

BOREAS FOLLOW-ON DSP-10 REGRIDDED TM MOSAIC LAND COVER MAPS FOR 1994

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**Summary:**

Existing 30-m land cover Thematic Mapper classification by CCRS was aggregated and reprocessed and are now available at multiple resolutions (10x5 minutes and 30 minutes). These data were regrided for use by the BOREAS Follow-on Carbon and Hydro-Meteorological modeling groups. Characteristics of the individual products are described below.

Maps included in this data set:

[Regridded TM Mosaic Land Cover Maps, 10 by 5 minutes](#)

[Regridded TM Mosaic Land Cover Maps, 30 min](#)

**Data Citation:**

Cite this data set as follows (citation revised on October 30, 2002):

Hall, F., G. Rapalee, and D. Knapp. 2001. BOREAS Follow-On DSP-10 Regrided TM Mosaic Land Cover Maps for 1994. Data set. Available on-line [<http://www.daac.ornl.gov>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A.

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## Processing:

If there are any questions about how this aggregation was done, please contact Gloria Rapalee (Gloria.Rapalee@gsfc.nasa.gov) or Jaime Nickeson (Jaime.Nickeson@gsfc.nasa.gov).

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## Regridded TM Mosaic Land Cover Maps, 10 by 5 minutes

These images were produced by aggregating the 30-m land cover Thematic Mapper classification by CCRS to a 10' (horizontal) by 5' (vertical) pixel size in a straight latitude/longitude grid. See the document [dsp01\\_tm\\_landcover\\_doc.html](http://dsp01.tm.landcover.doc.html) for more information on the original data product that this is based on.

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## Image Specifications

Each image is 66 pixels by 60 lines and contains no leading header bytes. Each pixel in the image is represented by one byte. The DN value for each pixel is the percentage of the coverage that pixel that is of a given class. The sum of all of the percentages in the various images might not be 100 for a given pixel because of rounding.

Land Cover Maps, 10 by 5 minutes
class001_10by5min.img
class007_10by5min.img
class011_10by5min.img
class013_10by5min.img
class021_10by5min.img
class022_10by5min.img
class025_10by5min.img
class032_10by5min.img
class035_10by5min.img
class036_10by5min.img
class039_10by5min.img
class043_10by5min.img
class053_10by5min.img
class055_10by5min.img
class059_10by5min.img
class064_10by5min.img
class069_10by5min.img
class079_10by5min.img
class080_10by5min.img
class081_10by5min.img
class085_10by5min.img
class099_10by5min.img
class113_10by5min.img
class134_10by5min.img
class150_10by5min.img
class160_10by5min.img

class161_10by5min.img class162_10by5min.img
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An additional image is included for which the DN value for each pixel is the percentage of the coverage of the CCRS mosaic in that pixel:

class00\_10by5min.img

The class numbers correspond to the class numbers used by CCRS in their classification.

<b>CCRS Land Cover Classification</b>	
<b>Class ID</b>	<b>Class Name</b>
Class 0	Percent of data coverage area of image
Class 1	Water
Class 7	Coniferous high crown density black spruce
Class 11	Coniferous high crown density black spruce and Jack pine
Class 13	Burn recent bare area
Class 21	Coniferous high crown density black spruce younger
Class 22	Coniferous medium crown density jack pine
Class 25	Coniferous medium crown density black spruce
Class 32	Coniferous medium crown density black spruce, jack pine
Class 35	Burn recent sparse vegetation cover
Class 36	Mixed coniferous medium density
Class 39	Mixed coniferous high density
Class 43	Coniferous low crown density black spruce, jack pine
Class 53	Mixed forest
Class 55	Coniferous very low density
Class 59	Coniferous low crown density jack pine
Class 64	Old burns mixed regeneration cover
Class 69	Mixed deciduous forest
Class 79	Deciduous high crown density
Class 80	Deciduous medium crown density
Class 81	Older burns shrub-grass cover
Class 85	Shrubs and grassland
Class 99	Deciduous low broadleaf cover
Class 112	Bare disturbed areas sparse vegetation cover
Class 113	Burn rock outcrops
Class 134	Bare disturbed area
Class 150	Clouds
Class 160	Cropland high biomass
Class 161	Cropland medium biomass

Class 162	Cropland low biomass
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## The Pixel-Area Image

The file "0\_pixel\_area\_10by5min.img" is an image that provides the area for each of the 10 by 5 minute cells. The area for each pixel is given in hectares. One hectare equals 10,000 square meters.

