Energizing the Millennium Development Goals

A Guide to Energy's Role in Reducing Poverty

United Nations Development Programme

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El Salvador, IFAD/L. Dematteis

Foreword

In September 2000, at the United Nations Millennium Summit, world leaders agreed to a set of time-bound and measurable goals and targets for combating poverty, hunger, illiteracy, gender inequality, disease, and environmental degradation. The eight goals that were eventually agreed upon are what the development community now refers to as the Millennium Development Goals (MDGs).

While there is no MDG specifically on energy, access to energy services is a prerequisite to the achievement of all eight MDGs. This was recognized at the World Summit for Sustainable Development (WSSD) in Johannesburg in 2002. Unfortunately, much greater quantities and much greater quality of energy services will be required to meet these goals than are presently available in developing countries. Worldwide, 2.4 billion people rely on traditional biomass as their primary source of energy and 1.6 billion people do not have access to electricity.

To ensure that a lack of adequate energy does not become a bottleneck to achieving the MDGs, urgent action is needed to move beyond the 'business-as-usual' approach to energy. It is no longer sufficient to think of energy usage as being driven by economic development. The time has come to begin assessing the role of energy versus other inputs as a means of stimulating human development. If approached as an integrated part of MDG strategies, access to energy services can be an important instrument in helping promote economic growth, social equality, and environmental sustainability.

This guide has been designed to help development practitioners ask the relevant questions needed to bring about this change. It offers an overview of the some of the most pertinent issues regarding development and energy and provides suggestions and examples on how to address energy within broader efforts to reach the MDGs.

Susan McDade
Sustainable Energy Programme Manager
Energy and Environment Group
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Q&A

Introduction to Energy and Development

Is energy important to the poor?

Yes. Energy deeply influences poor people's lives. It is central to practically all aspects of human welfare, including access to water, agricultural productivity, health care, education, job creation, and environmental sustainability. Yet, millions of households in the developing world still lack

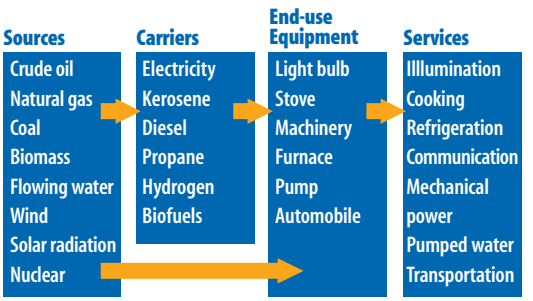
Mali, IFAD/H. Wagner

access to safe and reliable energy and pay high prices for poor-quality substitutes. Moreover, poor people spend much of their income on energy, more than a third of household expenditures in some countries. They also devote a large portion of another important asset, their time, on energy-related activities—women and young girls spend upwards of 6 hours a day gathering fuelwood and water, cooking, and agro-processing. Access to modern energy services can make a real difference to poor people's lives.

What are energy services?

The term 'energy services' is used to describe the benefits that energy use offers. For households, these benefits include **lighting, cooked food, refrigeration, telecommunications, education,** and **transportation.** Energy services can also include other benefits such as **mechanical power.** All of these services represent the last link of what is commonly referred to as the 'energy chain'. (See Figure 1.) The energy chain begins with the extraction or collection of primary energy sources that, in one or several steps, may be converted into energy carriers that are suitable for end use. Energy carriers include fuels and electricity and can be derived from both conventional and renewable energy sources. From the perspective of the consumer, it is the availability and affordability of energy services, not merely the source of energy itself, that is important.

Figure 1. Energy chain



Source: Adapted from WEA

Uganda, PANOS/C. Hughes

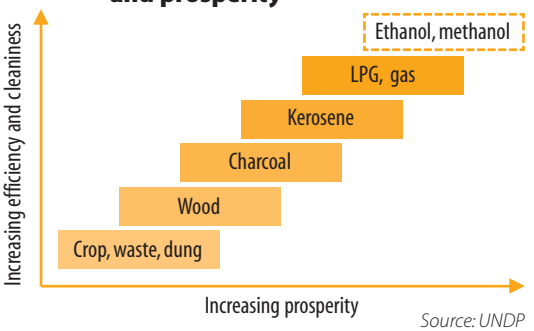
Q&A

Introduction to Energy and Development

How are the fuels used to generate energy services related to development?

Most poor households in developing countries lack access to modern fuels. They instead rely on traditional biomass fuels like **crop waste, dung,** and **wood** to meet their basic energy needs. When used with inefficient devices these low-quality fuels often result in harmful health and environmental impacts. Traditional fuels represent the lowest rungs on the 'energy ladder'. (See Figure 2). The order of fuels on the energy ladder corresponds to their efficiency and 'cleanliness' at end use. More efficient and 'cleaner' fuels such as **charcoal, coal, kerosene, liquefied petroleum gas (LPG)** and finally modern biofuels such as **ethanol** and **methanol** represent successively higher rungs on the ladder. Although modern fuels tend to be more costly—at least from a monetary perspective—than traditional fuels, they do provide people with far greater opportunities for income generation. Climbing the energy ladder towards more modern fuels, therefore, is a challenge most poor people in developing countries must face in order to improve their overall standard of living.

