The NASA NEESPI Data Portal: Products, Information, and Services

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Overview

Studies have indicated that land cover and use changes in Northern Eurasia influence global climate system. However, the procedures are not fully understood and it is challenging to understand the interactions between the land changes in this region and the global climate. Having integrated data collections from multiple disciplines are important for studies of climate and environmental changes. Remote sensed and model data are particularly important due to sparse in situ measurements in many Eurasia regions especially in Siberia. The NASA GES DISC (Goddard Earth Sciences Data and Information Services Center) NEESPI data portal has generated infrastructure to provide satellite remote sensing and numerical model data for atmospheric, land surface, and cryosphere. Data searching, subsetting, and downloading functions are available. One useful tool in the Web-based online data analysis and visualization system, Giovanni (Goddard Interactive Online Visualization And Analysis Infrastructure), which allows scientists to assess easily the state and dynamics of terrestrial ecosystems in Northern Eurasia and their interactions with global climate system. Recently, we have created a metadata database prototype to expend the NASA NEESPI data portal for providing a venue for NEESPI scientists to find the desired data easily and leveraging data sharing within NEESPI projects. The database provides product level information. The desired data can be found through navigation and free text search and narrowed down by filtering with a number of constraints. In addition, we have developed a Web Map Service (WMS) prototype to allow access data and images from different data resources.

Data Access Tools and Services

Search and Download Data using Mirador

This service allows a user to access data and images from other data service center through the Web Map Service (WMS). Through current prototype, a user can access the files within 24 hours from Web Fire Mapper, Univ. of Maryland; high resolution land cover map from JPL (Landsat7, highest 15m) and POSTEL (MERIS/ENVISAT,300m); and daily UV aerosol index from GES DISC (OMI, 1x1 deg).

NEESPI Data Searching Portal

This portal intends to help people find data related to NEESPI project. The portal allows searching for data by project, location, investigator, science keywords, etc. and refining searched results by specify category or text.

Other data download services

Direct FTP: Direct FTP download from the Simple, Scalable, Script-Based, Science Processing Archive (SPA) system
OPEndAP: Open-source Project for a Network Data Access Protocol
GIS: OGC-compliant GIS map and coverage servers to provide image and data to remote system

Future High Resolution Products

NDVI 1km tiles in sinusoidal grid
NDVI mosaics 1km in Equidistant grid

Parameters in Giovanni NEESPI

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