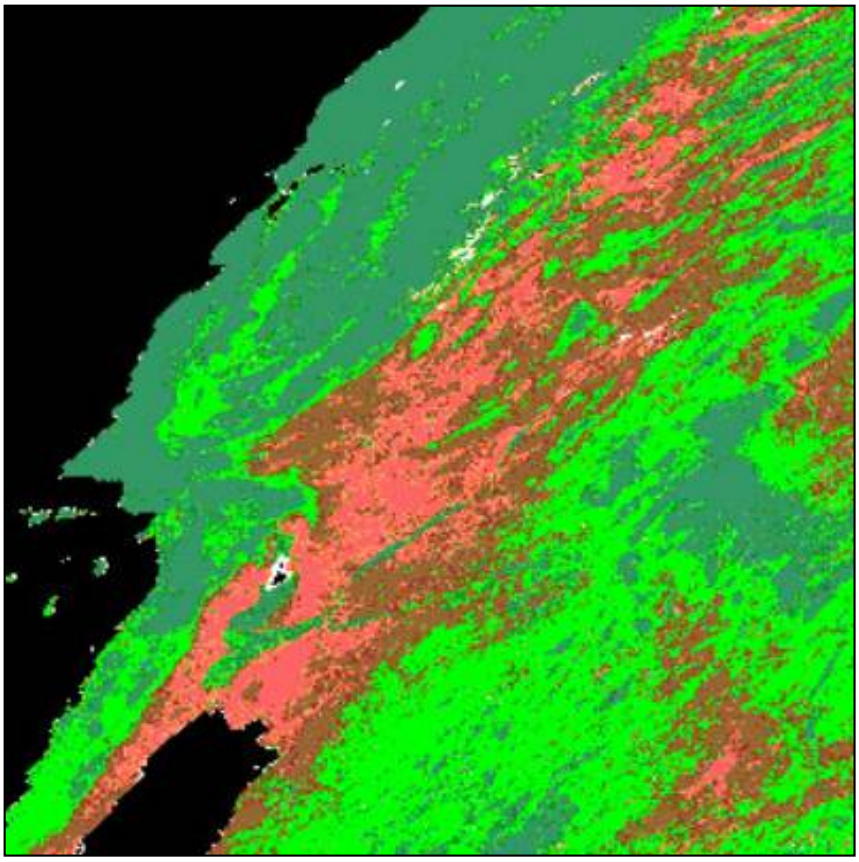

EDG Data Set Name
MODIS/Terra Vegetation Indices 16-Day L3 Global 500m ISIN Grid

Granule Shortname
MOD13A1

Data Set Characteristics
Area = ~ 10° x 10° lat/long
Size = 2400 x 2400 rows/columns
File Size = ~70 MB (variable)
Resolution = 500 meters
Projection = Integerized Sinusoidal
Data Format = HDF-EOS
Science Data Sets (SDSs) = 11

Product Description
The MOD13A1 image shown above is a sample of the MODIS Level 3 16-day composite of Vegetation Indices at 500m resolution that has been pseudo-colored. This product uses, as input, MODIS Terra surface reflectances, corrected for molecular scattering, ozone absorption, and aerosols. Two vegetation index (VI) algorithms are produced globally for land. One is the standard normalized difference vegetation index (NDVI), which is referred to as the "continuity index" to the existing NOAA-AVHRR derived NDVI. The other is an 'enhanced' vegetation index with improved sensitivity into high biomass regions and improved vegetation monitoring through a de-coupling of the canopy background signal and a reduction in atmosphere influences. The two VIs compliment each other in global vegetation studies and improve upon the extraction of canopy biophysical parameters. A new compositing scheme that reduces angular, sun-target-sensor variations with an option to use BRDF models is utilized. The gridded vegetation indices include quality assurance (QA) flags with statistical data that indicate the quality of the VI product and input data. Due to their implicity, ease of application, and widespread familiarity, vegetation indices have a wide range of usage within the user community. Some of the more common applications may include global biogeochemical and hydrologic modeling, agricultural monitoring and forecasting, land-use planning, land cover characterizaton, and land cover change detection.

NOTE: These products are still experimental in nature upon their initial release. Investigations are underway to assess the scientific validity of these products.

SDS	UNITS	DATA TYPE-bit	FILL VALUE	VALID RANGE	SCALE FACTOR
NDVI	NDVI	16-bit integer	-3000	-2000-10000	10000
EVI	EVI	16-bit integer	-3000	-2000-10000	10000
NDVI Quality	bit field	16-bit unsigned integer	65535	0-65534	na
EVI Quality	bit field	16-bit unsigned integer	65535	0-65534	na

Red Reflectance	relectance	16-bit integer	-1000	0-10000	10000
NIR Reflectance	relectance	16-bit integer	-1000	0-10000	10000
Blue Reflectance	relectance	16-bit integer	-1000	0-10000	10000
MIR Reflectance	relectance	16-bit integer	-1000	0-10000	10000
Viewing Zenith Angle	degree	16-bit integer	-10000	-9000-9000	100
Solar Zenith Angle	degree	16-bit integer	-10000	-9000-9000	100
Relative Azimuth Angle	degree	16-bit integer	-4000	-3600-3600	10

Order Data through the EOS Data Gateway
(http://edcimswww.cr.usgs.gov/pub/imswelcome/)

EOS Data Gateway Search Tips

Data Center: EDC-ECS
Sensor: MODIS
Dataset: MODIS/Terra Vegetation Indices 16-Day L3 Global 500m ISIN Grid
Geographic Extent: Type Lat/Long Range or Draw on Map
Temporal Extent: 2000-06-09 to present

Product Information

Product Description
(http://modis-land.gsfc.nasa.gov/products/products.asp?ProdFamID=6)

User Guide
(http://tbrs.arizona.edu/project/MODIS/UserGuide_doc.php)

Algorithm Theoretical Basis Document (ATBD)
(http://eospso.gsfc.nasa.gov/atbd/modistables.html)

MODIS Standard Data Products Catalog
(http://modis.gsfc.nasa.gov/data/dataprod/descchart.html)

EOS Data Products Handbook Volume 1 (2000)
(http://eospso.gsfc.nasa.gov/eos_homepage/misc_html/data_prod.html)

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Last Update: Friday, 07-Mar-2003 08:22:15 CST
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