Figure 2. Relationship between fuel usage and prosperity



Source: UNDP

Is electricity the most important energy carrier for the poor?

No, not necessarily. Electricity and fuels can produce different energy services. Electricity is essential for modern communications, supporting modern industry and the provision of public services such as public lighting, education, and health care. Fuels, on the other hand, are essential for all households, rich and poor alike, in so far as all people need cooked food and boiled water. Unless basic fuel needs are met, electricity is a luxury item

Chile, UNDP

few can hope for or afford. As such, the importance of electricity versus fuels varies based on the different needs of the poor and the economic and social circumstances that enable their use. Sensitivity to the differential impact that electricity can have on the poor is crucial to planning and prioritizing energy-related programmes and projects.

How many people are impoverished by lack of modern energy services?

It is estimated that worldwide there are **2.4 billion** people—more than one-third of humanity—who rely on wood, charcoal, and dung as their principal source of energy for cooking and heating[1]. At least **1.6 billion** people

Mali, UNDP

have no access to electricity[2] in their homes and consequently are without means for electric lighting, mechanical power, and telecommunications. Although people from both rural and urban areas suffer from a lack of access to modern energy services, those in rural areas are especially deprived. It is estimated that four out of five people without electricity live in rural areas of the developing world, mainly in South Asia and Sub-Saharan Africa. According to the International Energy Agency (IEA) these figures will remain largely unchanged in 2015 unless new policies are adopted to expand investment in rural energy infrastructure. In fact, the IEA estimates that a total of **US$200 billion** worth of investment in electricity will be needed to help halve the proportion of people living on less than US$1 a day by 2015[3]. This amount is in addition to the **US$5.8 trillion** needed just to meet existing projections in electricity demand[4].

Is energy a gender-neutral issue?

No. Women, especially those in rural areas, are disproportionately burdened by lack of access to modern fuels and electricity. Gender-ascribed roles and cultural practices tend to make women and girls responsible for the most labour-intensive and time consuming household chores. Hundreds of millions of women and young girls spend hours a day just gathering fuelwood and carrying water for basic subsistence needs. These are often the same women and girls who have to spend considerable amounts of time and effort manually processing—threshing, dehusking or grinding—staple foods before they can be cooked and eaten. The time spent on these sorts of activities represents a huge **'opportunity cost'** for women. Because of these demands on their time, women and young girls are denied opportunities for other more productive activities such as employment and education, not to mention much needed time for rest. They also suffer considerable damage to their health by having to cook indoors on poorly vented stoves and with low-quality fuels. It is estimated that **1.6 million deaths** per year (of which 60 percent are female) in developing countries are associated with the inhalation of indoor smoke from the use of solid fuels[5]. For all these reasons, energy services such as heat for cooking and power for food processing are particularly important for women and girls.

Somalia, IFAD/F. Mattioli

[1] International Energy Agency. 2002. *World Energy Outlook 2002*. OECD/IEA. Paris.

[2] idem

[3] International Energy Agency. 2004. *World Energy Outlook 2004*. OECD/IEA. Paris.

[4] idem.

[5] World Health Organization. 2002. *The World Health Report 2002*. Geneva.

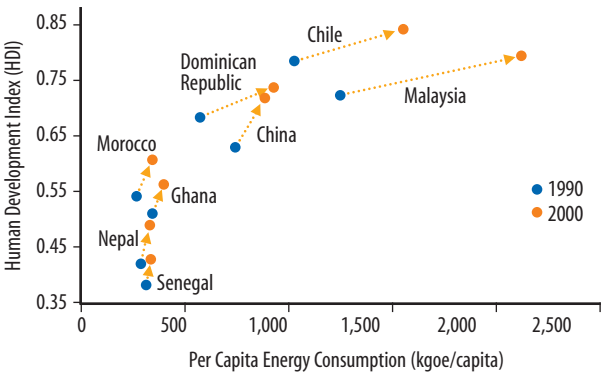
Q&A

Introduction to Energy and Development

Is there evidence linking energy to overall human development?

Yes. Energy's importance to development is not merely a matter of conjecture or wishful thinking. There is an empirical basis to the relationship between access to modern energy and human development. To better understand this relationship it is helpful to think of energy in relation to some measure of development. Figure 3 displays the relationship between a country's human development index (HDI)[6] ranking and per capita energy use, with energy consumption used as a proxy for energy services. Energy is strongly linked to human development; as evidenced by the upward sloping trend in the graph. The graph also illustrates that countries that develop over time do so in tandem with improvements in energy. In fact, no country in modern times has substantially reduced poverty without a massive increase in its use of energy and/or a shift to efficient energy sources.

Figure 3. Relationship between HDI and energy consumption



Note: Figure 3 depicts the relationship between energy consumption and the HDI among a selected group of countries. This pattern is typical across most developing countries.