Each pixel value is represented as a 2-byte integer. This image has the low-order byte first. On some systems, the bytes may need to be swapped in order to read the 2-byte integers correctly. On UNIX systems, this can be done with the following command.

```
dd if=input_file_name conv=swab of=output_file_name
```

## Spatial Coverage

These data cover the same area as the regional meteorological parameters assembled by Val Pauwels. The data are in a straight latitude/longitude grid. The BOREAS grid coordinates listed below are simply given for reference purposes. The corner coordinates are identical to the upper left corner of Val's regional data set.

Corner	X	Y	Longitude	Latitude
Upper Left	242.697	675.191	107°00'00.00" W	57°00'00.00" N
Upper Right	903.583	765.939	96°00'00.00" W	57°00'00.00" N
Lower Left	274.686	119.043	107°00'00.00" W	52°00'00.00" N
Lower Right	1022.683	221.752	96°00'00.00" W	52°00'00.00" N

The X and Y coordinates listed above are the BOREAS grid coordinates which are based on an Albers Equal Area Conic (AEAC) projection with the following parameters:

```
Origin: 111.00 deg W, 51.00 deg N
Standard Parallels: 52.5 deg N, 58.5 deg N
Units of Measure: kilometers
```

## Regridded TM Mosaic Land Cover Maps, 30 min

These images were produced by aggregating the 30-m land cover Thematic Mapper classification by CCRS to a 0.5 degree by 0.5 degree (or 30' by 30') pixel size in a straight latitude/longitude grid. See the document [dsp01\\_tm\\_landcover\\_doc.html](#) for more information on the original data product that this is based on.

## Image Specifications

Each image is 22 pixels by 10 lines and contains no leading header bytes. Each pixel in the image is represented by one byte. The DN value for each pixel is the percentage of the coverage that pixel that is of a given class. The sum of all of the percentages in the various images might not be 100 for a given pixel because of rounding.

<b>Land Cover Maps, 30 minutes</b>
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class001\_30min.img  
 class007\_30min.img  
 class011\_30min.img  
 class013\_30min.img  
 class021\_30min.img  
 class022\_30min.img  
 class025\_30min.img  
 class032\_30min.img  
 class035\_30min.img  
 class036\_30min.img  
 class039\_30min.img  
 class043\_30min.img  
 class053\_30min.img  
 class055\_30min.img  
 class059\_30min.img  
 class064\_30min.img  
 class069\_30min.img  
 class079\_30min.img  
 class080\_30min.img  
 class081\_30min.img  
 class085\_30min.img  
 class099\_30min.img  
 class113\_30min.img  
 class134\_30min.img  
 class150\_30min.img  
 class160\_30min.img  
 class161\_30min.img  
 class162\_30min.img

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**References:**

Steyaert, L.T., F.G. Hall, and T.R. Loveland. 1997. Land Cover Mapping, Fire Disturbance-Regeneration, and Multiresolution Land Cover Scaling Studies in the BOREAS Forest Ecosystem with Multiresolution 1-km AVHRR. *J. Geophys. Res.*102: 29581-29598.

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[http://daac.ornl.gov/BOREAS/FollowOn/guides/dsp10\\_landcov\\_tm\\_mos\\_maps.html](http://daac.ornl.gov/BOREAS/FollowOn/guides/dsp10_landcov_tm_mos_maps.html)

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