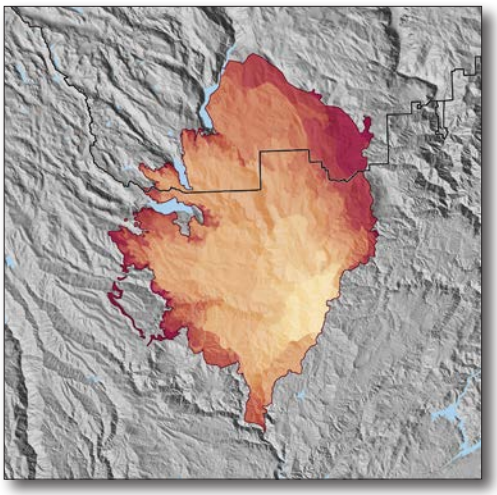
Coffee Break Training – Community Risk Reduction

Understanding Geospatial Information: Reading Imagery — Part 5: Use What You Know

No. CR-2015-5 June 17, 2015

Learning Objective: *The student will gain an understanding of how existing geographic knowledge of a place helps in reading related satellite imagery.*

Perhaps the most powerful tool for interpreting a satellite image is your own geographic knowledge of place. If you know that a wildfire burned through a forest last year, it's easy to figure out that the dark brown patch of forest is probably a burn scar, not a volcanic flow or shadow.



When lost, the simplest way to figure out where you are is to find a familiar landmark and orient yourself with respect to it. The same technique applies to satellite images. Mapmakers orient maps so that north is at the top of the map, and the same applies to aerial photos and satellite imagery in finished product form.

Having local knowledge also allows you to connect satellite mapping to what's happening in everyday life, including social studies, economics and history (e.g., population growth, transport, food production); geology (volcanic activity, tectonics); biology and ecology (plant growth and ecosystems); politics and culture (land and water use); chemistry (atmospheric pollution); and health (pollution, habitat for disease carriers).

If you lack knowledge of the area shown, a reference map or atlas can be extremely valuable. A map gives names to the features that you can see in the image, and that gives you the ability to look for additional information. Several online mapping services even provide a satellite view with features labeled. Historic maps, such as those found at the **Library of Congress** (http://1.usa.gov/1ESc3Tb) or in the **David Rumsey Map Collection** (http://bit.ly/1EswCIx), can help you identify changes and may even help you understand why those changes occurred.

Whether you are looking at images of Earth for emergency and disaster planning, response and recovery or for reference in science, history or something else, consider the NASA Earth Observatory as a key resource. The site hosts an extensive archive of more than 12,000 interpreted satellite images covering a wide range of topics and locations. The archive includes images of natural events, as well as more diverse featured images.

References

Pennsylvania State University Creative Commons License: https://www.e-education.psu.edu/natureofgeoinfo/.

NASA Earth Observatory Image License: http://earthobservatory.nasa.gov/ImageUse/.