



# Gender and energy

## Background

***“Although access to more modern energy alternatives will not necessarily lead to greater equality in gender roles, it can at least relieve some of the most burdensome and unhealthy aspects of their daily lives and expand the development options available to women, their families and their communities.”***

Source: ENERGIA, ‘Fact Sheet on Energy, Gender and Sustainable Development’, 2011.

Approximately 2.7 billion people (almost 2 billion in the Asia-Pacific region)—40 percent of the world’s population—depend on wood, charcoal or animal waste for basic energy needs such as cooking and heating.<sup>1</sup> Because poor and marginalized people tend to rely on locally sourced biomass for their daily energy needs, any stress on their surrounding ecosystems, climatic or otherwise, is likely to render them increasingly vulnerable to biomass—and hence energy—scarcities.<sup>2</sup> Such scarcities take a significant toll on poor women, especially rural women. Rural women and girls are the primary energy producers for the household. Further, they tend to depend on small-scale agriculture and locally available resources to support their livelihoods and to fulfil their household obligations. Energy poverty leads to drudgery, greater health risks and a lack of time to focus on income-generating, educational or other self-nurturing (e.g. leisure) activities.

The United Nations General Assembly designated 2012 as the International Year of Sustainable Energy for All. Such designation is fitting; the lack of meaningful access to sustainable energy services hampers progress towards economic and social development, achieving the Millennium Development Goals and climate change adaptation and mitigation objectives.

## **Better energy access is a catalyst for achievement of the Millennium Development Goals**

Energy is essential to life in the 21st century. Modern energy services play a key role in facilitating access to fundamental necessities such as clean water, sanitation and health care and advance development through the provision of reliable and efficient lighting, heating, cooking, mechanical power, transport and telecommunication services.<sup>3</sup> Because women and girls are primarily responsible for the bulk of household work, access to clean and affordable energy directly benefits their health and well-being. Though access to modern energy alternatives is not sufficient to guarantee gender equality, it is necessary in order to relieve women of drudgery and to provide them more time to care for themselves and engage in activities that are more productive to them, thereby leading to empowerment and greater gender equality.<sup>4</sup> On a broader scale, incorporating poverty alleviation measures, gender equality principles and climate change impacts into energy policies can catalyse national development and play a vital role in realizing the Millennium Development Goals.<sup>5</sup>

### **Energy poverty has gender dimensions**

Energy poverty—a malaise that afflicts over a billion people—is one aspect of broader economic poverty and has similar, marked gender characteristics. Women and girls are often primarily responsible for collecting fuel and water for their families. In India, for example, women gathering firewood, crop waste and cattle dung fulfil 92 percent of rural domestic energy needs. They gather 85 percent of their cooking fuel from forests, village commons and fields.<sup>6</sup> Rural women tend to participate in the informal and biomass-dependent economic sectors, which tend to be neglected in national energy policies. Women also face energy related hurdles in the formal sectors—for example, women-headed businesses generally have lower access to finance and energy-related services (such as grid electricity) than men.<sup>7</sup>

Relatedly, indoor pollution from the use of cooking stoves is also a serious health problem for women, girls and boys under the age of 5.<sup>8</sup> By 2030, indoor air pollution from biomass use is likely to cause more than 1.5 million deaths per year.<sup>9</sup> Factors such as workload and poor nutrition also increase women's susceptibility to health risks, including anaemia and perinatal mortality.<sup>10</sup> Moreover, drudgery from energy-collection (e.g. fetching and carrying fuel wood) takes a significant toll on women's and girls' health and well-being, affects prenatal mortality and increases post-delivery complications.

