Agriculture and Food Security

Overview

Because agriculture is a fundamental driver of environmental change, agriculture-related data can provide valuable insights into sustainability issues such as land use, biodiversity, and food security, for both researchers and applied users.

The Web site of the NASA Socioeconomic Data and Applications Center (SEDAC) offers a variety of interdisciplinary data and related resources grouped under socioeconomic and Earth science themes. The Agriculture and Food Security theme spans global data holdings and resources that touch on the proportion of cropland and pasture, the extent of poverty, biodiversity, environmental indicators, and human consumption measures.

Data

Go to http://sedac.ciesin.columbia.edu/theme/agriculture to download maps and data.

Highlights

The SEDAC Web site provides access to several global agriculture-related data sets, including:

- Global Agricultural Lands, which shows the proportion of land area used as cropland and pasture, for the year 2000.
- Global Fertilizer and Manure, representing fertilizer application rates and manure production of Nitrogen (N) and Phosphorous (P).
- Effects of Climate Change on Global Food Production, providing data from a study that projected changes in the yields of major grain crops based on climate change scenarios.
- Anthropogenic Biomes, helping delineate 21 anthropogenic biomes based on population density, land use, biota, climate, terrain and geology.
- The Human Footprint, which aims to measure the extent of human influence on the Earth’s surface.
- Human Appropriation of Net Primary Productivity (HANPP), comparing the spatial distribution of human consumption of carbon (as embodied in food, fiber, and wood products) with the ability of land-based ecosystems to produce it.
- 2012 Environmental Performance Index (EPI), ranking 132 countries in 10 policy areas; and a complementary Pilot Trend EPI showing country improvement 2000–2010. Agriculture-related indicators have been part of each EPI since 2006.
- Global Poverty Mapping Project, an extensive collection of poverty and food security data from around the world, in tabular and shapefile format, with case studies.

To learn more, go to http://sedac.ciesin.columbia.edu/theme/agriculture