NEW REMOTE SENSING
DATASETS

OKLAHOMA EPSCoR

Oklahoma NSF EPSCoR researchers in the Earth Observation and Modeling Facility at OU have been processing Landsat (30-m resolution), PALSAR (25-m resolution) and MODIS (500-m resolution) images and producing new datasets for use by EPSCoR researchers and the broader research community across Oklahoma.

DEVELOPED
PRODUCTS

Open Surface Water

Surface water is important natural resource and provides ecosystem services to millions of people in Oklahoma. Geospatial datasets of Oklahoma's surface water can be used to support water resource management, and climate modeling.

Forest Coverage

Forests are important natural resources and provide ecosystem services to millions of people in Oklahoma. Geospatial datasets of forest cover in Oklahoma can be used to support forest resource management, conservation planning, biodiversity assessment, water and climate modeling.
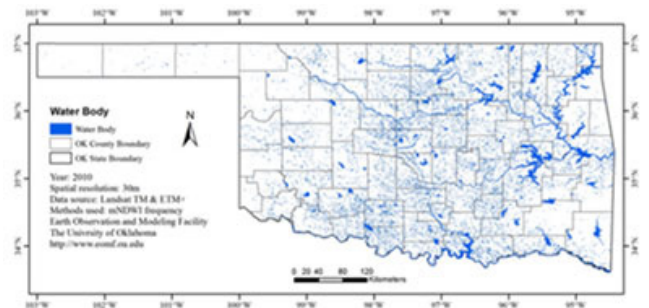
Gross Primary Production

Gross primary production (GPP) of vegetation is an important component of the terrestrial carbon cycle, and is the base for net primary production (NPP) and plant biomass. Geospatial datasets of GPP in Oklahoma can be used to assess productivity of croplands, rangeland and forests, which affect substantially crop yield, forage biomass, livestock production, and timber.
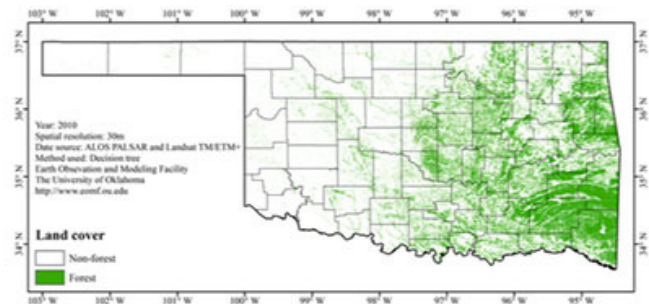
PRELIMINARY FINDINGS

From these datasets, our researchers have discovered:

- Open survey water body area varied substantially over the years, with a mean of 2300 km^2.
- Total forest area in Oklahoma in 2010 was approximately 40,149 km^2.
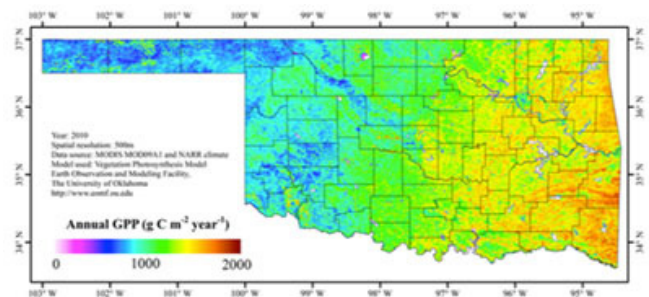- Severe droughts in 2006 and 2011 caused the GPP to drop substantially in the OKC Metro.

Spatial resolution: 30-meter
Temporal resolution: Annual, 1985 to 2014

Spatial resolution: 30-meter
Temporal resolution: 5-yr intervals, 1985 to 2014

Spatial resolution: 500-meter
Temporal resolution: Annual, 2000 to 2014

FOR MORE INFORMATION

Dr. Xiangming Xiao (xiangming.xiao@ou.edu)

http://www.eomf.ou.edu

http://okepscor.org

OKLAHOMA STATE REGENTS FOR HIGHER EDUCATION
Improving our future by degrees

NSF