Energy poverty also affects women and girls by virtue of the toll it takes on their time, resulting in 'time poverty' (a lack of time for rest and leisure after taking into account the time spent working, whether in the labour market or at home). Women spend an inordinate amount of time gathering biomass for basic energy needs, resulting in severe opportunity costs that prevent them from participating in other beneficial ventures (e.g. education).<sup>11</sup> Because women undertake these activities largely on foot, climate-induced scarcity of natural resources will exacerbate women's time poverty as women and girls will be forced to travel spend more time collecting these resources. Technology can help alleviate some of these challenges. For example, in Nepal, mechanized mills were found to reduce the time needed to process one kilo of rice from 19 minutes to 0.8 minutes.<sup>12</sup>

Finally, women are often excluded from discussions about energy plans and policies. Excluding women from decision-making is likely to result in gender-blind planning, financing, execution and implementation.<sup>13</sup>

## **Energy services and programmes can promote women's skills development and employment**

Supporting women to develop and manage greener technologies and green and renewable energy sources contributes to national mitigation strategies, provides new employment opportunities, contributes to poverty reduction and promotes women's economic empowerment. For example, the *Grameen Shakti* project in Bangladesh has trained over 30,000 local women to install and maintain solar systems and provides micro-loans to purchase domestic solar systems. The solar systems' reduced emissions create 'certified emission reduction' units under the Kyoto Protocol's Clean Development Mechanism. Grameen Shakti purchases the units to sell on emissions trading markets, thus generating income to subsidize the cost of the system.

## **Energy policies and programmes need to be gender sensitive**

Although women and girls are disparately energy-poor and likely to bear the brunt of inequitable energy policies across various levels, they nonetheless play a key role in energy

### **Gender and energy: Fast facts**

- 1.4 billion people (almost 800 million in the Asia-Pacific region), do not have access to electricity.
- Energy poverty has distinct gender characteristics, disproportionately affecting women and girls.
- 2 million people (mainly women and children) die because of the burning of biomass indoors.
- About 10 million people, mostly rural poor, have gained access to modern energy services through UNDP-supported projects over the past decade.
- The practice of cooking over open wood fires or primitive stoves accounts for almost 20 percent of global greenhouse gas emissions.
- The number of premature deaths from household air pollution is greater than the number of premature deaths from malaria or tuberculosis.
- Improved watermill technology, which involves the improvement of traditional watermills for agro-processing and electricity generation, has helped spare women of the drudgery of grinding and milling and saves them significant time for other activities

Sources: UNDP, *Human Development Report 2011 — Sustainability and Equity: A Better Future for All*, 2011; International Energy Agency (IEA), 'World Energy Outlook 2011: Energy for All – Financing Access for the Poor; Special Early Excerpt of the World Energy Outlook 2011'; 2011; IEA, *World Energy Outlook, 2010*; World Health Organization, *Gender, Climate Change and Health*, 2011.

production, utilization and conservation. Smart energy policies should offer due consideration to their needs, concerns and unique contributions. Women's central role in sustainable socio-economic development (through their role as food producers, health care providers, educators and natural resource managers) means that gender equality and women's empowerment are key to development, environmental sustainability and to ensuring efficiency and sustainability of climate change responses.<sup>15</sup> In particular, incorporating both women's and men's contributions and concerns can increase access to and benefits from grid and off-grid electricity/energy sources.<sup>16</sup> In fact, failure to consider gendered interests, different levels of access to resources and the different needs of men and women can limit the effectiveness and sustainability of energy programmes and policies and other energy use-related development activities.

## Promoting gender equality through improved access to energy: Northern India

*Access to energy services significantly impacts women's lives by reducing time spent on household tasks, improving their health and increasing access to information services such as television, radio and the Internet. Access to energy services can also unleash a process of women's empowerment, bringing in changes in gender relations.*

*Jagriti is a non-governmental organization working in the remote hills of northern India. In 2001–2002, Jagriti began organizing poor women into women's savings and credit groups to improve their status and give them a collective voice. However, it quickly became apparent that if these women were to benefit from Jagriti's programmes, their work burden—some 10 hours per day devoted to cooking and collecting fuelwood and water—would have to be reduced so that they would have time to participate in economic activities. Consequently, Jagriti, through the women's savings and credit groups, introduced improved energy technologies such as liquefied petroleum gas, pressure cookers and energy-efficient water heaters.*