Source: IEA; UNDP analysis

How is energy security related to development?

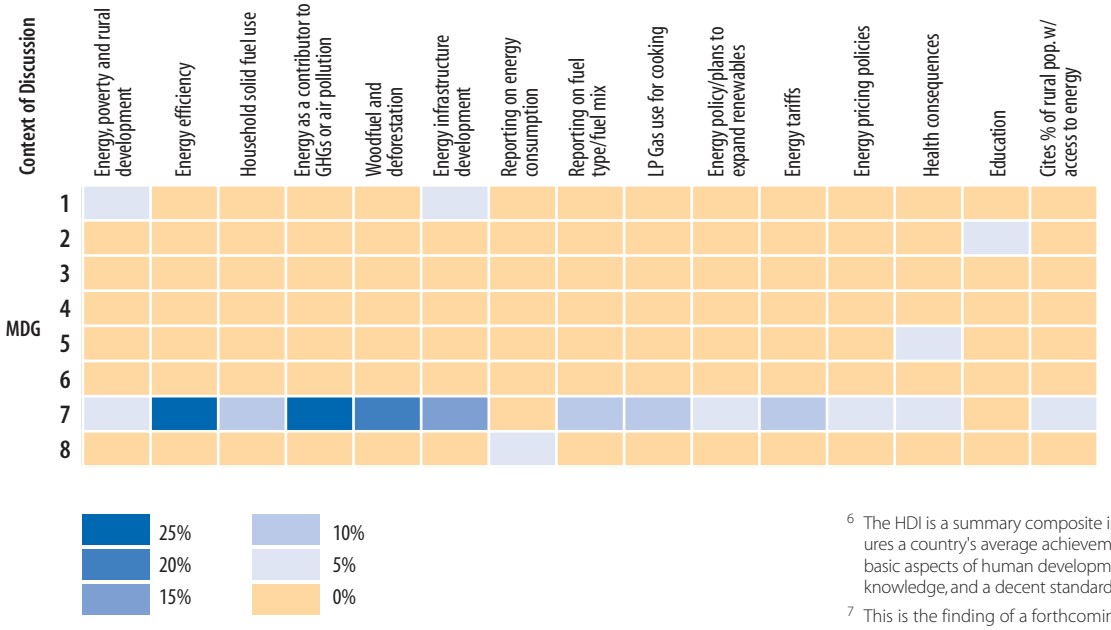
The earth's energy resources are more than adequate to meet demand through at least the first half of the 21st century. Reserves of traditional commercial fuels—oil, gas, and coal—will suffice for decades to come. This does not mean that the world's energy outlook is secure. Energy resources are not evenly distributed across the world nor are their different usages all environmentally benign. Energy-importing countries face geopolitical, market, social and environmental forces that, in one or more ways, make securing adequate and affordable energy a challenge. This challenge is particularly important to developing countries, where future energy demand is predicted to increase the most. The dependence of some developing countries on imported fossil fuels depletes scarce foreign exchange and increases exposure to the balance of payment impact of oil price shocks. Without measures to increase the sustainability and availability of energy supplies—through, for example, the improved management and development of renewable energy resources—financial exchange and other financial shocks will continue to undermine many developing countries' ability to service foreign debt and attract foreign investment, issues closely tied to the welfare of poor people in developing countries. Having said this, traditional commercial fuels are likely to remain the backbone of the poorest countries' energy infrastructure despite the decreasing costs in renewable energy.

Is energy's importance to development adequately reflected in national development frameworks and monitoring and reporting processes?

No. Many development strategies treat energy only within the context of large-scale infrastructure projects. Energy access issues are conspicuously absent, leaving important linkages with **productivity** and **cross-sectoral** applications unaddressed[7]. Development strategies also tend to focus only on electricity while ignoring issues such as fuel availability and rural energy development. Less than half of all national Poverty Reduction Strategy Papers (PRSPs) in Sub-Saharan Africa, for example, include explicit targets and timeliness to meet the energy priorities of the poor. Only one third of PRSPs actually allocate budgetary resources to national energy priorities in their Mid Term Expenditure Frameworks (MTEFs). Energy issues are also understated in national monitoring and reporting processes such as those found in MDG Country Reports. Out of 80 MDG Country Reports[8] only 10 mention energy outside of discussions pertaining to environmental sustainability. Little attention is actually paid to energy's role in reducing poverty. Much of the reporting on energy occurs in the context of energy efficiency and decreasing carbon dioxide and other greenhouse gases (GHGs). (See Figure 4.)

Although energy is certainly important to the environmental agenda and to macroeconomic growth, it receives little attention within national development frameworks and reporting processes compared to other dimensions of development such as poverty reduction, gender equality, education and health. Access to energy is indeed a prerequisite to meeting all the MDGs but its importance as a means of stimulating development is too often overlooked.

Figure 4. Percentage of MDG reports that discuss energy



Source: UNDP

[6] The HDI is a summary composite index that measures a country's average achievements in three basic aspects of human development: longevity, knowledge, and a decent standard of living.

