

Title:

**DEVELOPMENT OF A LAND COVER CHANGE PRODUCT FOR THE NORTH  
AMERICAN LAND CHANGE MONITORING SYSTEM- THE UNITED STATES  
PERSPECTIVE.**

Authors:

SHEIKH M NAZMUL HOSSAIN, SGT at USGS/EROS Data Center  
COLLIN HOMER, USGS/EROS Data Center  
CHANDRA GIRI, ASRC at USGS/EROS Data Center

The North American Land Change Monitoring System (NALCMS) is a collaborative initiative of Canada, Mexico, and the United States to monitor land cover—the observed physical cover on the surface of the earth—and its changes over time. The vision encompasses a collaborative effort to create a harmonized system for multi-scale and multi-temporal monitoring and reporting of North American land cover change. Based on satellite images, NALCMS data are designed to depict information about land cover and land cover change in a seamless, consistent and automated way across North America at regular intervals. The NALCMS seeks to be a dynamic land cover change monitoring system and a vital long-term information source for users of land cover change products across North America. Initial proof of concept U.S. research will be presented that outlines the semi-automated approach proposed to create the land cover change product at 250m resolution. The development procedure depends upon change algorithms derived from a series of 250m MODIS imagery and land cover. Multiple change detection algorithms, including spectral change and decision tree approaches, are utilized to generate change products from the 250m MODIS bands. First, seasonal metrics of change was identified by change threshold with class type, and then decision tree model was used to classify change. Multi-criteria voting methods are applied to delineate change areas from this hybrid approach. Testing results and future plans specific to the U.S. will be presented. This land cover change information will help scientific community to track continental pattern in land change dynamics.

## References

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