EARTH SYSTEM SCIENCE
Data and Services

HUMAN DIMENSIONS *Data Set Reference Sheet* — *December 2017*

Physical Properties	Data Center	Selected Data Sets and Data Collections *Complete data set listings available through each individual data center. For information about NASA's Earth Observing System Data and Information System (EOSDIS) data centers, see: https://earthdata.nasa.gov*
Biodiversity & Ecosystems	**ASF DAAC** http://www.asf.alaska.edu	• ASF Data Pool of processed SAR data and images (Sentinel-1A, Sentinel-1B, SMAP, Seasat, ALOS PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR) • Global Boreal Forest Mapping Project, JERS-1 SAR image mosaics of Boreal North America, Winter 1997-98 and Summer 1998 • Global Rainforest Mapping Project, JERS-1 SAR image mosaics of rain forests in 1) the Amazon region, 2) Central American and South American Pantanal regions, 3) Africa, and 4) Southeast Asia • MEaSUREs Wetlands Extent and Inundated Wetlands Time Series • SAR Data for Terrestrial Ecologists (PALSAR GeoTIFF subsets of 42 flux tower locations)
	ORNL DAAC http://daac.ornl.gov	• Geoecology: County-level environmental data for the United States 1941-1981 • Global N Cycle Fluxes and N2O Mixing Ratios Originating from Human Activity • Pre-ABoVE: Arctic Vegetation Plots at Atqasuk, Alaska, 1975, 2000, and 2010 • Pre-ABoVE: Arctic Vegetation Plots, Unalaska Island, Aleutian Islands, Alaska, 2007 • Pre-ABoVE: Poplar Vegetation Plots, Arctic and Interior Alaska and Yukon, 2003-2005 • Pre-ABoVE: Arctic Vegetation Plots, Umiat, North Slope, Alaska, 1951 • Pre-ABoVE: Arctic Vegetation Plots, Frost Boil Sites, North Slope, Alaska, 2000-2006 • Pre-ABoVE: Arctic Vegetation Plots at Nome, Alaska, 1951 • Pre-ABoVE: Arctic Vegetation Plots at Toolik Lake, Alaska, 1989 • Pre-ABoVE: Arctic Vegetation Plots at Imnavait Creek, Alaska, 1984-1985 • Pre-ABoVE: Arctic Vegetation Plots at Prudhoe Bay, Alaska, 1973-1980 • Pre-ABoVE: Arctic Vegetation Plots at Happy Valley, Alaska, 1994 • Pre-ABoVE: Arctic Vegetation Plots at Arrigetch Peaks, Alaska, 1978-1981 • Pre-ABoVE: Arctic Vegetation Plots, Willow Communities, North Slope, Alaska, 1997
	SEDAC http://sedac.ciesin.columbia.edu	• Anthropogenic Biomes - 21 anthropogenic biomes based on population density, land use, biota, climate, terrain and geology for the years 1700, 1800, 1900 and 2000 • Environmental Treaty Texts - Full text of more than 140 international environmental agreements • Global Mangrove Forests Distribution, v1 - a compilation of the extent of mangroves forests of the world, circa 2000 • Gridded Species Distribution - 30 arc-second spatial resolution data for global mammal and amphibian richness grids • Human Appropriation of Net Primary Productivity (HANPP) - data and maps for global net primary productivity, human appropriation of NPP and HANPP expressed as a percent of NPP • Last of the Wild, v2 - Three data sets depicting human influence on terrestrial ecosystems using data sets compiled on or around 2000
Climate Change	**ASF DAAC** http://www.asf.alaska.edu	• AMM-1 and MAMM SAR Image Mosaics of Antarctica 100 m (RADARSAT-1) • Arctic MEaSUREs sea ice dynamics products (RADARSAT-1) • ASF Data Pool of processed SAR data and images (Sentinel-1A, Sentinel-1B, SMAP, Seasat, ALOS PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR) • International Polar Year SAR Datasets
	ORNL DAAC http://daac.ornl.gov	• Daymet: Daily, Monthly, and Annual Climate Summaries on a 1 km Grid for North America, Version 3 • ISLSCP II Climate Research Unit CRU05 Monthly Climate Data - 11 climate variables from 1961-1990 • ISLSCP II CRU05 Climate Time Series for Global Land Areas, 1986-1995 • VEMAP 2: Monthly Ecosystem Model Responses to U.S. Climate Change, 1994-2100 • VEMAP 2: Annual Ecosystem Model Responses to U.S. Climate Change, 1994-2100