[7] This is the finding of a forthcoming report by the World Bank, ESMAP.

[8] Although 100 MDG Country Reports are available online at www.undg.org, 20 were either inaccessible or presented technical difficulties. Therefore, only 80 MDGRs were used for this review.

MDG
1
Eradicate Extreme Poverty and Hunger

Poverty is a global challenge and its alleviation is at the heart of MDG 1 – Eradicating Extreme Poverty and Hunger. While energy services, by themselves, are not sufficient to eradicate extreme poverty, they are necessary for creating the conditions for economic growth and improving social equality.

Modern energy services help drive economic growth by improving productivity and enabling local income generation through improved agricultural development and non-farm employment. When they are available to all incomes groups, modern energy services are also an invaluable means of improving social equality.

"Energy for jobs, agriculture, and a decent standard of living is an indispensable part of the MDG recipe. You cannot have pro-poor economic growth without access to modern energy services."

Shoji Nishimoto, Assistant Administrator and Director, Bureau for Development Policy, UNDP

Productive uses of energy are particularly important to economic growth. Modern fuels and electricity, for example, help boost household income by providing lighting that extends livelihood activities beyond daylight hours. They power machines that generate valuable time savings and increase output and value added. By providing additional opportunities for employment, energy services also enable farmers to diversify their income sources, and thus mitigate against the inherent risks associated with agriculture-dependent livelihoods. Energy is important in supporting productive activities in both the formal and informal sectors.

MALI:

Mechanical power increases women's income generating opportunities

In Mali, roughly three quarters of the population survives on less US$1 per day. It is has been estimated that since 1996, when small diesel engines (or so called 'multifunctional platforms') began to be introduced in rural villages, women have been earning an additional US$0.32 per day as a result of having access to mechanical power—a tiny amount by the standards of the industrialized economies, but a huge increase in income for the beneficiaries. This additional income is being used to invest in increased agricultural output, education, and heath care.

Source: UNDP

Another way modern energy services contribute to economic growth is by reducing unit costs. Due to the inefficiency of commonly used items such as batteries, candles, kerosene, and charcoal, the poor often pay higher unit costs for energy than do the rich. The use of more effi-

CHILE:

Wind technology for rural electrification reduces the cost of electrical energy

The cost of electricity on Chile's island of Isla Tac has dropped by 75-90% with the arrival of a new wind-diesel electric system. Before the arrival of electricity, islanders were paying the equivalent of approximately 2,500 pesos per kWh for small batteries, candles, small engine generators, and kerosene lanterns. They now pay anywhere between 211 pesos to 650 pesos per kWh.

Source: UNDP

El Salvador, IFAD/L. Dematteis

cient fuels can reduce the large share of household income spent on cooking, lighting, and keeping warm, thus saving families much needed income for food, education, health services, and other basic needs.

Modern energy resources are also important for alleviating hunger. Use of commercial fuels and improved cookstoves, for example, can increase agricultural productivity and food security by allowing farmers to use more of their farm waste as a source of soil nutrients rather than as an inefficient source of fuel. With 95 percent of all food requiring cooking in order to be eaten, the role of modern fuels in alleviating hunger is significant. Coupled with the fact that most modern farming practices such as plowing and pumping irrigation water require fuel, modern fuels are one of the most basic energy needs of the world's poor.

MDGs
2&3

Achieve Universal Primary Education and Promote Gender Equality and Empower Women

Worldwide, an estimated 115 million children of primary school age are still not enrolled in school[9]—a situation that underscores the challenge of achieving universal primary education by 2015. Access to modern energy services can play a critical role in improving educational opportunities for children. Electricity for lighting, for example, allows children to study at night, increases security, and enables the use of diverse educational media both at school and at home, including information and communication technologies. It also helps attract teachers to remote communities by increasing the standard of living in rural areas.

"Reducing drudgery in women's lives by providing clean, affordable fuels for food grinding, water pumping, cooking and transportation is one of the most important challenges to achieving universal primary education and gender equality."

Susan McDade, Manager, Sustainable Energy Programme, UNDP

The disproportionate amount of time and effort women and young girls spend on basic subsistence activities like agro-processing, cooking, and collecting fuelwood and water has profound implications for gender equality. The responsibility of girls to assist their mothers with domestic chores is often one of the most important reasons—along with inadequate income—that young girls do not regularly attend school. Lack of schooling among girls in turn results in lifelong harm to the literacy and economic opportunities of adult women.

[9] United Nations. 2005. *Millennium Development Goals Report 2005*. New York.

MALI:

Time and labour saving devices help promote girls' education

In Mali, girls typically handle domestic chores from the age of eight on and even earlier for certain chores like carrying water—a situation that limits their ability to attend school. Since their inception in 1996, multifunctional platforms have been providing villagers with alternative means (for example, mechanical services) to handle the tasks that would otherwise be handled by girls, thus releasing them from this daily burden. The success of the multifunctional platform in freeing young girls of the drudgery of basic subsistence work has helped increase the girl-to-boy ratio in some schools by as much as 90 percent while boosting the proportion of girls entering secondary education by 7 percent.

