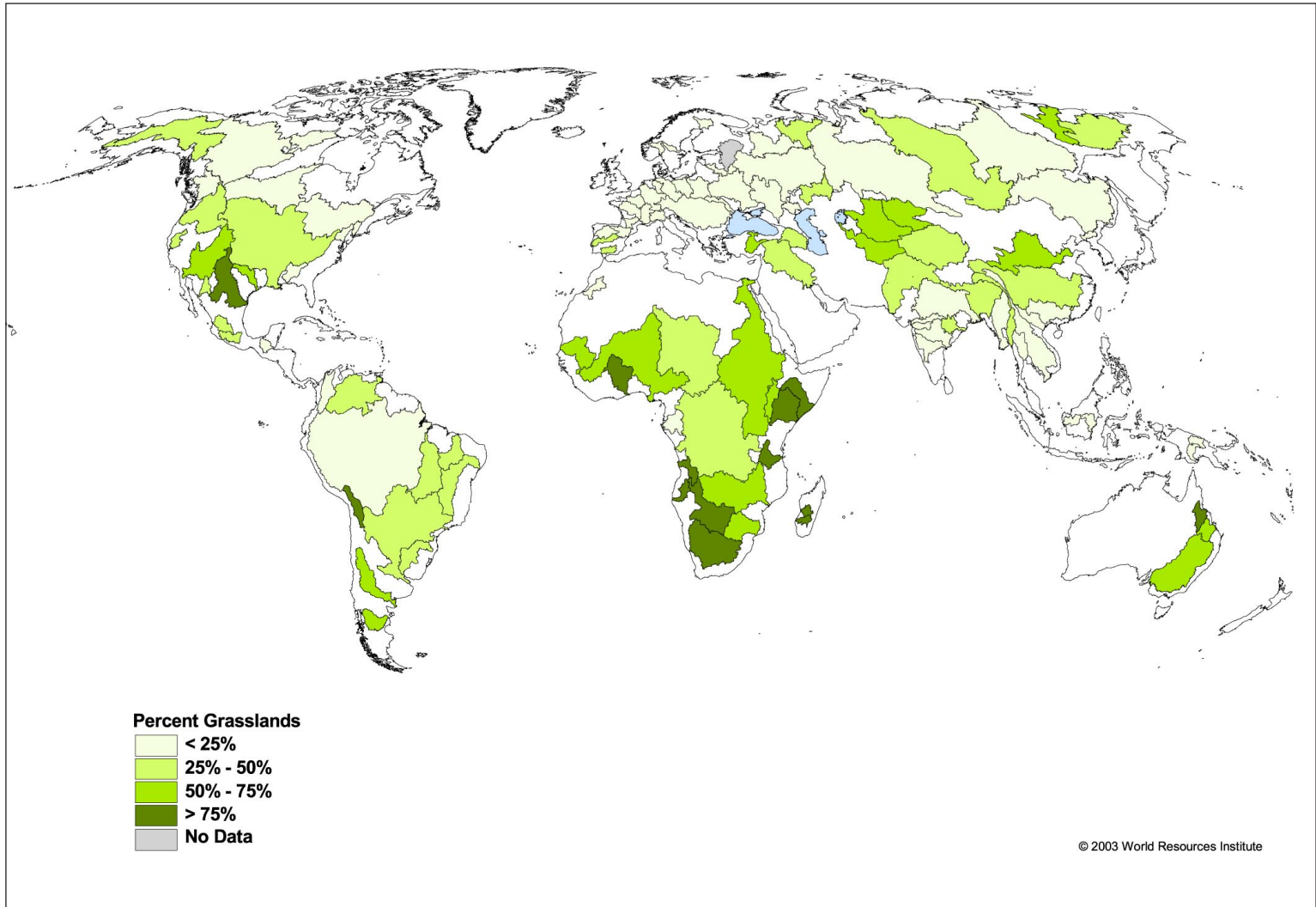




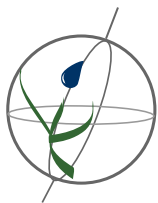
# 07. Grassland, Savanna and Shrubland Area by Basin



## Map Description

Grasslands, including shrublands, savannas, and tundra cover 40 percent of the earth's surface and are home to almost a billion people. Grasslands provide goods and services to support flora, fauna, as well as human populations worldwide. For instance, all of the major foodgrains -- corn, wheat, oats, rice, barley, millet, rye, and sorghum -- originate in grasslands and wild strains of grasses can provide genetic material to improve food crops and to help keep cultivated varieties resistant to disease. Grasslands produce forage for domestic livestock, provide habitat for breeding, migrating, and wintering birds, maintain ideal conditions for many soil fauna, and provide rangelands for wild herbivores. Some of the world's major animal migratory routes are dependent on grasslands, such as the migration of large herds of wildebeest in Africa, caribou in North America, and Tibetan antelope in Asia. Unfortunately, agriculture and urbanization have transformed grasslands worldwide. For some North American prairies, for example, conversion is already nearly 100 percent. Road-building and human-induced fires also are changing the extent, composition, and structure of grasslands around the globe.

Examination of grasslands according to watershed boundaries can facilitate integrated resource management. Within watersheds, grasslands absorb rainfall, recharge aquifers, stabilize soils, and moderate runoff. Many physical and biological features of grasslands can be managed effectively in the context of watersheds.



# Watersheds of the World : Global Maps

## 07. Grassland, Savanna and Shrubland Area by Basin

This map shows the percentage of each basin that is covered by grassland, shrubland, or savanna. For the purpose of this map areas covered by tundra have been excluded. Those basins with the largest percentage of grassland include the Burdekin-Belyando basin in Australia; the Orange, Okavango, Cuanza, Cunene, Rufiji, Volta, Jubba, Shabelle, Mangoky and Mania basins in Africa; Lake Titicaca and Salar de Uyuni in South America; and the Rio Grande basin in North and Central America.

### Mapping Details

The USGS Global Land Cover Characterization Database (GLCCD 1998) with the International Geosphere Biosphere Programme (IGBP) classification was used to identify the extent of different land cover types within each basin. The land cover database is derived from 1-kilometer resolution satellite imagery spanning April 1992 through March 1993. These data are most useful for analyzing general land cover patterns at a continental or large scale. The data are less reliable for smaller watersheds. Percent grassland indicates the percentage of the basin classified as primarily herbaceous grassland, to grassland with increasing amounts of woody vegetation including open shrubland, closed shrubland, woody savanna, and savanna. Identified percentages were aggregated by river basins to create the global map.

### Map Projection

Robinson

### Sources

GLCCD (Global Land Cover Characteristics Data base), Version 1.2. 1998. Loveland, T.R., B.C.Reed, J.F. Brown, D.O. Ohlen, Z. Zhu, L. Yang, and J. Merchant. 2000. "Development of a Global Land Cover Characteristics Data base and IGBP DISCover from 1-km AVHRR data." *International Journal of Remote Sensing* 21 (6-7): 1303–1330. Data available on-line at: <http://edcdaac.usgs.gov/glcc/glcc.html>.

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