Climate Change (continued)	**SEDAC** http://sedac.ciesin.columbia.edu	• Anthropogenic Biomes - 21 anthropogenic biomes based on population density, land use, biota, climate, terrain and geology for the years 1700, 1800, 1900 and 2000 • Environmental Treaty Texts - Full text of more than 140 international environmental agreements • Gridded Species Distribution - 30 arc-second resolution data available for global mammal and amphibian richness grids • Human Appropriation of Net Primary Productivity (HANPP) - data and maps for global net primary productivity, human appropriation of NPP and HANPP expressed as a percent of NPP
Human & Environmental Health	**ORNL DAAC** http://daac.ornl.gov	• A Global Database of Gas Fluxes from Soils after Rewetting or Thawing, Version 1.0 • CMS: Atmospheric Methane Concentrations and Prior Emissions, Boston, MA, 2012-2014 • CMS: Carbon Fluxes from Global Agricultural Production and Consumption, 2005-2011 • CMS: DARTE Annual On-road CO2 Emissions on a 1 km Grid, Conterminous USA, 1980-2012 • ISLSCP II Edgar 3 Gridded Greenhouse and Ozone Precursor Gas Emissions • NACP Regional: National Greenhouse Gas Inventories and Aggregated Gridded Model Data
	SEDAC http://sedac.ciesin.columbia.edu	• Environmental Performance Index - A collection of performance indicators of countries tracked across policy categories covering both environmental public health and ecosystem vitality. Available for 2006, 2008, 2010, 2012, 2014 and 2016 • Environmental Sustainability Index - A measure of overall progress towards environmental sustainability. A report, underlying data, and associated maps for the Pilot 2000, 2001, 2002 and 2005 versions • Environmental Treaties and Resource Indicators (ENTRI) - Searchable relational database containing international environmental treaties, treaty summaries, treaty status files and natural resource indicators • Global Annual PM2.5 Grids from MODIS, MISR and SeaWiFS Aerosol Optical Depth (AOD), v1 • Global Urban Heat Island (UHI) - average summer daytime max/nighttime min land surface temperatures within urban areas and surrounding rural areas, as well as the temperature difference between urban and rural areas. • Global 3-Year Running Mean Ground-Level NO2 Grids from GOME, SCIAMACHY and GOME-2, v1 • Historical Anthropogenic Sulfur Dioxide Emissions - annual estimates of anthropogenic global and regional Sulfur Dioxide emissions for 1850-2005 • Indicators of Coastal Water Quality - Chlorophyll-a concentrations derived from NASA's Sea-viewing Wide Field-of-view Sensor (SeaWiFS) • Natural Disaster Hotspots - A set of global geospatial data on six major natural hazards and associated risks of mortality and economic loss • Poverty Mapping - A collection of subnational, spatially explicit poverty data sets for selected proxy measures of poverty at global and national scales • Superfund Site Footprints - An assessment of populations living in proximity to U.S. Superfund National Priorities List (NPL) sites
Population & Land Use	**ASF DAAC** http://www.asf.alaska.edu	• ASF Data Pool of processed SAR data and images (Sentinel-1A, Sentinel-1B, SMAP, Seasat, ALOS PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR) • Global Rainforest Mapping Project
	LP DAAC https://lpdaac.usgs.gov	• ASTER L1B Registered Radiance at the Sensor • ASTER Level 1 Precision Terrain Corrected Registered at-sensor Radiance • MEaSUREs Web-Enabled Landsat Data 5-Year Land Cover Land Use Change • MODIS/Terra and MODIS/Aqua Land Cover Type Yearly L3 Global 500 m SIN Grid
	ORNL DAAC http://daac.ornl.gov	• Decadal Land Use and Land Cover Classifications across India, 1985, 1995, 2005 • Harmonized Global Land Use for Years 1500 -2100, V1
	SEDAC http://sedac.ciesin.columbia.edu	• Anthropogenic Biomes - 21 anthropogenic biomes based on population density, land use, biota, climate, terrain and geology for the years 1700, 1800, 1900 and 2000 • China Dimensions Data Collection - Includes digital administrative boundaries, fundamental GIS layers, county-level data on population, agriculture, economics and hospitals • Dar es Salaam Land Use and Informal Settlement Data Set - Urban land use and informal settlements for 1982, 1992, 1998, and 2002 in Dar es Salaam, Tanzania • Energy Infrastructure - Population exposure estimates in proximity to nuclear power plants by point locations and country-level aggregates • Global Agricultural Lands - Proportion of land area used as cropland (land used for the cultivation of food and pasture (land used for grazing) in the year 2000 • Global Estimated Net Migration Grids by Decade, v1 - Estimates of net migration (in-migration minus out-migration) at half-degree and 30 arc-second spatial resolution for the 1970s, 1980s and 1990s • Global Fertilizer and Manure, v1 Data Collection - Nitrogen (N) and Phosphorous (P) application rates for both fertilizer and manure based on global crop and livestock data • Global Grid of Probabilities of Urban Expansion to 2030 - spatially explicit probabilistic forecasts of global urban land cover change from 2000 to 2030 at a 2.5 arc-minute resolution

