RLC GENERALIZED FOREST MAP OF THE FORMER SOVIET UNION, 1-KM

Summary:

This data set is the Former Soviet Union (FSU) portion of the Generalized World Forest Map (WCMC 1998), a 1-km-resolution generalized forest cover map for the land area of the FSU. There are five forest classes in the original global generalized map. Only two of those classes were distinguished in the geographical portion comprising the FSU.

The data are offered in several formats including binary raster data in Idrisi format, ASCIIGRID raster data in ASCII format (easily imported into ArcInfo), vector data in ArcView shapefile format, and a graphic map in JPEG format (see Figure 1). Please read all documentation before using these files.
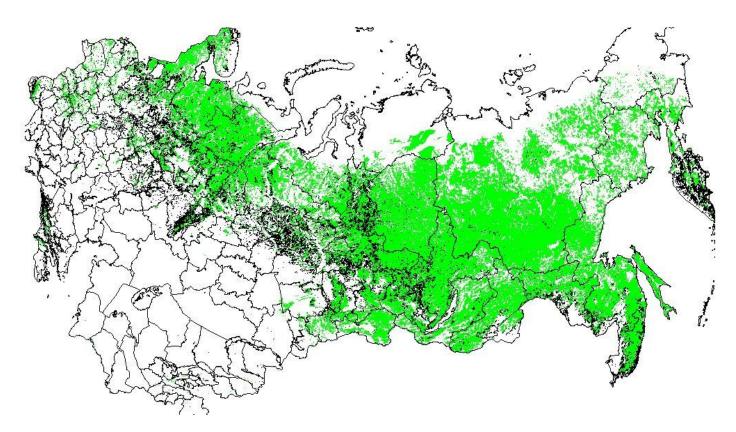
Figure 1. Generalized forest cover map, 1-km resolution, for the land area of the Former Soviet Union.

Data Citation:

Cite this data set as follows:

Stone, T. A., and P. Schlesinger. 2003. RLC Generalized Forest Map of the Former Soviet Union, 1-km. 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. doi:10.3334/ORNLDAAC/697.

Table of Contents:

1. Data Set Overview:

Data Set Contents:

This data set is the FSU portion of the Generalized World Forest Map (WCMC 1998), a 1-km-resolution generalized forest cover map for the land area of the FSU. There are five classes in the original global generalized map. Only two of those classes were distinguished in the geographical portion comprising the FSU.

The purpose of the generation of the original map was to create the best possible map of forest cover for the world using the most recent digital maps of regional and national forested and protected areas. The following text is from the source web site (previously http://www.wcmc.org.uk/forest/data/wfm.htm; now http://www.unep-wcmc.org):

In collaboration with the World Wide Fund for Nature (WWF), WCMC has compiled a World Forest Map - the first digital global forest map showing actual forest extent and protected areas with forested land. The digital map is being maintained at WCMC for use in promoting forest conservation. It has been used to produce a poster, which is being made widely available to people in the conservation and environmental community. The global Geographic Information System (GIS) data in the poster map are based on more detailed maps and digital files from national and international sources compiled mainly between the early 1980s and early 1990s. The digital information was used to estimate the amount of each major forest type in the world under protection and to provide a baseline for future monitoring of forests.

Related Data Sets:

See other Russian Land Cover data sets.

Title of Investigation:

Measuring Changes to Russian Forest Over the Last 25 Years

Investigator(s) Name and E-mail:

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Technical Contact(s) Name, Telephone, and E-mail:

Name	Email	Phone
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Future Modifications and Plans:

Not available.

2. Data Characteristics:

Study Area:

Spatial Coverage:

Min. X: -4649071

Max. X: 3289929

Min. Y: -1496226

Max. Y: 2944775

In meters from 104.5 degrees E, 56.5 degrees N

Spatial Resolution:

1-km resolution

Projection:

Lambert Azimuthal Equal Area

Grid Description:

Cols: 7939

Rows: 4441

Resolution: 1000 meters

Temporal Coverage:

The map bears a very strong resemblance to the 1973 Forest Atlas (Anon. 1973). Therefore, there is a real concern that this map is based on a 1973 Atlas that was likely based on forestry data from the 1940s, 1950s, and 1960s. See Section 4, Limitations of the Data.

Parameter or Variable:

Table for: wfmap.img

Variable	Description	Units	Instrument	Range
LANDCOVER	Generalized Forest Cover Classes	Unitless	Generalized World Forest Map (WCMC, 1998)	Not applicable

LANDCOVER footnote: The 2 generalized forest cover classes distinguished in this dataset are listed below. They include:

5) Temperate Broadleafed/Temperate Mixed

6) Temperate Needleleaved

Table for: wfmap.dat.gz

Variable	Description	Units	Instrument	Range
LANDCOVER	Generalized Forest Cover Classes	Unitless	Generalized World Forest Map (WCMC, 1998)	Not applicable

LANDCOVER footnote: See forest cover classes listed above.

Table for: wfmap.zip

Variable	Description	Units	Instrument	Range
LANDCOVER	Generalized Forest Cover Classes	Unitless	Generalized World Forest Map (WCMC, 1998)	Not applicable

LANDCOVER footnote: See forest cover classes listed above.

Data Organization:

Granule Name or Description:

wfmap.img

Data Format:

A binary raster image depicting forest cover in Idrisi format. Note: must be converted to an *rst file when using version 3.2 of Idrisi. Use the Idrisi File Conversion (16/32) utility available in the file pulldown menu to convert to the new format. Also note that the Idrisi v. 2 image documentation file, wfmap.doc, MUST be present for the binary data to be read by Idrisi.

