

GET FOREST SMART



CAN (RENEWABLE) ENERGY GROW ON TREES?

FACT

AN ESTIMATED

50 PERCENT

OF THE WOOD EXTRACTED FROM FORESTS WORLDWIDE IS USED AS FUELWOOD AND CHARCOAL.

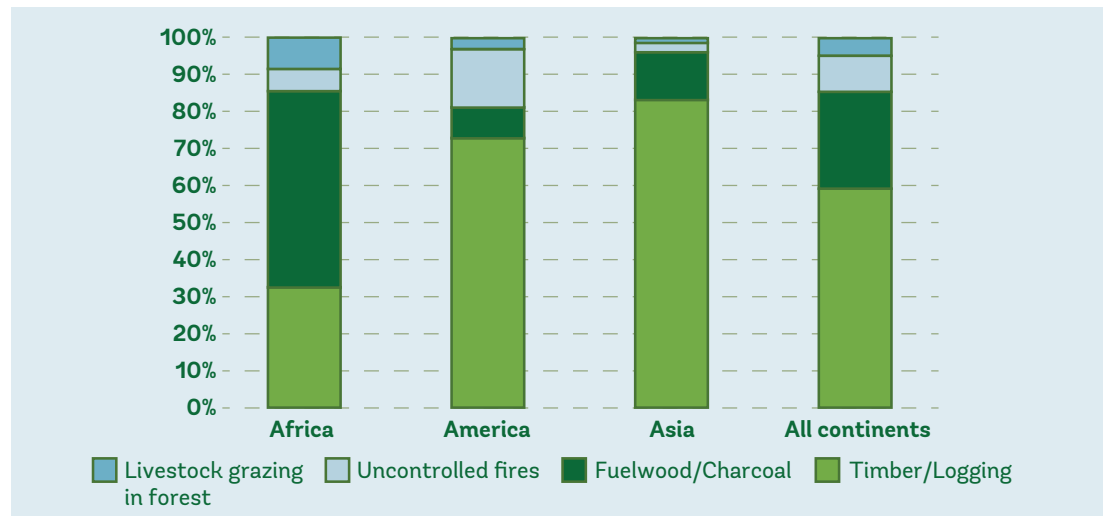
MORE THAN

2.4 BILLION PEOPLE,

MAINLY IN DEVELOPING COUNTRIES, DEPEND ON WOOD ENERGY FOR COOKING AND OTHER BASIC ENERGY NEEDS. (FAO)

Context & Facts

- In developing countries, wood energy often represents the only domestically available and affordable source of energy, as well as an important source of income.
- Many small, medium, and even larger enterprises are increasingly using wood instead of fossil fuels to generate the energy that runs their businesses.
- Wood-based biomass energy provides a value chain with income benefits and economic opportunities in many developing countries.
- Wood-based biomass energy, a low-carbon option, can also contribute to meeting future electricity needs, especially through off-grid and mini-grid installations, while substituting fossil fuels in industrial production processes.
- Researchers and policymakers who work on the forest-energy nexus are seeking opportunities to meet future RE needs through wood energy. In Africa alone, for instance, an estimated 90 percent of the continent's population uses fuelwood for cooking. (<http://web.mit.edu>).



The graph shows the continental-level estimations of the relative area proportion based on data from 46 tropical and sub-tropical countries (Source: FAO 2010/ IOP Science). The graph shows that fuelwood collection and charcoal production is the main degradation driver for the African continent, and is of small to moderate importance in Asia and Latin America.

WHAT IS FOREST SMART?

"Forest-smart" is a development approach that recognizes forests' significance for sustaining growth across many sectors, including agriculture, energy, infrastructure, and water. It transforms how sectors operate by identifying opportunities for mutual benefit and creating practical solutions that can be implemented at scale. Forest-smart solutions support development outcomes such as improved food security, green growth, and climate change mitigation and adaptation.

The Forest-Energy Nexus

The U.N. General Assembly declared 2012 as the International Year of Sustainable Energy for All, and set targets for energy access, energy efficiency, and renewable energy (RE) to be achieved by 2030. However, the effective management of environmental and natural resources, especially for the forestry sector, underlies the successful deployment of RE sources to meet these important energy targets. Unfortunately, incorporating environmental considerations, especially forests, into energy decisions has often been hampered by insufficient or unreliable data.

Furthermore, considering wood-based biomass energy as an opportunity for meeting future electricity, heat, and household needs, is often missed at the strategy level due to various factors, including: the lack of sound information on energy-forestry relationships; and misinformation and misconceptions of managing sustainable yields and assessing adverse impacts.

Therefore, countries need better data, validated evidence, and awareness and capacity building for making informed decisions in the RE sector, and to accomplish the energy targets set by the international community.

PROFOR Forest Energy Program

The forest-energy nexus could provide new ways of financing sustainable forest management as well as more direct financial benefits and incentives to forest-dependent communities. Although large-scale financial benefits from forests have so far depended on the exploitation of wood and timber, extraction of other forest products, the conversion of forest to other higher-cash yielding land uses, and revenue sharing from energy production could significantly shift such terms of the trade. However, the non-existent policies and institutional arrangements that integrate forests, including the lack of tools and methodology to address forest-based conflicts in RE development, are obstacles to unlocking RE investments. PROFOR, therefore, seeks to facilitate the proactive integration of forest management into RE development by providing much needed data while developing and testing innovative approaches and evidence-based tools.

In brief, PROFOR's program seeks to enhance the knowledge of the forest-energy nexus, and foster solutions for strengthening the upstream integration of forest issues into renewable energy planning, and investments to enhance RE readiness of countries and investors.

What Approach is PROFOR Using?

PROFOR's program will conduct a deep dive analysis into biomass and geothermal development, which will be led by three pillars: Data and analysis; methodology and tools; and knowledge exchange and capacity building.

- The work on biomass energy, for example, involves advancing global knowledge on the use and impact of biomass energy on natural resource management. This work involves improving data collection and analysis of selected key areas, such as: the role of urbanization in biomass energy demand and its impact on forest resource management; households' energy behavior and energy choice for cooking; and a review of the use of and available technology for (forest) biomass energy for mini-grid and off-grid power systems.
- The work on geothermal development will support "beyond safeguards" solutions to establish reciprocal benefit mechanisms for forests and energy systems. In addition, this program will develop diagnostic tools and best practice guidance for geothermal development in forest areas of Indonesia, and biomass energy development for household energy use and power generation in Haiti.

For more information about this program, visit <http://profor.info/>



Interested in learning more? Contact our communications focal point: Laura Ivers: laivers@worldbankgroup.org

The Program on Forests (PROFOR) multi-donor partnership generates innovative, cutting-edge knowledge and tools to advance sustainable management of forests for poverty reduction, economic growth, climate mitigation and adaptation, and conservation benefits. Through its programs, PROFOR is advancing forest-smart development, which recognizes forests' significance for sustaining growth across many sectors, including agriculture, energy, infrastructure, and water.

