UNEP/GRID Documentation Summary for Data Set:

Soil Water Holding Capacity (Bouwman)

This data set shows the global distribution of soil water holding capacity, at field capacity for the top soil (0-30 cm.), with a one degree latitude/longitude spatial resolution, and was derived from information on soil type and texture (FAO Soil Map of the World). It was developed as an experimental data set at NASA/GISS, the Goddard Institute of Space Studies, at Columbia University in New York City by Lex Bouwman of the National Institute of Public Health and Environmental Protection (RIVM; P. O. Box 1; 3720 BA; Bilthoven, the Netherlands) in 1990. This data set is to be published in Global Biogeochemical Cycles as the following reference: "Bouwman, Lex et al., 1990. Global emission of nitrous oxide from natural soils."

The data set has the following legend and class values:

Soil Texture Class	d.n. value = Water Holding Capacity (mm)
Rendzina, Lithosol, Ranker	15 (FAO Soil codes 22, 40, 85)
SAND	40
ORGANIC	60
Vertisol	" (FAO Soil codes 86,87)
MEDIUM	80
Vertic Cambisol, Luvisol	" (FAO Soil codes 13,55)
Ferralsol	" (FAO Soil codes 23-28)
	100
FINE	120
Andosol	" (FAO Soil codes 81-84)
Oceans	(250)
Ice	(251)

The Soil Water Holding Capacity data set is available only as a single raster data file, which has a spatial resolution of one degree latitude/ longitude and consists of 180 rows (lines) by 360 columns (elements/ pixels/samples) of data. Its origin point is at 90 degrees North latitude and 180 degrees West longitude, and it extends to 90

degrees South latitude and 180 degrees East longitude. The data file is one byte per element, and comprises 64.8 Kb. The original source of the digital data file is the IBM mainframe computer at NASA/GISS.