Source: UNDP

Access to modern energy services is particularly important to empowering women and increasing girls' opportunities for education. Mechanical power, for example, can reduce the drudgery of hours of food grinding and threshing, thereby freeing young girls to pursue more regular schooling. The same is true for cooking fuels. Access to modern fuels like kerosene, biogas, and LPG help dramatically reduce the time and effort women and young girls devote to collecting dung, fuelwood, and agricultural wastes. Water pumping is another potential source of time savings for women and young girls. The combined amount of time and effort these services can save women—upwards of 6 hours in some countries—underscores the critical role that modern energy services have in reducing the gender bias of energy poverty.

Mali, PANOS/C. Hughes

MDGs
4,5&6

Reduce Child Mortality, Improve Maternal Health, and Combat HIV/AIDS, Malaria and other Diseases

The health of the world's people can be no better than the health of its food, water, and air or than the opportunities people have for health care. Much of what enables these resources to advance human welfare is the availability of adequate and clean energy.

This availability of adequate clean energy is particularly important in reducing child mortality. Modern fuels and electricity help reduce malnutrition-related mortality by boosting food production and household incomes. They also help reduce the incidence of waterborne diseases by powering equipment for pumping, boiling, and treating water. Replacing traditional stoves that burn wood and dung with more modern appliances that burn kerosene, LPG, or modern biomass fuels further reduces the risk of child mortality by reducing harmful indoor air smoke and the risk of respiratory disease. Access to modern energy services is critical for keeping the food, water, and air that children consume both safe and in adequate supply.

"Delivering health care services and educating the population about HIV/AIDS requires electricity and modern communications. MDGs 4, 5, and 6 will require better energy services if they are to be met."

Elhadj Sy, Director, HIV AIDS Group, UNDP

Modern sources of energy are also a key component of a functioning health care system; thus they contribute to improving maternal and child health and reducing the incidence of HIV/AIDS, malaria, and other major diseases. Electricity, for example, enables health clinics to refrigerate vaccines, operate and sterilize medical equipment, and provide lighting so that clinical services can be provided after sunset. It allows the use of modern tools of mass communication needed to fight the spread of HIV/AIDS and other preventable diseases. Access to electricity also helps attract and retain health and social workers, especially when it provides lighting in their accommodations.

KENYA:

Improved cookstoves reduce indoor air pollution

Over 16,000 improved cookstoves have been installed in western Kenya as part of a project aimed at improving the living and working conditions of women in rural households. Since their introduction in 1995, fuel efficient cookstoves have led to a 60 percent reduction in indoor smoke, contributing to a 65 percent reduction in acute respiratory infections among mothers and a 70 percent reduction of conjunctivitis among children under five. Lower incidences of health problems have enabled women to save the equivalent of US$4 per year in avoided health costs—a small, but not trivial, amount of money.

Source: UNDP

PHILIPPINES:

Rural electrification contributes to maternal health

A statistical analysis of 15,000 townships, or barangays, in the Philippines indicates that there is a significant relationship between maternal health and access to electricity. Data from the Philippine's 1998 National Demographic and Health Survey (NDHS) shows that, after controlling for income and other demographic factors, women with access to electricity have a 17 percent higher probability of having a doctor-assisted birth than those without electricity.

Source: UNDP

Zambia, PANOS/G. Pirozzi

MDG
7

Ensure Environmental Sustainability

Although energy's potential for catalyzing growth and development is unquestionable, current patterns of energy production and consumption are threatening the environment on both local and global scales. Emissions from the burning of fossil fuels are major contributors of urban air pollution, acidification of land and water, and the unpredictable effects of climate change.

"Energy is critical in both how it impacts the global environment and how it is needed to protect the local environment. Access to clean energy is an essential component of sustainable development."

Olav Kjørven, Director, Energy and Environment Group, UNDP

The use of fuelwood and charcoal can be unsustainable when it leads to land degradation from fuelwood gathering and to indoor air pollution from biomass combustion. The earth's environment is intrinsically linked to how energy is supplied and consumed.

The burden of environmental degradation falls disproportionately on developing countries. The poor often live in the most ecologically sensitive and marginal environments, which makes them especially vulnerable to environmental degradation and the adverse effects of climate change. In most cases, environmental damage can be directly or indirectly mitigated by increasing energy efficiency, introducing modern technologies for energy production and use, substituting cleaner fuels for polluting fuels, and introducing renewable energy.

Land degradation, for example, is a substantial problem that affects nearly 2 billion hectares of land worldwide and threatens the livelihoods of a billion of the earth's inhabitants[10]. Fuelwood collection is not the major cause of this global problem, but reducing it can play an important role in stemming and reversing land degradation and its local and regional impacts. Reducing the amount of fuelwood collected can be done through a combination of measures, including the introduction of modern biomass energy systems, more fuel efficient cookstoves, fuelwood supply management, and fuel substitution.

