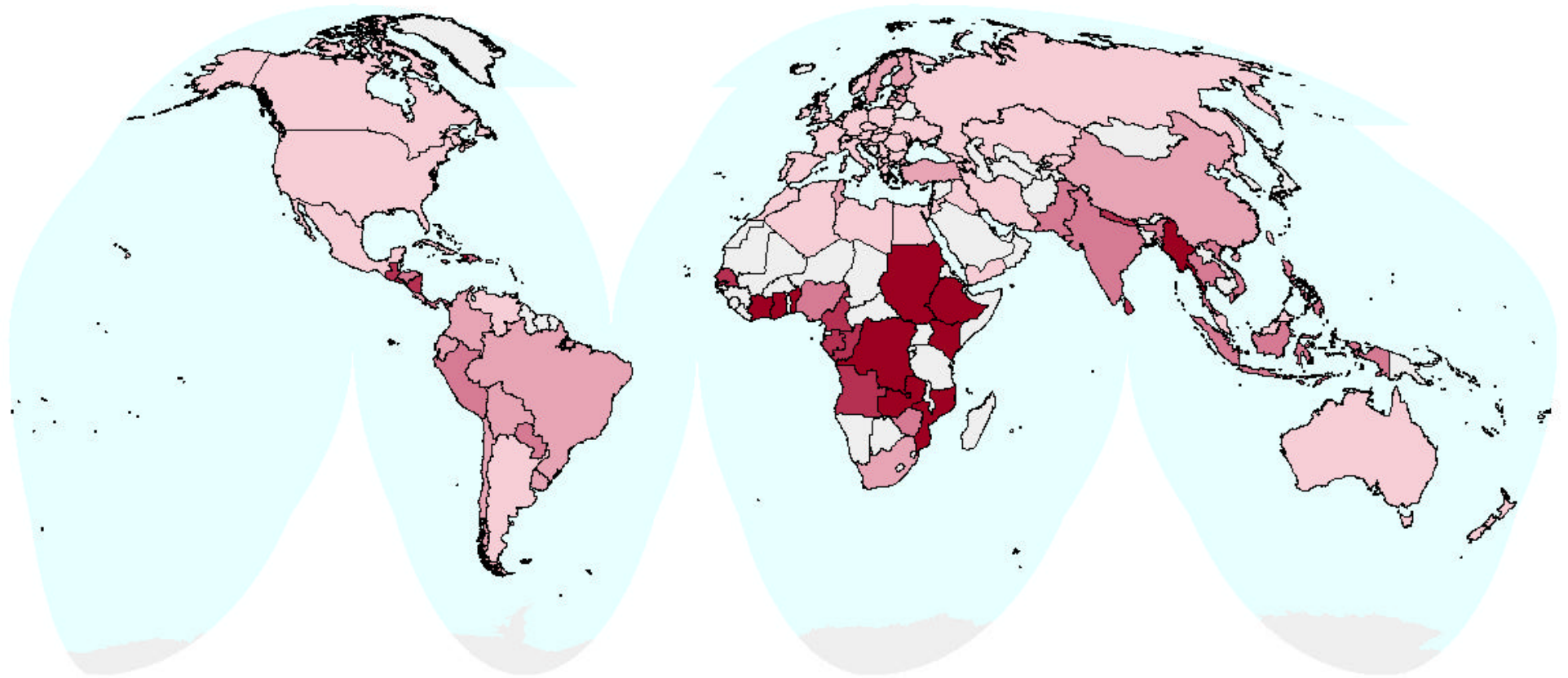


Share of Woodfuels in National Energy Consumption



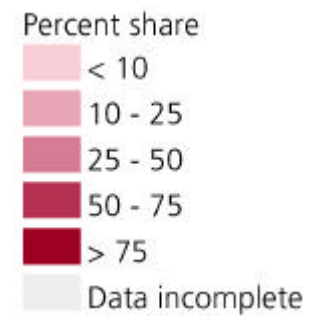
Map Projection: Interrupted Goode's Homolosine

Citation: World Resources Institute - PAGE, 2000

Notes:

Wood energy includes fuelwood, charcoal, and black liquor, measured in thousand metric tons of oil equivalent (TOE).

Wood energy consumption is expressed as a percentage of total final energy consumption from all energy sources in thousand TOE.



Map Description:

Fuelwood, charcoal, and other wood-derived fuels (collectively known as woodfuels) are the world's most important form of nonfossil energy. Production and consumption are concentrated in low-income countries, with five countries -- Brazil, China, India, Indonesia, and Nigeria -- accounting for about 50 percent of the total. In addition to direct sources, wood residues from the forest products sector are also commonly burned as fuel. Statistics from the International Energy Agency (IEA) show the importance of wood energy in the lives of hundreds of millions of people. Biomass energy, which includes woodfuels, crop residues, and animal wastes, provides on average nearly 30 percent of total primary energy supply in developing countries. Over 2 billion people depend directly on biomass fuels as their primary or sole source of energy. Although woodfuels are the dominant form of biomass energy, the current state of global data does not allow analysts to distinguish wood from other forms of biomass in many countries. The available data suggest that woodfuels account for more than half of biomass energy consumed in developing countries, or 15 percent of their total energy supply. If China is excluded (where agricultural residues are an important fuel), woodfuels provide about 20 percent of total energy supply in the developing world (IEA, 1996: II.289-308, III.31-187). In some countries, for example, Nepal in Asia, and Uganda, Rwanda, and Tanzania in sub-Saharan Africa, woodfuels provide 80 percent or more of total energy requirements.

Source:

1. International Energy Agency (IEA). 1996, Energy Statistics and Balances of Non-OECD Countries, 1994-95. Paris:IEA. pp. 2. Environmental Systems Research Institute. 1996, World Countries 1995. Redlands, CA: ESRI.

Analytical Overview:

Statistics on woodfuel consumption are still inferior to those compiled for industrial roundwood production and consumption. This map is based on the International Energy Agency's combustible renewables and waste database. IEA collects information from OECD countries via annual questionnaires. The product categories listed are solid biomass and animal products, gases derived from biomass and wastes, industrial waste and municipal solid waste. Energy data are expressed in thousand tonnes of oil equivalent. The questionnaire requests data on individual fuels such as wood, vegetal wastes, black liquor, and landfill gas. For non-OECD countries, IEA follows the same classification, but relies on a variety of information sources. Sources include national publications or statistics, regional organizations, and specific studies or surveys. Where other sources are unavailable, IEA data draws on UN information. WRI calculated woodfuel consumption as a proportion of total energy consumption for each country by summing the energy consumption of fuelwood, charcoal, and black liquor, and expressing this total as a percentage of total final energy consumption.