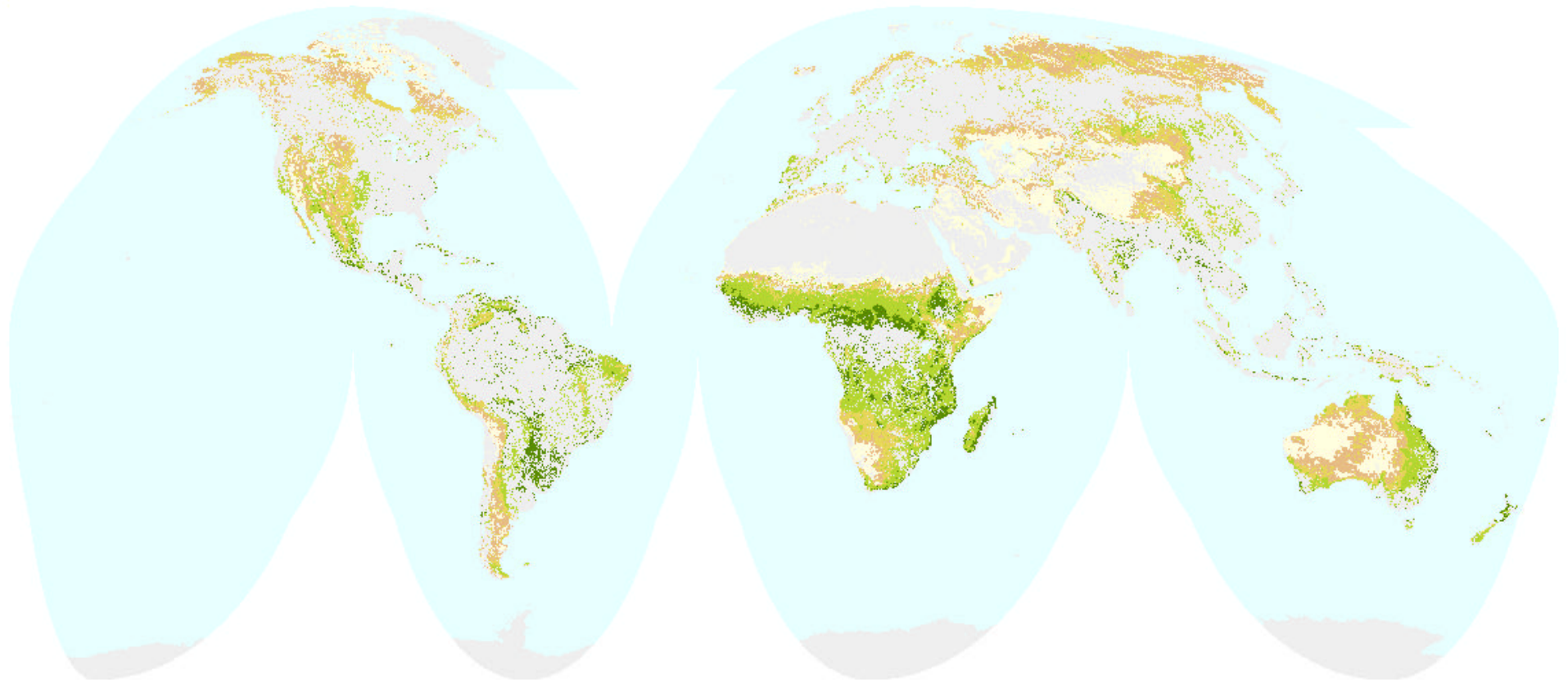


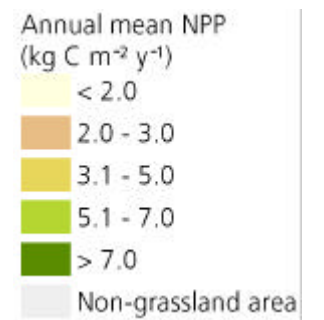
Global Net Primary Productivity of Grasslands, 1982-1993



Map Projection: Interrupted Goode's Homolosine

Citation: World Resources Institute - PAGE, 2000

Notes:



Map Description:

This is a global map representing annual mean NPP estimates for grasslands. NPP values are generally below 7kgCm⁻²yr⁻¹. This value decreases in areas near deserts and cooler extremes of grasslands. Savannas and woodlands have higher NPP values. Variations in NPP estimates most likely indicate the impacts of land use change, such as agricultural development and urbanization (see <http://www.inform.umd.edu/Geography/glopem/> for more information on the GLO-PEM model).

Analytical Overview:

Net Primary Productivity (NPP), and its trend over time, can be used as a measure of grassland condition. Direct observations of NPP are not available globally, but computer models derived from local observations have been developed to represent global NPP (Cramer and Field 1999). One model is the Global Production Efficiency Model (GLO-PEM) developed by the University of Maryland's Geography Department (Prince and Goward 1995; Goetz et al. 1999). The NPP values derived from GLO-PEM are based on "global, repetitive, spatially contiguous, and time-specific observations of the actual vegetation" over an eight-year period (Prince and Goward 1995: 815).

Source:

1. GLCCD, 1998. Global Land Cover Characteristics Database, Version 1.2.. Loveland, T.R., B.C. Reed, J.F. Brown, D.O. Ohlen, Z. Zhu, L. Yang, and J. Merchant. 1998. "Development of a Global Land Cover Characteristics Database and IGBP DISCover from 1-km AVHRR Data" International Journal of Remote Sensing 21(6-7): 1303-1330. Available On-line at: <http://edcaac.usgs.gov/glcc/glcc.html>. Global Land Cover Characteristics Database, Version 1.2.
2. Goetz, S.J., S.D. Prince, S.N. Goward, M.M. Thawley, and J. Small. 1999. "Satellite remote sensing of primary production: an improved production efficiency modeling approach". Ecological Modeling 122: 239-255
3. Prince, S.D., and S.N. Goward. 1995. "Global Primary production: a remote sensing approach". Journal of Biogeography 22: 815-835