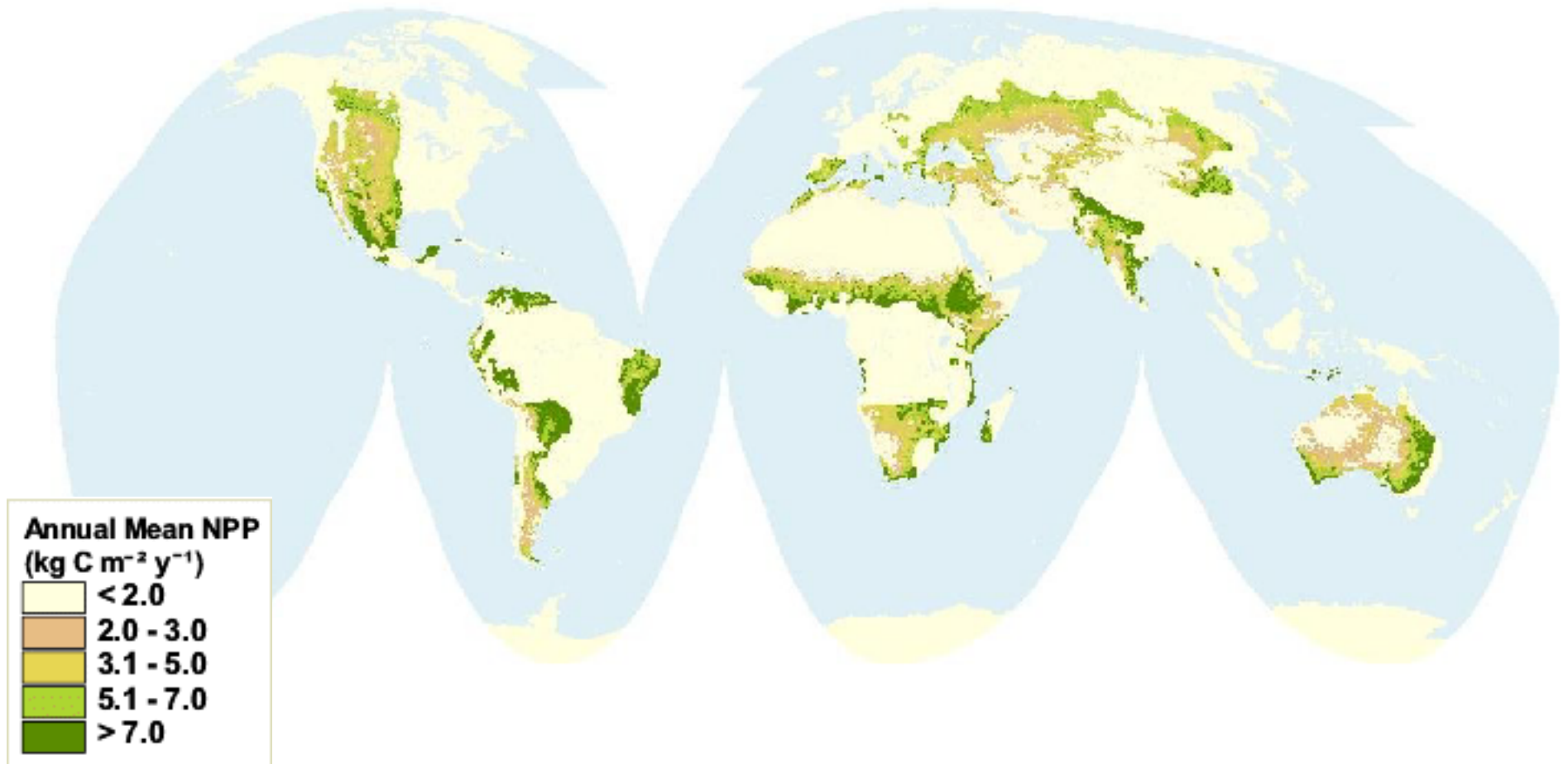


Drylands: Net Primary Productivity in Drylands



Map Projection: Interrupted Goode's Homosoline

Citation: WRI. 2002. World Resources Institute. Drylands, People, and Ecosystem Goods and Services: A Web-based Geospatial Analysis. Available online at: <http://www.wri.org>.

Analytical Overview:

Net Primary Productivity (NPP) and its trend over time can be used as a measure of dryland 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).

Description:

This map shows the pattern of mean annual NPP in drylands for a twelve year period (1982-1993). Globally, NPP is highest in low latitudes and lowest at the poles. The tropics and eastern edges of the continents tend to have high mean annual NPP. Western and more poleward continental areas have lower productivity. Drylands exhibit a range in productivity around the globe, from low NPP values around the Sahara and Namib deserts and in portions of central Asia and western Australia to the highest values, most extensive in low latitudes, in the tropical areas of South America, Asia and Africa. Dry sub-humid areas tend to correspond to the highest NPP values while arid and semi-arid areas average lower mean annual NPP.