SENEGAL:

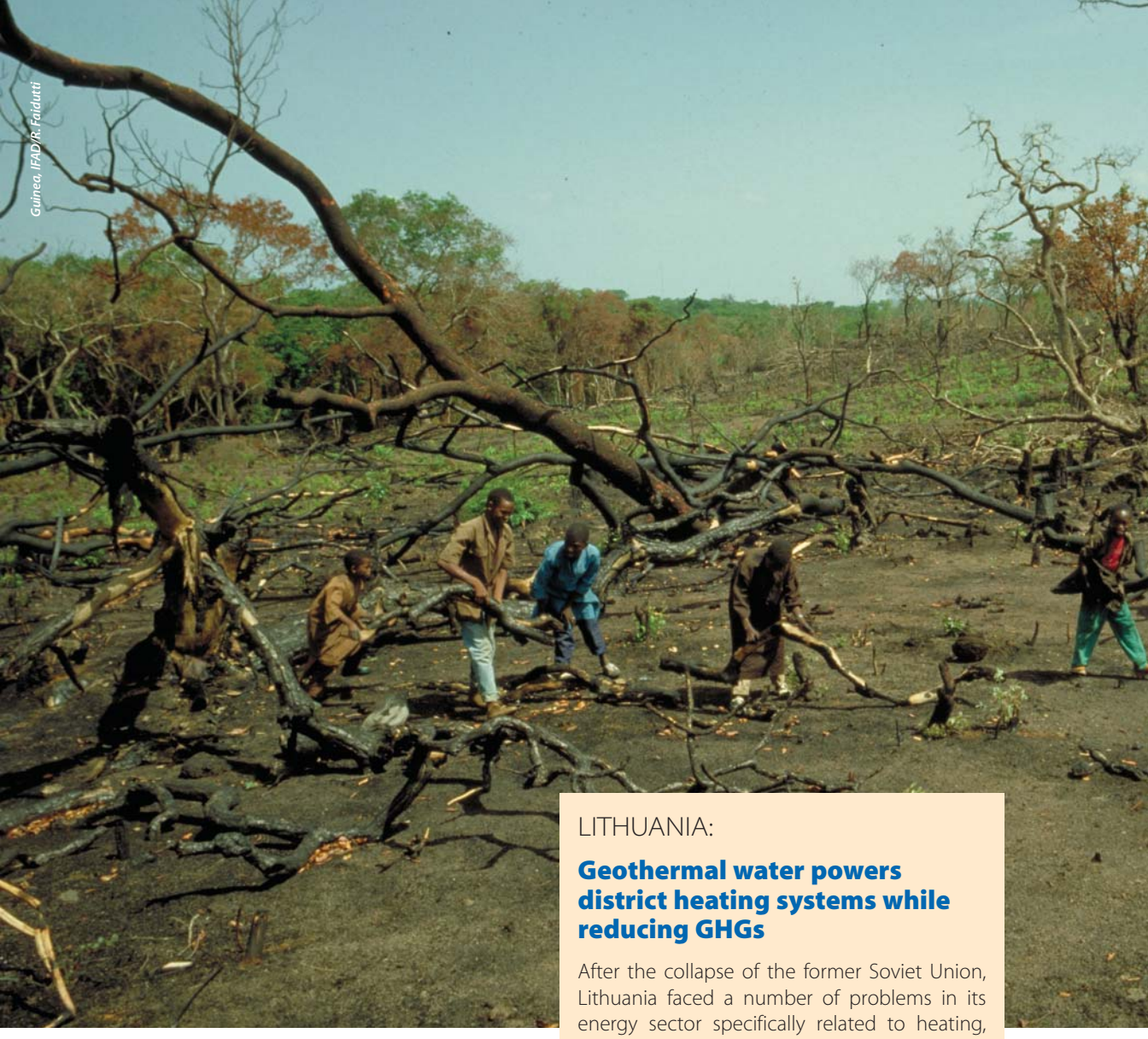
Fuel substitution helps alleviate land degradation

In an effort to address the dual problems of land degradation and rural poverty, the government of Senegal has embarked on a program to help encourage the substitution of liquefied petroleum gas for biomass energy (e.g., firewood and charcoal). Through a series of energy sector reforms and subsidy programs, the government has helped increase LPG consumption by an average annual rate of 11 percent since 1974. The result has been a marked reduction in deforestation. In 2002, the consumption of 100,000 tonnes of LPG led to 40,500 ha of avoided deforestation, or the avoidance of the production of 337,500 tonnes of charcoal.

Source: ENDA

Climate change represents one of the most serious global environmental challenges facing humankind in the twenty-first century. Reducing CO2 and other greenhouse gas emissions from

[10] UNEP/ISRIC. 1991. *World Map of the Status of Human-Induced Soil Degradation (GLASOD).* An Explanatory Note, second revised edition (edited by Oldeman, L.R., Hakkeling, R.T., and Sombroek, W.G.). UNEP, Nairobi, Kenya, and ISRIC, Wageningen, Netherlands.



