

Landsat Update Volume 6 Issue 4, 2012

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[View Printable Version - .pdf \(xx KB\)](#)

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News

Nine Million Scenes and Counting!

The use of Landsat data has exploded since the USGS began distributing the data at no cost in 2009. In the best sales year, around 25,000 images were sold. The Landsat project has now exceeded that number in a single day. In fact, the 9 millionth image was distributed on September 1, 2012. It has taken less than 4 years to reach this mark, which demonstrates both the temporal and geographic expansion of Landsat-based research, as well as exposure to new communities that are exploring the 40 years of global Landsat data for the first time.

International Landsat Cooperators Confer in Sioux Falls

As Landsat circles Earth, international partners in nearly a dozen locations downlink and process these data; sharing images with our global community of scientists, engineers,

and managers. These partners meet annually for the Landsat Technical Working Group (LTWG) meeting, which was held in Sioux Falls, SD on September 24-28, 2012. LTWG serves as a venue to discuss operational and technical issues and explore expanded opportunities for collaboration.

This meeting, the 21st for the group, concentrated on establishing reception, processing, and distribution capabilities for the next Landsat satellite. The Landsat Data Continuity Mission (LDCM) is set for launch in February 2013. The state-of-the-art imaging satellite — to be known as Landsat 8 once it successfully achieves orbit— will build on the 40-year record of Earth observations by the Landsat satellite series and greatly expand the program's capabilities to impartially record changes on the surface of the Earth.

Conference organizers at the U.S. Geological Survey Earth Resources Observation and Science Center (USGS-EROS) hosted — nearly 140 participants in the meeting from 25 countries and 49 separate organizations.

Remote Sensing of Environment

Special Landsat issue of Remote Sensing of Environment. The legacy, the science, and the future: <http://www.sciencedirect.com/science/journal/00344257/122>

LDCM News

Jointly managed by the USGS and NASA, the Landsat Data Continuity Mission (LDCM) is the future of Landsat satellites. It will carry on the over 40-year legacy of the Landsat program, which is unmatched in quality, detail, coverage, and value. Launch is set for February 11, 2013.

Upper Stage of LDCM Rocket Arrives at Vandenberg Air Force Base:

http://landsat.gsfc.nasa.gov/news/news-archive/news_0513.html

First Stage of LDCM Rocket Arrives at Launch Site:

http://landsat.gsfc.nasa.gov/news/news-archive/news_0511.html

LDCM Completes Another Test:

http://landsat.gsfc.nasa.gov/news/news-archive/news_0510.html

Landsat Stories

Landsat Data contribute to Google Earth Engine

The 40 year archive of Landsat data is useful for many platforms, including Google Earth Engine - an online environment that brings worldwide satellite imagery to the public for environmental analysis, land cover classification, and biomass and carbon - just to name a few applications. This video gives a look inside the Landsat Missions and imagery that support scientists worldwide:

<http://www.google.com/earth/outreach/tools/earthengine.html#tab=a-planetary-perspective-with-landsat-and-google-earth-engine>

Upcoming Meetings

MAPPS/American Society for Photogrammetry and Remote Sensing (APSRS)

2012 Specialty Conference

October 29–November 1, 2012

Tampa, Florida

<http://www.asprs.org/Conferences/Tampa-2012/blog>

The Geological Society of America (GSA) 2012 Annual Meeting & Exposition

November 4-7, 2012

Charlotte, North Carolina

<http://www.geosociety.org/meetings/2012/>

American Geophysical Union (AGU) 45th Annual Fall Meeting

December 3-7, 2012

San Francisco, California

<http://fallmeeting.agu.org/2012/>

American Society for Photogrammetry and Remote Sensing (APSRS)

