Cookbook 13 November 2013
Data!

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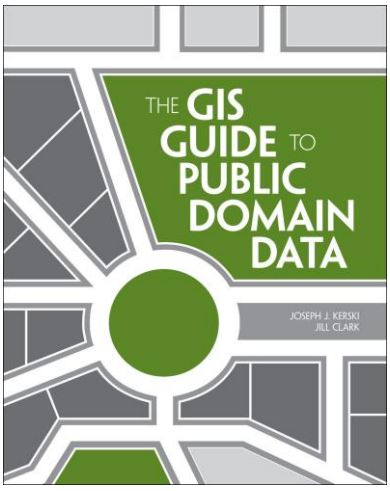


http://esripress.esri.com/display/index.cfm?fuseaction=display&websiteID=219&moduleID=0

http://spatialreserves.wordpress.com/

1) Geoportals

A Geoportal is a gateway to Web-based geospatial information and information services. It enables you to discover, view and access geospatial information and services made available by their sources. Likewise, if you are a source of such information and services it enables you to make your geospatial information and services discoverable, viewable and accessible by others.

See http://opengeoportal.org/ for more information.

In the most basic form, a geoportal is simply an easier way to download data. Compare, for example, the traditional file listing approach of MassGIS with its geoportal OLIVER:

MassGIS Data Layer Listing
http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/layerlist.html

MassGIS OLIVER
http://maps.massgis.state.ma.us/map_ol/oliver.php

However, there is much more to geoportals:

1. Distributed data storage, meaning that the data sets are stored wherever in the cloud and the geoportal only serves as an access point.

2. Mash-up mapping and downloading. Here you first create a mash-up of the data you want (= an online map of your data layers) and the geoportal automatically prepare the data for download.

3. Emphasize on meta data = data about the data = a fancy word for data documentation.

Examples of Geoportals

GeoData@Tufts	http://geodata.tufts.edu/
MIT Geoweb	http://web.mit.edu/geoweb/
GeoData@Berkeley	http://gis.lib.berkeley.edu:8080/
Global Geoportal:	http://www.geoportal.org/web/guest/geo_map_viewer
NOAA Geoportal:	http://data.nodc.noaa.gov/geoportal/
Harvard Geoportal	http://calvert.hul.harvard.edu:8080/opengeoportal/
Harvard GID Data	http://www.gis.dce.harvard.edu/Data.html

2) Land Use / Land Cover Data

Land cover is the physical material at the surface of the earth. Land covers include grass, asphalt, trees, bare ground, water, etc. There are two primary methods for capturing information on land cover: field survey and analysis of remotely sensed imagery.

Land cover is distinct from land use despite the two terms often being used interchangeably. Land use is a description of how people utilize the land and socio-economic activity - urban and agricultural land uses are two of the most commonly known land use classes. At any one point or place, there may be multiple and alternate land uses, the specification of which may have a political dimension.

The buzz-word today is LUCC: Land Use and Land Cover Change

2.1) Land Use Data for Massachusetts

Available from MassGIS state-wide for 1971, 1985, 1999, and 2005 (tiled by city/town)

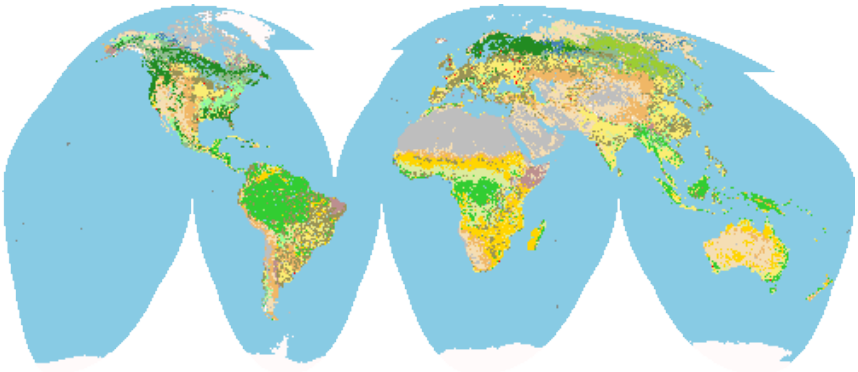
2.2) Land Use / Land Cover Data for the USA

The National Land Cover Database (NLCD) is developed by the Multi-Resolution Land Characteristics Consortium (MRLC).

Main website:	http://www.mrlc.gov/
MRLC Geoportal	http://gisdata.usgs.gov/website/mrlc/viewer.htm
2006 National Land Cover	http://www.mrlc.gov/nlcd2006.php
2001 National Land Cover	http://www.mrlc.gov/nlcd2001.php
1992 National Land Cover	http://www.mrlc.gov/nlcd1992.php

2.3) Global Land Use / Land Cover Data

Univ. of Wisconsin	http://www.sage.wisc.edu/iamdata/
USGS data links	http://landcover.usgs.gov/landcoverdata.php
USGS download	http://edc2.usgs.gov/glcc/glcc.php