Guinea, IFAD/R. Faidutti

the burning of fossil fuels is at the heart of current efforts to halt this global phenomenon. The use of cleaner, more efficient energy systems will certainly help pave the path to a low-carbon energy future. Developed countries—where per capita emissions have historically been far higher than those of developing countries—are now well positioned to lead the way in investing in modern energy services that do not rely so heavily on fossil fuels. Accelerated use of renewable and more energy efficient technologies can provide 'win-win' options to tackle global and local development challenges. Strengthened cooperation between developed and developing countries is critical to promoting technology transfer, capacity building, and increased financing for modern energy services.

LITHUANIA:

Geothermal water powers district heating systems while reducing GHGs

After the collapse of the former Soviet Union, Lithuania faced a number of problems in its energy sector specifically related to heating, including high energy intensity, the need for energy efficiency and conservation, and limited domestic energy resources. In 1992, the Government of Lithuania developed a geothermal plant as a means of providing hot water to the Klaipeda district heating system and reducing harmful emissions from the burning of fossil fuels. Overall, the heat supplied from the geothermal plant has reduced the amount of natural gas and heavy fuel oil used for heating. It is estimated that the decline in the use of fossil fuels corresponds to an annual reduction of 46,000 tons CO2; 2,100 tons of SO2; and 75 tons of NOx emissions when heavy oil is replaced, and 33,500 tons CO2 and 94 tons of NOx when natural gas is replaced. These declines in fossil fuel use have positive benefits to the local, regional, and global environments.

Source: World Bank & GEF

MDG 8

Develop a Global Partnership for Development

Given the complex and imperfect nature of energy markets, market forces alone cannot be expected to deliver energy services that are sustainable and meet the needs of the most vulnerable communities. Cooperation and partnerships between sectors and regions are needed to enable the use of energy services as a means for meeting all of the MDGs.

Senegal, UNDP

Defining commonly shared problems and channeling resources and expertise requires effective partnership among governments, public entities, development agencies, civil society, and the private sector. Without such partnerships it is difficult to secure the financial capital, knowledge and technology necessary to expand energy services at the global, regional, and local levels. It is therefore critical that all sectors, public and private alike, cooperate together to ensure that cleaner, more efficient energy systems—and the markets that are needed to sustain them—are available to the poor.

Partnerships are particularly important in helping countries mainstream energy into broader development strategies and frameworks. Energy is a cross-cutting issue by its very nature and thus requires participation from all development sectors in order to maximize its impact on development. To ensure that the poor benefit fully from greater access to energy, energy planning should be linked to development goals and priorities in other sectors.

LP Gas Rural Energy Challenge

The LP Gas Rural Energy Challenge is a public-private partnership between the World Liquefied Petroleum Gas Association (WLPGA) and the United Nations Development Programme (UNDP). The LPG Challenge, as it is known, targets rural and peri-urban areas with the objective of expanding access to affordable liquefied petroleum gas. The partnership draws on combined strengths and collective action to mobilize public and private sectors in ways that benefit society and investors, improving social and economic conditions, and creating viable new markets for liquefied petroleum gas products and services. The partnership integrates private sector contributions in service delivery and investment financing with government facilitation of the necessary enabling environment. Communities and local NGOs strengthen the effort by providing a critical support function at the project implementation level. The development assistance community contributes by supporting technical assistance and capacity building.

Source: UNDP

Partnerships are also quite important for mobilizing financial resources to expand energy investments and services. Public financing from both domestic resources and official development assistance, combined with private entrepreneurship and investment, are needed to develop energy services for the poor. New forms of risk sharing between the private and the public sectors should be developed under public-private partnerships as a way to attract private sector resources in the area of sustainable energy. Official development assistance should be used strategically to build capacity, assess and prepare projects, and support the creation of enabling policy environments.


India, J. Schytte

Global Village Energy Partnership (GVEP)

GVEP is a voluntary partnership that brings together developing and industrialized-country governments, public and private organizations, multilateral institutions, consumers, and others in an effort to ensure that the poor have access to modern energy services. It addresses linkages between access to energy services and poverty reduction through building capacity and encouraging the transfer of technology. The partnership now includes over 700 partners, of whom 15 percent are from the energy sector, with the bulk representing agriculture, education, environment, health, rural development, water, and other sectors.

Source: UNDP

Conclusion

Energy's important role in underpinning the MDGs has yet to be fully recognized by the international development community. Developing a new approach to energy, where energy services are acknowledged not just as a result of development, but as an actual driver of development, will be crucial if energy is to play a more prominent role in strategies aimed at achieving the MDGs. The upcoming 2005 World Summit—to be held in New York in September 2005—presents an opportunity to provide real momentum in this direction. In 2006/2007 the Commission for Sustainable Development (CSD) will look at energy and sustainable development, presenting another opportunity to deepen the focus on energy and the MDGs.

As such, awareness raised in 2005 on energy's linkages to the MDGs could be further elaborated into priority capacity building, financing, technical assistance, and technology issues to be adopted through the CSD process in 2006 and 2007 as means to support the achievement of the MDGs. Breakthroughs made in linking access to energy services to multiple development objectives would need to be further elaborated in terms of technical options available, the minimum energy inputs needed to support each MDG, the associated costs, and the related policy and financial options of these alternatives.