Annual Conference

March 24-28, 2013

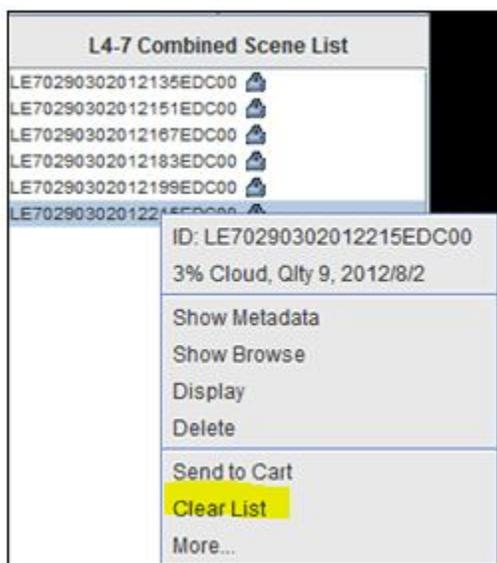
Baltimore, Maryland

<http://www.asprs.org/Conferences/Baltimore-2013/blog>

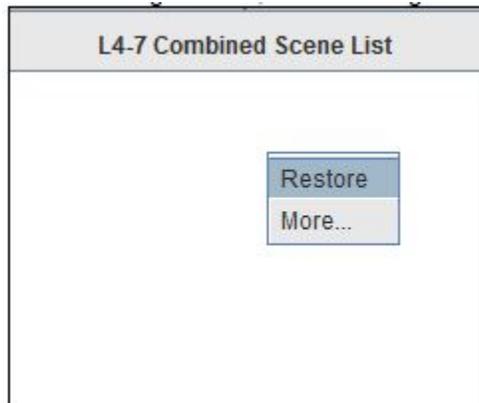
Tips and Tricks – 'Clear List' feature released in GloVis

'Clear List' Feature Added to GloVis

A new feature in GloVis (<http://glovis.usgs.gov>) allows users to 'Clear' the list of all scenes in the Scene List.



After clearing the list, users can right click in the white space and click Restore to return the last scenes in the list.



EROS Authors in Recent Publications

Hansen, M.C., and Loveland, T.R., 2012, A review of large area monitoring of land cover change using Landsat data: *Remote Sensing of Environment*, v. 122, p. 66-74. (Also available online at <http://dx.doi.org/10.1016/j.rse.2011.08.024>)

Irons, J.R., Dwyer, J.L., and Barsi, J.A., 2012, The next Landsat satellite—the Landsat Data Continuity Mission: *Remote Sensing of Environment*, v. 122, p. 11-21. (Also available online at <http://dx.doi.org/10.1016/j.rse.2011.08.026>)

Ju, J., Roy, D.P., Vermote, E., Masek, J., and Kovalskyy, V., 2012, Continental-scale validation of MODIS—based and LEDAPS Landsat ETM+ atmospheric correction methods: *Remote Sensing of Environment*, v. 122, p. 175-184. (Also available online at <http://dx.doi.org/10.1016/j.rse.2011.12.025>)

Loveland, T.R., and Dwyer, J.L., 2012, Landsat—building a strong future: *Remote Sensing of Environment*, v. 122, p. 22-29. (Also available online at <http://dx.doi.org/10.1016/j.rse.2011.09.022>)

Potapov, P.V., Turubanova, S.A., Hansen, M.C., Adusei, B., Broich, M., Altstatt, A., Mane, L., and Justice, C.O., 2012, Quantifying forest cover loss in Democratic Republic of the Congo, 2000–2010, with Landsat ETM+ data: *Remote Sensing of Environment*, v. 122, p. 106-116. (Also available online at <http://dx.doi.org/10.1016/j.rse.2011.08.027>)

Vogelmann, J.E., Xian, G., Homer, C.G., and Tolk, B.L., 2012, Monitoring gradual ecosystem change using Landsat time series analyses—case studies in selected forest and rangeland ecosystems: *Remote Sensing of Environment*, v. 122, p. 92-105. (Also available online at <http://dx.doi.org/10.1016/j.rse.2011.06.027>)

Wulder, M.A., Masek, J.G., Cohen, W.B., Loveland, T.R., and Woodcock, C.E., 2012, Opening the archive—how free data has enabled the science and monitoring promise of Landsat: *Remote Sensing of Environment*, v. 122, p. 2-10. (Also available online at <http://dx.doi.org/10.1016/j.rse.2012.01.010>)

Landsat Image of Interest – Mississippi River Level, August 27, 2012

The 2012 drought, which affected much of the cropland in the Midwest and the western United States, has also had a major effect on the level of the Mississippi River. The diminishing flow of the river has delayed barge traffic and movement of cargo to ports at the lower mouth of the river.

Forty percent of the conterminous United States drains into the Mississippi River. The drought, which has diminished the flow from feeder streams, has led to a -30-50 foot drop in the river level. A drop of one foot lessens the amount of cargo that can be carried downstream by 200 tons.

Landsat imagery illustrating water levels in the St. Louis, Missouri, region demonstrate the change in recent years. The 2010 image shows "normal" conditions. The river level forms a uniform line and oxbow lakes east of the river provide water for nearby crops. The 2011 image, acquired after major flooding, shows water boundaries similar to the 2010 view. However, the 2012 image shows a narrower river with white tones representing exposed sand bars and exposed shorelines. One of the oxbow lakes is nearly dry and the larger lake has shrunk.



Landsat 5
October 5, 2010



Landsat 5
September 6, 2011



Mississippi River Level Dropping

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Landsat 7
August 15, 2012

