

Assessing Fuel Loads by Remote Sensing

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A project funded by the Natural Disaster Mitigation Program.

The study team includes NSW Rural Fire Service, NSW State Forests, NSW National Parks and Wildlife Service, the Bushfire CRC, the Spatial Information CRC, CSIRO, the University of New South Wales and GHD.

Research suggests that there are several possible technologies available that may be able to determine forest fuel loads from the air. These technologies include digital imagery, multispectral scanning, hyperspectral scanning and radar scanning from aircraft as well as scanning from SPOT, LandSat, Aster and Hyperion satellites.

This study has collected data using all the above devices for an area on the NSW Central Coast. At the same time, the study team is collecting ground truthing data for fuel loads (RFS), as well as forest health (SF) and vegetation type (NPWS). The remote sensing data will be analysed and compared to the ground truthed data to determine what it can tell about the fuels and fuel loads.

One spin-off of this project has been the development of an updated visual fuel assessment methodology (CSIRO/GHD) based on the Overall Fuel Hazard Guide, but taking into account recent research and latest thinking by Dr Kevin Tolhurst, Project Vesta and the Bushfire CRC. The updated visual fuel assessment is being validated using destructive sampling to measure tonnes per hectare in each layer of the fuel profile.