Geophysical Research Abstracts
Vol. 17, EGU2015-74, 2015
EGU General Assembly 2015

Calculating Regional MODIS NPP for Europe

Adam Moreno (1), Mathias Neumann (1), Maosheng Zhao (2), and Hubert Hasenauer (1)

(1) Institute of Silviculture, University of Nat. Res. and Life Sci. - Vienna, Vienna, Austria (adam.moreno@boku.ac.at), (2) Department of Geographical Sciences, University of Maryland, College Park, USA

The MODerate resolution Imaging Spectroradiometer (MODIS) is a sensor on the Terra satellite that monitors many facets of the earth's terrestrial biosphere. One such product is the MODIS net primary production (NPP) dataset distributed by NASA and the Numerical Terradynamic Simulation Group (NTSG) at University of Montana, USA. This NPP data set is commonly used on a 1x1km resolution and includes an estimate every 8 days for the entire globe. This data set is accurate at the scale for which it was designed, namely the global scale. However, researchers have continuously used this dataset to study ecosystems on a more regional and landscape level. MODIS NPP however has many flaws when studying only a subset of the data because the input datasets and the datasets used for calibration and validation were global and intended to be accurate only at that scale. When studying European landscapes using the global MODIS NPP dataset one finds artificial delineations caused by using global climate data, incorrect land cover classifications, and unreasonably high or low values of NPP. To solve these problems for people studying Europe we have created new European specific input datasets and used European forest inventory data and crops statistics to recalibrate and validate a new and improved MODIS NPP dataset made specifically for Europe. This new dataset is more accurate and precise across Europe when compared to terrestrial data then its global predecessor.