Sample Data Record:

Not applicable

Granule Name or Description:

wfmap.dat.gz

Data Format:

A compressed ASCIIGRID version of the binary raster data (wfmap.img). This data file was created by converting the Idrisi binary file (wfmap.img) using Idrisi export utilities. The ASCII file was compressed using the gzip utility available in UNIX.

Sample Data Record:

Not Applicable.

Granule Name or Description:

wfmap.zip

Data Format:

A vector map version of data (same info as raster data wfmap.img and wfmap.asc.gz) in ArcView shapefile format (compressed).

Sample Data Record:

Not applicable

3. Application and Derivation:

Typical Application of Data:

Regional-, national-, and sub-national-level forest and land use change assessments.

Theory of Measurements:

Not available

Derivation Techniques and Algorithms:

Formulae:

Not available

Processing Steps:

The source data for the FSU portion of the Generalized World Forest Map (being distributed here) were obtained from the WCMC as an ArcInfo Export format file from their World Wide Web site (ftp://www.wcmc.org.uk/services/forest/wfm.e00.Z). These data were reprojected from Robinson projection to Lambert Azimuthal Equal Area using Arc Info for UNIX using the PROJECT command. The subsequent coverage was also gridded to a 1000 meter resolution surface using this software's POLYGRID command. The resulting gridded data set was exported to a generic binary format suitable to Idrisi v. 2.0 for Windows.

Processing Changes:

Datum : Undefined

Delta WGS84 : 0 0 0

Ellipsoid : Sphere

Radius of sphere: 6370997.0000

Origin long : 104.5

Origin lat : 56.5

Special Corrections/Adjustments:

Not applicable

Calculated Variables:

Not applicable

Graphs and Plots Used in Analysis:

4. Quality Assessment:

Data Usage Guidance:

Errors and Limitations:

Error Sources:

Not available

Limitations of the Data:

To the best of our knowledge, the source map data used to create the original World Forest Map (from which this Generalized World Forest Map subset is derived) consists solely of the Forests of the USSR map (Garsia 1990). (Distributed by the ORNL DAAC as the RLC Forest Cover Map of the Former Soviet Union, 1990. See the Limitations section for that data set). A comparison between the two data sets shows, for example, that all sparse forest categories from map of Forests of the USSR (Garsia 1990) are binned in the "nodata" category on the Generalized World Forest Map. Thus, one should not assume that the "nodata" regions of this map do not contain forest.

Latitude of True Scale: 0.0

False Easting: 0.0

False Northing: 0.0

Pixel Dimension: 1000 meters

Known Problems with the Data:

Not available

Quality Assessment Activities:

Validation by Submitter of Data:

Not available

Confidence Level or Accuracy Judgment:

Not available

Measurement Error for Parameters:

Not available

Additional Quality Assessments:

Not available

Verification by Data Center:

Not available

Other Relevant Information about the Study:

Not available

5. Acquisition Materials and Methods:

Source or Platform Collection Environment:

Not available

Source or Platform Program Management:

Not available

Source or Platform Mission Objectives:

Coverage Information:

Not available

Attitude Characteristics:

Not available

Data Collection System:

Not available

Communication Links:

Not available

List of Sensors or Instruments:

Analysis

Ground Segment Information:

Data Acquisition and Processing:

Not available

Latitude Crossing Times:

Not available

Sensor or Instrument Descriptions

Key Variables:

Not available

Principles of Operation:

Not available

Sensor or Instrument Measurement Geometry:

Not available

Manufacturer of Sensor or Instrument:

Not available

Calibration:

Specifications:

Not applicable

Tolerance:

Not applicable

Frequency of Calibration:

Not applicable

Other Calibration Information:

Not applicable

Data Acquisition Methods:

The source data were acquired from WCMC. See World Wide Web address: (formerly http://www.wcmc.org.uk/forest/data/wfm.htm; now http://www.unep-wcmc.org).

Observations:

Data Notes:

Not available

6. Data Description and Access:

Data Access:

This data set is available from the Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC).

Data Archive Center:

Contact for Data Center Access Information:

E-mail: uso@daac.ornl.gov
Telephone: +1 (865) 241-3952
FAX: +1 (865) 574-4665

Product Availability:

Data can be accessed electronically on the ORNL DAAC's anonymous FTP site or from the DAAC's search and order system. Data files are also available by request from uso@daac.ornl.gov.

Reading the Media:

Not available

Software and Analyses Tools:

Not available

7. References:

Anon. 1973. Atlas of Forests for the Soviet Union, Main Geodetic and Cartographic Organization for the Ministries of the USSR, Moscow, 222 pp.

Garsia, M. G. (ed.). 1990. Forests of the USSR, Scale 1: 2,500,000, Forest Cartography Department of All-Union State Planning - Research Institute Sojuzgiprolezhoz. GUGK, Moscow, USSR.

World Conservation Monitoring Centre (WCMC), 219 Huntingdon Road, Cambridge, CB3 0DL
United Kingdom. Telephone: +44-1223 277314 Fax: +44-1223 277136. Email:
info@wcmc.org.uk

8. Glossary and Acronyms:

Glossary:

Acronyms:

Acronym Definition
ASCII   American Standard Code for Information Interchange
FSU   Former Soviet Union
GIS   Geographic Information System
JPEG   Joint Photographic Experts Group
RMS   Root Mean Square
WCMC   World Conservation Monitoring Centre
WWF   World Wide Fund for Nature

9. Document Information:

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