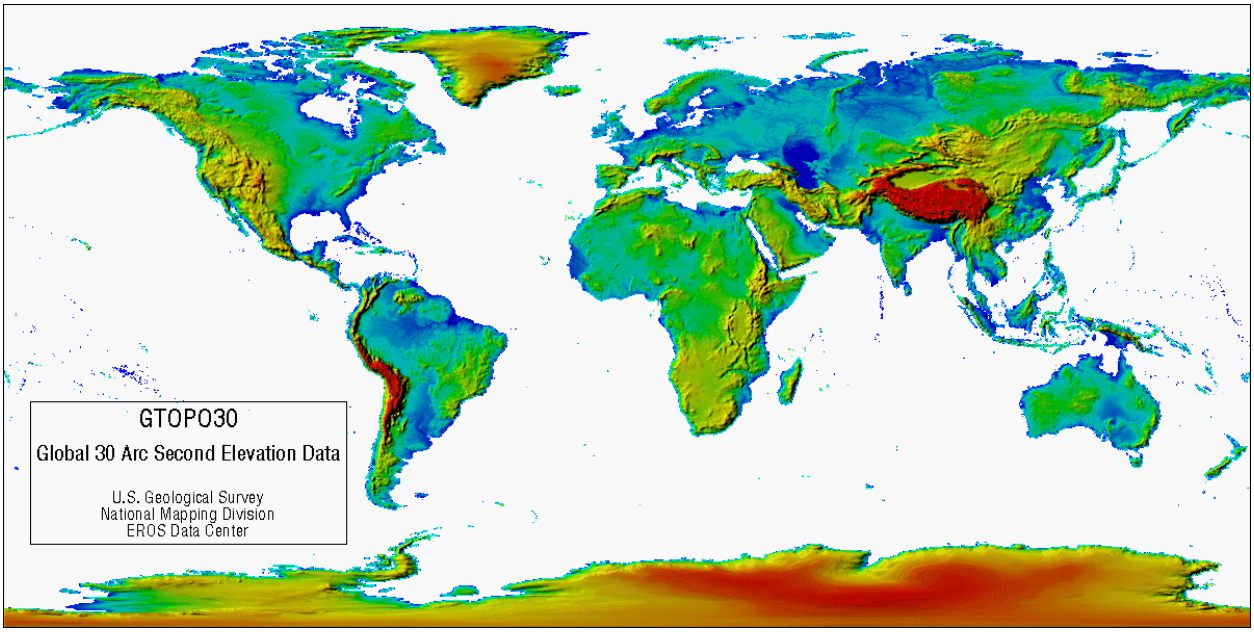


3) HYDRO1K / GTOPO30

HYDRO1K https://lta.cr.usgs.gov/HYDRO1K
GTOPO30 https://lta.cr.usgs.gov/gtopo30

HYDRO1K is a geographic database developed to provide comprehensive and consistent global coverage of topographically derived data sets, including streams, drainage basins and ancillary layers derived from the USGS' 30 arc-second (~ 1 km) digital elevation model of the world. HYDRO1K provides a suite of geo-referenced data sets, both raster and vector, to organize, evaluate, or process hydrologic information on a continental scale.

GTOPO30 is a global digital elevation model (DEM) with a horizontal grid spacing of 30 arc seconds (approximately 1 kilometer). GTOPO30 was derived from several raster and vector sources of topographic information. For easier distribution, GTOPO30 is divided into tiles. Detailed information on the characteristics of GTOPO30 including the data distribution format, the data sources, production methods, accuracy, and hints for users, is found in the GTOPO30 README file.



4) New England GIS Data

GIS Data for Connecticut
UCONN MAGIC: http://magic.lib.uconn.edu/
UCONN CLEAR: http://clear.uconn.edu/

GIS Data for New Hampshire
NH Granit: http://www.granit.unh.edu/
NH DOT: http://www.nh.gov/dot/org/projectdevelopment/planning/gis-data-catalog/

GIS Data for Vermont
Vermont VCGI: http://vcgi.vermont.gov/
VT Natural Resources: http://www.anr.state.vt.us/site/html/maps.htm
UVM Data Sources: http://www.uvm.edu/~geosptal/?Page=DataSources.html

GIS Data for Rhode Island
RIGIS: http://www.edc.uri.edu/rigis/
RI Environmental Management: http://www.dem.ri.gov/maps/
RI DOT: http://www.dot.ri.gov/engineering/gis/

GIS Data for Maine
Maine Office of GIS: http://www.maine.gov/megis/catalog/
Maine Environmental Protection: http://www.maine.gov/dep/gis/datamaps/
USM GIS Data: http://www.usm.maine.edu/gis/data-resources

GIS Data for New York
NYSGIS: http://gis.ny.gov/
Cornell CUGIR: http://cugir.mannlib.cornell.edu/

5) Assorted Cool Data!

Here is a selection of interesting and sometimes even useful GIS data sources.

DATA.Gov
Go nuts at http://catalog.data.gov/dataset

Congressional Districts 1789 to 2012
http://cdmaps.polisci.ucla.edu/

Project Linework
http://somethingaboutmaps.wordpress.com/project-linework/

GIS Data for Europe
http://www.eurogeographics.org/form/topographic-data-eurogeographics

NHGIS: National Historical Geographic Information System
https://www.nhgis.org/

Historic USGS Maps of New England & NY
http://docs.unh.edu/nhtopos/nhtopos.htm

USGS Aerial Photographs
http://www.usgs.gov/pubprod/aerial.html

Natural Earth
Global vector and raster data at http://www.naturalearthdata.com/

National Geodetic Survey
Bench Marks: http://geodesy.noaa.gov/cgi-bin/datasheet.prl
As AGO web map at http://bit.ly/yzXC4z

2010 Census Data at Block Group Level
http://www.gisnuts.com/terra/blog/2012/12/03/block-group-level-census-data-now-available-for-download

NSF OpenTopography
http://www.opentopography.org/index.php

Global SRTM DEM
http://srtm.csi.cgiar.org/SELECTION/inputCoord.asp

ASTER Global Digital Elevation Map (GDEM)
http://asterweb.jpl.nasa.gov/gdem.asp

Compilation of free GIS data by Robin Wilson
http://freegisdata.rtwilson.com/

Compilation of GIS data by Carsten Braun
http://www.westfield.ma.edu/cbraun/resources/gis-resources/