Land Cover Institute

For more information

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Mission

The U.S. Geological Survey (USGS) Land Cover Institute (LCI) is the focal point for advancing the science, knowledge, and application of land use and land cover information.

What can the USGS LCI do for you?

The USGS and other agencies and organizations have collaborated to produce land cover data to meet a variety of needs. The USGS LCI has been established to provide access to, and scientific and technical support for, these land cover data.

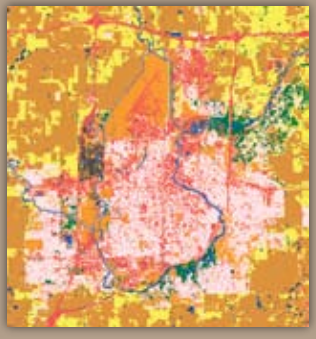
About the USGS Land Cover Institute

The U.S. Geological Survey (USGS) houses the Land Cover Institute (LCI) at the Center for Earth Resources Observation and Science in Sioux Falls, South Dakota. The LCI addresses land cover topics from local to global scales, and in both domestic and international settings. The USGS, through the LCI, serves as a facilitator for land cover and land use science, applications, and production functions. The institute assists in the availability and technical support of land cover data sets through raising public and scientific awareness of the importance of land cover science.

Mapping Land Cover

Scientists working in the USGS are among the leaders in the study of land cover. Land cover refers to the vegetation and artificial structures that cover the land's surface. Examples of land cover include trees, grass, crops, wetlands, water, buildings, and pavement.

Remotely sensed image of Sioux Falls, South Dakota



Derived land cover map, Sioux Falls, South Dakota

Land cover maps are made from remotely sensed images. Scientists interpret those images by relating specific colors, tones, patterns, shapes, sizes, and features to specific types of land cover. Most land cover maps are made using computer-assisted classification techniques in which land cover types are automatically identified based on the amount of light they reflect in different portions of the electromagnetic spectrum.

The Importance of Land Cover Change Data

Land cover scientists use satellite images, and the land cover maps generated from them, to study the economic impacts of land cover change and productivity, as well as its effects on water quality, the spread of invasive species, habitat and biodiversity loss, climate variability, and other environmental factors. Scientists require up-to-date land cover information to accurately understand current conditions and to asses the extent and impacts of land cover change on the Earth.

USGS Land Cover Institute Website

The Website is a focal point for locating, accessing, and downloading regional, national, and global land cover data products. The bulletin board allows all land cover data users and producers to communicate current research, common needs, and issues, as well as post upcoming land cover-related conferences and symposiums. The USGS Land Cover Institute home page is http://landcover.usgs.gov