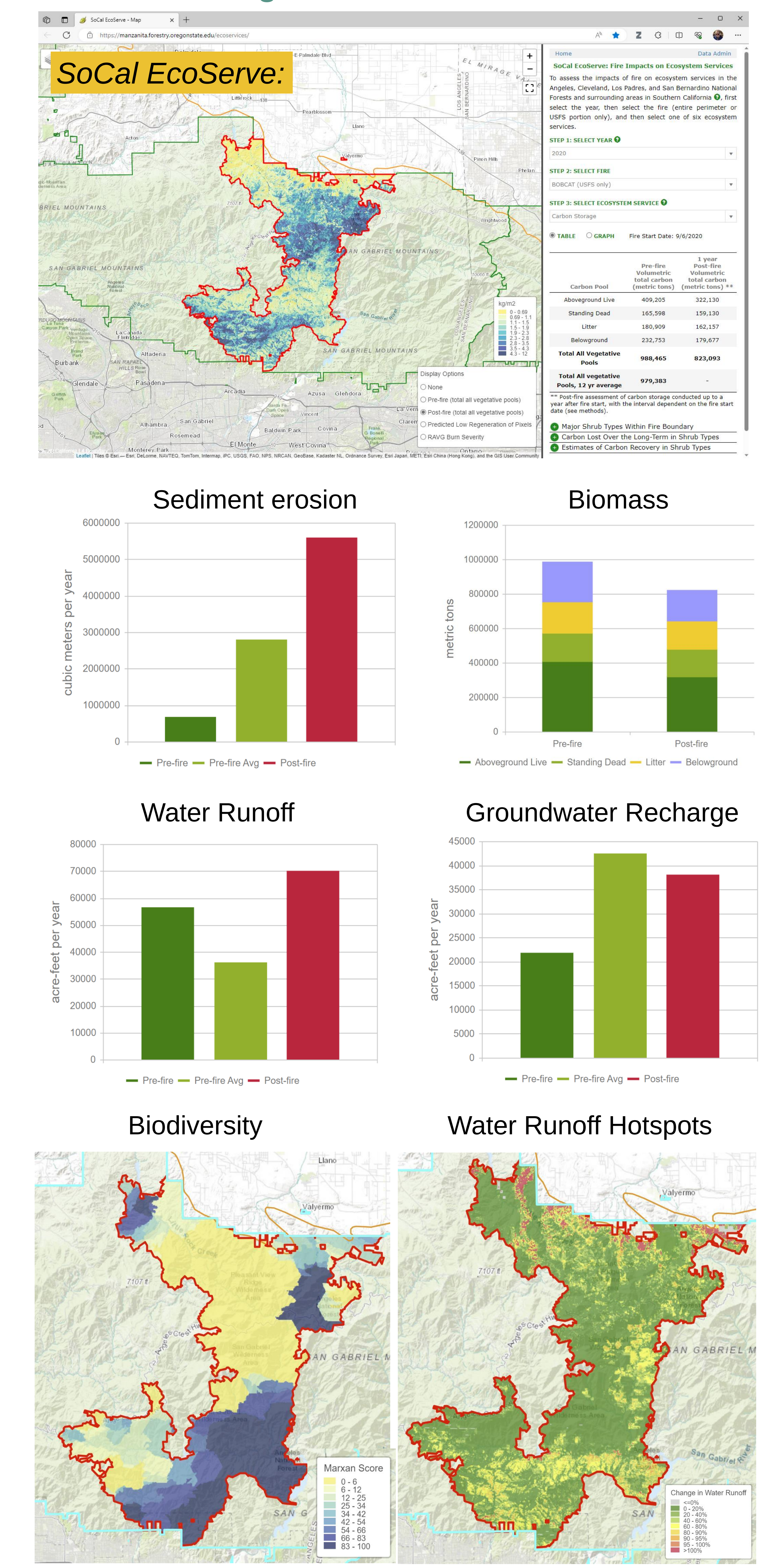
GET STARTED SoCal EcoServe calculates the effects of wildfire on biomass (carbon storage), biodiversity, recreation and watershed functions such as recharge, runoff, and sediment erosion retention. Maps, graphs, and tables are produced for both pre- and post-fire conditions as well as hotspots of ecosystem service change.

[SoCal EcoServe](#) quantifies carbon storage by comparing pre- and post-fire data and integrates canopy cover loss data to estimate hydrological impacts and sediment erosion.



