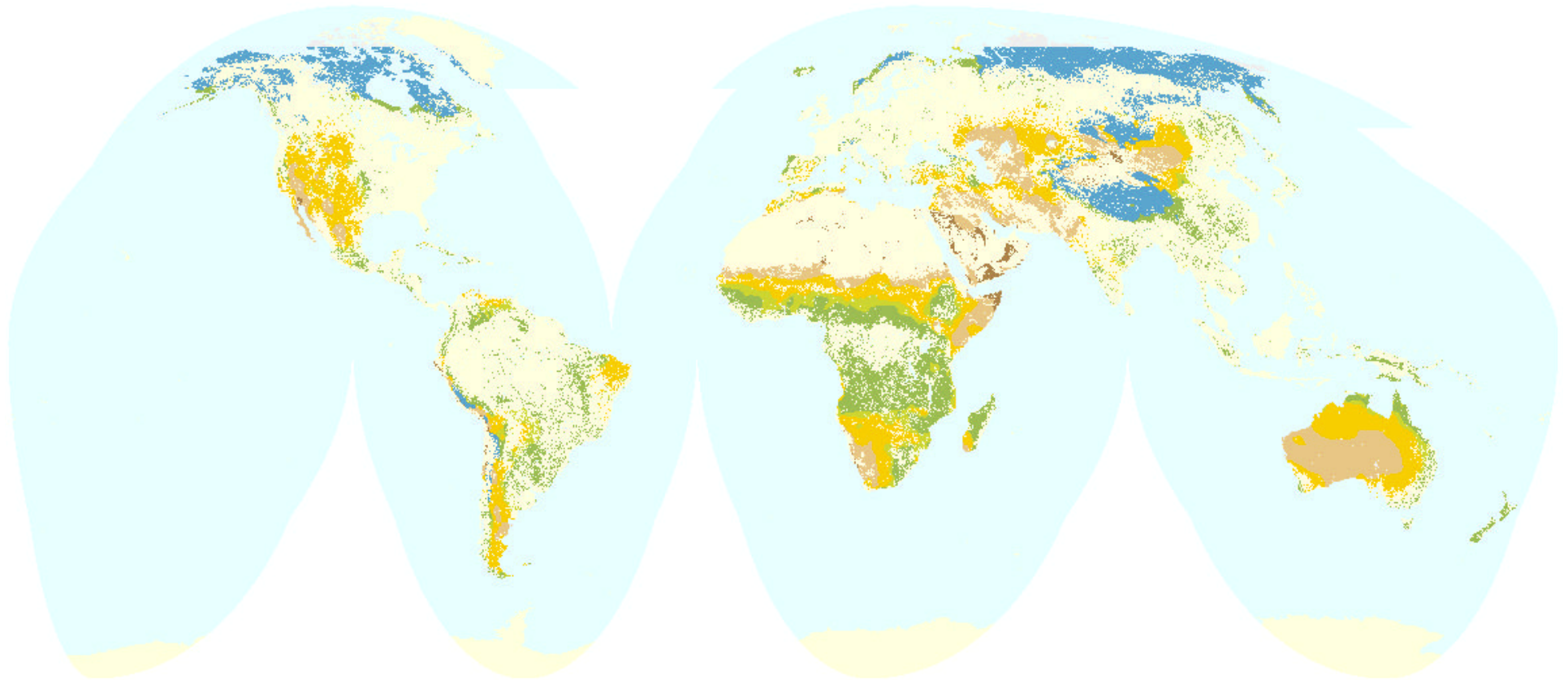


Grasslands and Aridity Zones



Map Projection: Interrupted Goode's Homolosine

Citation: World Resources Institute - PAGE, 2000

Notes:

No aridity zone data available north of 70°.

Grassland by aridity zone



Map Description:

This map shows the world divided into six aridity zones on the basis of the ratio of mean annual precipitation to mean annual potential evapotranspiration. Potential evapotranspiration is the amount of moisture that, if it were available, would be removed by evaporation and transpiration. This evapotranspiration can be estimated from temperature and photoperiod.

Twenty-eight percent of the world's grasslands are found in the semi-arid zones, 23 percent in the humid zone, 20 percent in the cold zone, and 19 percent in the arid zone. Montane grasslands and shrublands are found primarily in the cold aridity zones in mid-latitude, high-altitude areas; tundra is found primarily in the cold aridity zones at northern latitudes. Grasslands are least represented in the dry sub-humid zone and the hyper-arid zone, which is dominated by the Sahara Desert and Arabian Peninsula. Among the world's regions, Africa has the largest amount of total grassland area in each aridity zone. Most of this area is in the semi-arid, dry sub-humid, and humid zones. Asia has the most grassland in the arid zone, as well as considerable grassland in the semi-arid, humid, and cold zones.

Analytical Overview:

The United Nations Convention to Combat Desertification (UNCCD) provides a framework for sustainable development of drylands, including susceptible drylands, or those drylands characterized as arid, semi-arid, and dry sub-humid. Climate statistics for these three dryland zones - arid, semi-arid, and dry sub-humid - translate to an aridity index of .05 - .65. Ratios less than .05 indicate hyperarid zones and ratios of .65 or greater identify humid zones. Thus, woody savannas and savannas found in the humid zone have an aridity index of .65 or greater.

Source:

1. United Nations Environment Program. 1997, *World Atlas of Desertification*, 2nd edition. London:UNEP. 182 pp. Edited by N. Middleton and D. Thomas
2. 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