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Updates to Land Surface and Air Quality Products in NASA MAIRS and NEESPI Data Portals

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In the last few years, the data and service infrastructure has been established at the NASA GES DISC in support of the Northern Eurasian Earth Science Partnership Initiative (NEESPI). Data collections include more than thirty monthly and daily global satellite datasets for atmospheric, land surface, and cryosphere. User friendly data access tools are provided, such as temporal and spatial search, parameter and spatial subsetting, advanced data downloading, etc. Most of the data have been also integrated into Giovanni (Goddard Interactive Online Visualization ANd aNalysis Infrastructure). Recently, this data services infrastructure has been leveraged to support the Monsoon Asia Integrated Regional Study (MAIRS) project. Due to the large overlap of the geographic coverage and objectives of NEESPI and MAIRS, the collected data serve for both projects. Recently, satellite air quality data from AIRS (CO2, CO, and CH4) and the 30 years (1979-present) model products (assimilated land products from the NASA Global Land Data Assimilation System (GLDAS), and assimilated atmospheric products from the NASA Modern Era Retrospective-analysis for Research and. Applications (MERRA) project have been integrated into Giovanni MAIRS. To support the regional climate study related to land use/cover change, we are working on the higher resolution land process data such as vegetation index, land surface temperature, and active fire at 5km and/or 1km from the standard MODIS products. This presentation will focus on the use of land and air quality products and tools. Sample exploration studies through Giovanni are demonstrated, such as aerosol anomaly trend over East Asia, urban heat island inselected big cities, etc. Detailed information of the NASA data portals to support NEESPI and MAIRS projects can be found at: http://disc.gsfc.nasa.gov/mairs and http://disc.gsfc.nasa.gov/neespi.