RESULTS

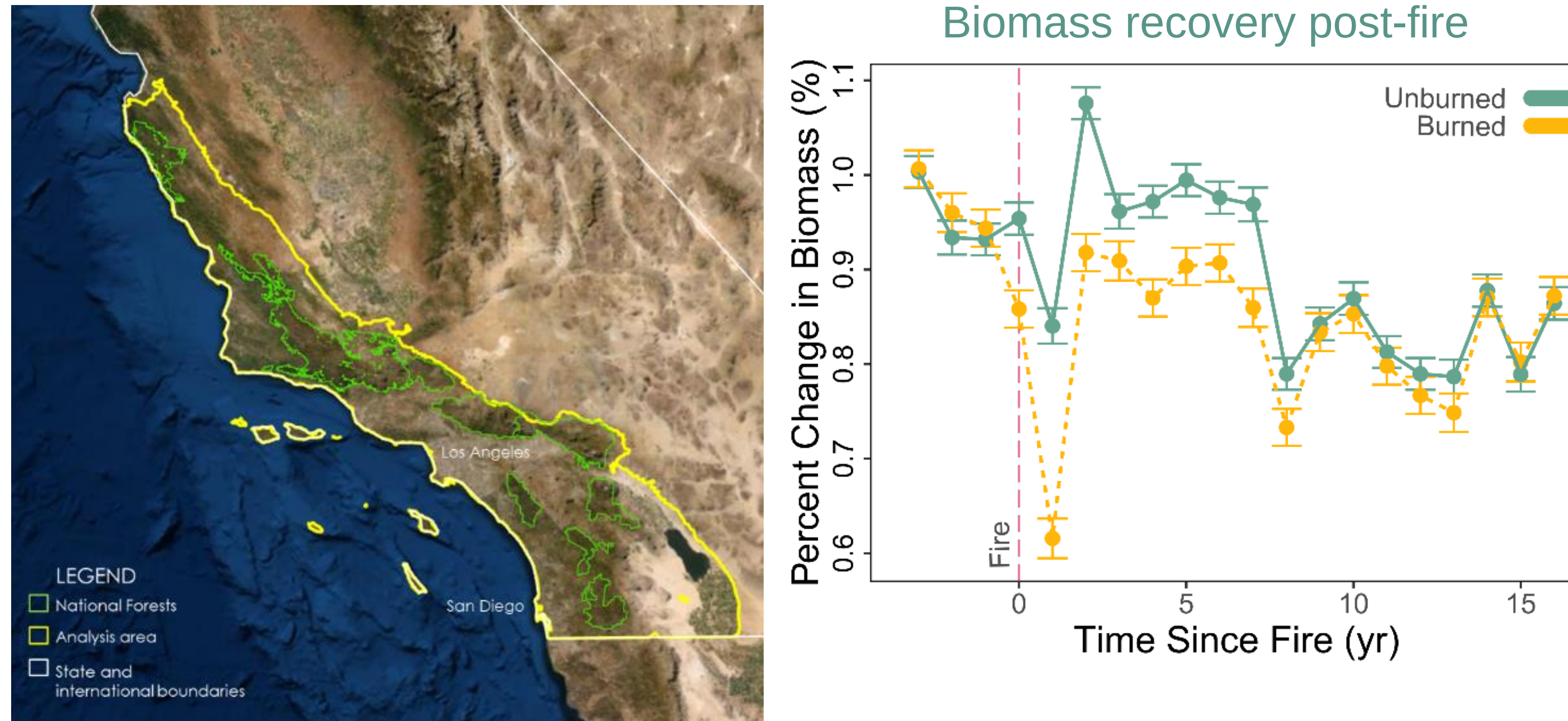
Bobcat Fire, Angeles National Forest, 9.6.2020



IMPLICATIONS FOR MANAGERS

Quantifying the impacts of wildfires on ecosystem services in addition to routine fire suppression expenses is increasingly recognized as an important component of natural resource management on public lands in southern California, for example Natural Resource Damage Assessments post-fire.

[SoCal EcoServe](#) can also assist in prioritizing areas for post-fire management activities, e.g., restoration, and to track the recovery of biomass and carbon-storage post-fire.



[SoCal EcoServe](#) is freely available and currently incorporates wildfires occurring on the four southern National Forests since 2017 (see image above). The tool will be annually updated to include recent fires and biomass data.

FURTHER INFORMATION

SoCal EcoServe tool URL:
<https://manzanita.forestry.oregonstate.edu/ecoservices/>



- QR code for EcoServe home page QR code for references
- Charlie Schrader-Patton: charlie.schrader-patton@usda.gov
 - Emma Underwood: enderwoodrussell@ucdavis.edu