



# Hydrology Seminar

---



## Land Surface Products at the Global Land Cover Facility

**John Townshend**  
**Department of Geography**  
**University of Maryland, College Park**

Remote sensing has become a major approach for deriving a wide range of land surface parameters critical to hydrological studies, including land cover and land cover change, vegetation structure, and topography. This seminar provides an overview of the land surface products developed or distributed through the Global Land Cover Facility (GLCF) of the University of Maryland. Wall-to-wall land surface products available from GLCF that cover the entire United States and its territories include 30 m and 90 m Shuttle Radar Topography Mission (SRTM) DEM data, 1 km and 8 km land cover classification, 1 km and 500 m land cover continuous fields of tree cover and other land cover components, 250 m land cover change products describing burn scar and other major forest disturbances, and 250 m and 500 m MODIS NDVI products from 2000 to present, based on which green vegetation fraction can be calculated. In addition, the GLCF is distributing fine spatial resolution satellite images, including the Landsat GeoCover image data sets that provide wall-to-wall coverage for the U.S. and its territories, and large numbers of ASTER (15 m), IKONOS and QuickBird images (4 m or better). These images can be used to derive land cover products at very high spatial resolutions. Connected with the Geography Department, GLCF has access to other land surface products being developed by Geography faculty members; including MODIS fire products, photosynthetically active radiation (PAR) products, land surface temperature products and leaf area index products. GLCF has a strong interest in using its land surface products to improve earth science studies, including hydrological studies. GLCF staff members have used its data products to study landslides and evaluated the usefulness of some land cover products for hydrological modeling. Most of GLCF's land surface products are spatial products and therefore are suitable for use in spatially explicit distributed hydrological models. The spatial and thematic details provided by these products allow studies to better understand scaling, uncertainties, and other issues associated with hydrological models.

**Date:** Monday, February 13, 2006

**Time:** 9:00 A.M.

**Location:** NWS Headquarters  
1325 East West Highway, SSMC#2, Room 8246  
Silver Spring, Maryland

**Contact:** Dong-Jun Seo  
301-713-0640 ext 116

---