Population & Land Use (continued)	SEDAC http://sedac.ciesin.columbia.edu (continued)	• Global Gridded Geographically Based Economic Data (G-Econ), v4 - global gridded Gross Domestic Product (GDP) data in both Market Exchange Rate (MER) and Purchasing Power Parity (PPP) • Global Human Built-up And Settlement Extent (HBASE) Dataset From Landsat, v1 (2010) • Global Man-made Impervious Surface (GMIS) Dataset From Landsat, v1 (2010) • Global Population Count Density Grid Time Series Estimates, v1 - Back-cast decadal (1970 – 2000) time series of population grids based on the year 2000 data from SEDAC's GRUMPv1 data set • Global Population Projection Grids Based on Shared Socioeconomic Pathways (SSPs), v1 – Population projections at a resolution of 7.5 arc-minutes for urban, rural, and total population at ten-year intervals for 2010-2100 • Global Reservoir and Dam (GRanD), v1 - Information on reservoirs and associated dams, such as dam and impounded river names, primary use, nearest city, height, area and volume of reservoir, and year of construction (or commissioning) • Global Roads Open Access Data Set, v1 - Globally consistent, spatially accurate, topologically integrated global roads • Global Rural-Urban Mapping Project (GRUMP), v1 - Includes 30 arc-second population grids, human settlements and urban extents • Gridded Population of the World (GPW), v4.10 - Population count and density estimates and basic demographic characteristics at 30 arc-second resolution for 2000, 2005, 2010, 2015, and 2020 • India Annual Winter Cropped Area, v1 (2001–2016) • Low Elevation Coastal Zone Urban-Rural Estimates - maps and tabular data of country-level estimates of urban, rural and total population and land area in low elevation coastal zones • Population, Landscape, and Climate Estimates (PLACE), v3 - National level aggregations of biome, climate, coastal proximity, elevation, and population density data for 1990, 2000, and 2010 • U.S. Census Grids 1990, 2000 and 2010 - Population counts and a wide variety of socioeconomic characteristics from the three most recent decennial U.S. censuses • Urban Landsat: Cities from Space - Landsat IR/visible imagery for 78 urban areas, and data for 28 urban locations around the world

ASF DAAC   Alaska Satellite Facility DAAC

LP DAAC   Land Processes DAAC

ORNL DAAC   Oak Ridge National Laboratory DAAC

SEDAC   Socioeconomic Data and Applications Center

FS-2016-11-528-GSFC

EMOD-2016-863-4-HD