Ethiopia: L. Gabb

United Nations Development Programme (UNDP)

UNDP is the UN's global development network, advocating for change and connecting countries to knowledge, experience, and resources to help people build a better life. We are on the ground in 166 countries, working with them on their own solutions to global and national development challenges. As they develop local capacity, they draw on the people of UNDP and our wide range of partners.

World leaders have pledged to achieve the Millennium Development Goals, including the overarching goal of cutting poverty in half by 2015. UNDP's network links and coordinates global and national efforts to reach these Goals. Our focus is helping countries build and share solutions to the challenges of:

- Democratic Governance
- Poverty Reduction
- Crisis Prevention and Recovery
- Energy and Environment
- HIV/AIDS

UNDP helps developing countries attract and use aid effectively. In all our activities, we encourage the protection of human rights and the empowerment of women.

UNDP's Approach to Energy

UNDP's work on sustainable energy is concentrated on supporting achievement of the MDGs, especially the target of reducing by half the proportion of people living in poverty by the year 2015. With offices in nearly every developing country and energy-related projects in 95 percent of country programmes, UNDP is uniquely placed to facilitate capacity building efforts in the area of energy that are vital to achieving the MDGs.

The corporate energy priorities of UNDP are as follows:

1. Support national policy frameworks that reflect the role of energy in poverty reduction and sustainable development;
2. Promote access to energy services, electricity or cleaner fuels in rural areas;
3. Increase use of low emissions energy technologies including renewable energy, energy efficiency and/or advanced fossil fuel technologies; and
4. Expand access to energy investment financing through the Clean Development Mechanism or public-private partnerships.

UNDP's country level assistance on energy is supported by technical and policy advisors posted in Regional Service Centers in Bangkok, Beirut, Bratislava, Dakar, Johannesburg, Nairobi, and Panama. UNDP funds energy activities through its regular resources, as well as in its role as an implementing agency of the Global Environment Facility (GEF). UNDP's Thematic Trust Fund (TTF) on Energy and Environment also serves as a vehicle for mobilizing additional resources for country-level activities.

For more information on UNDP's activities on energy, including its energy publications, cases studies, and lessons learned please visit: www.undp.org/energy

A Snapshot of Energy's Linkages to the MDGs

MDG	Energy Linkages
1 Eradicate extreme poverty and hunger	Energy inputs such as electricity and fuels are essential to generate jobs, industrial activities, transportation, commerce, micro-enterprises, and agriculture outputs. Most staple foods must be processed, conserved, and cooked, requiring energy from various fuels.
2 Achieve universal primary education	To attract teachers to rural areas electricity is needed for homes and schools. After dusk study requires illumination. Many children, especially girls, do not attend primary schools in order to carry wood and water to meet family subsistence needs.
3 Promote gender equality and empower women	Lack of access to modern fuels and electricity contributes to gender inequality. Women are responsible for most household cooking and water-boiling activities. This takes time away from other productive activities as well as from educational and social participation. Access to modern fuels eases women's domestic burden and allows them to pursue educational, economic, and other opportunities.
4 Reduce child mortality	Diseases caused by unboiled water, and respiratory illness caused by the effects of indoor air pollution from traditional fuels and stoves, directly contribute to infant and child disease and mortality.
5 Improve maternal health	Women are disproportionately affected by indoor air pollution and water—and food-borne illnesses. Lack of electricity in health clinics, lack of illumination for nighttime deliveries, and the daily drudgery and physical burden of fuel collection and transport all contribute to poor maternal health conditions, especially in rural areas.
6 Combat HIV/AIDS, malaria, and other diseases	Electricity for communication such as radio and television can spread important public health information to combat deadly diseases. Health care facilities, doctors, and nurses, all require electricity and the services that it provides (illumination, refrigeration, sterilization, etc.) to deliver effective health services.
7 Ensure environmental sustainability	Energy production, distribution, and consumption has many adverse effects on the local, regional, and global environment; these effects include indoor, local, and regional air pollution; local particulates; land degradation; acidification of land and water; and climate change. Cleaner energy systems are needed to address all of these effects and to contribute to environmental sustainability.
8 Develop a global partnership for development	The World Summit for Sustainable Development (WSSD) called for partnerships between public entities, development agencies, civil society, and the private sector to support sustainable development, including the delivery of affordable, reliable, and environmentally sustainable energy services.

Further Reading

World Energy Assessment Overview: 2004 Update
http://www.undp.org/energy/weaover2004.htm

Achieving the Millennium Development Goals: The Role of Energy Services
http://www.undp.org/energy/achievemdg.htm

Energy for the Poor: Underpinning the Millennium Development Goals
http://www.dfid.gov.uk/pubs/files/energyforthepoor.pdf

The Energy Challenge for Achieving the Millennium Development Goals
http://esa.un.org/un-energy

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