- *Given improved fuel efficiency, trips to the forest were reduced from once daily to between one and four times per week;*
- *Using liquefied petroleum gas and pressure cookers saved 1 to 1.5 hours of cooking time each day, enabling women to engage in income-generating activities such as weaving; and*
- *More efficient fuels reduced indoor air pollution, which improved health, productivity and general quality of life.*

*The improved energy-efficient devices thus catalysed the process of women's empowerment and changes in gender relations in ways completely unforeseen by the project. Visible indicators included the following:*

- *Women opening bank accounts;*
- *Increased participation in training activities and interactions with banks and government offices;*
- *Increased intra-group loans to meet women's emergency needs for cash;*
- *Increased participation in village-level meetings and stronger articulation of their needs in such forums; and*
- *Increased support from family members to engage in economic activities outside the home and to participate in community activities.*

Source: United Nations Development Programme (UNDP), 'Towards An "Energy Plus" Approach For The Poor – A review of good practices and lessons learned from Asia and the Pacific', 2011., pp. 31-32.

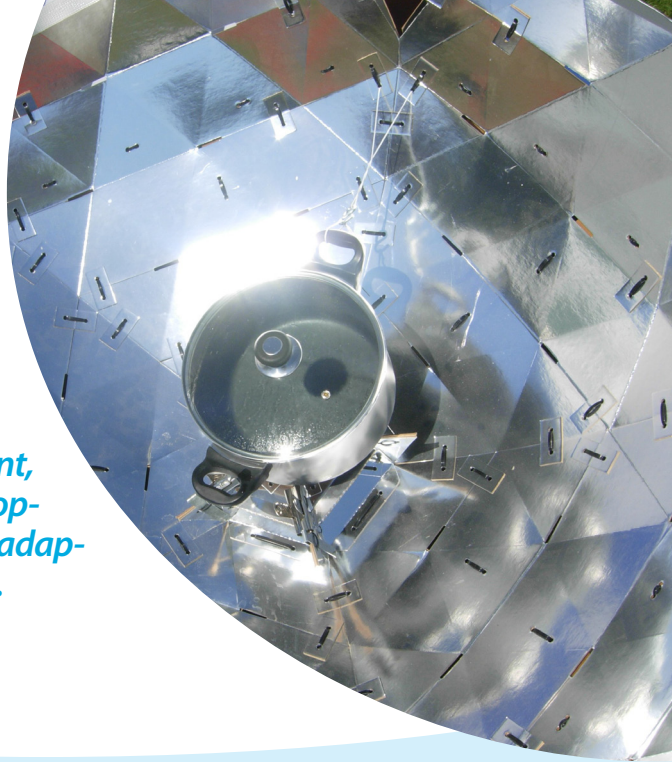
## Recommendations for action

- **Concerted efforts in low-emission technologies investment is needed across levels and sectors.** Lack of modern energy services remains a significant challenge to lifting millions of poor women, children and men out of poverty and achieving Millennium Development Goals targets. As such, low-emission technologies that benefit women and poor communities are needed to further improve their living situation and increase their resilience to climate change impacts. Investments in modern and sustainable energy services would alleviate women's drudgery, help improve the quality of their lives and health and afford them time to engage in other activities such as income generation, education, time with children and leisure. It would also help lead to the betterment of livelihoods of local populations at large through training in selling, setting up and maintaining low-emission energy technologies.
- **Gender-based constraints related to access to energy, finance, training, employment and entrepreneurship need to be better studied and addressed.** Policies that include both women and men during development stages will support equitable benefits from the setting up, maintenance, sale of and access to energy services. Infrastructure projects designed to promote cleaner, more efficient forms of fossil fuels and renewable energy can offer new skills training and increased employment for women. Therefore, more efforts are needed to involve women in the design, maintenance and dissemination of locally appropriate energy technologies and services.<sup>17</sup>
- **Climate change financing focusing on the energy sector should complement broader developmental goals including gender equality, poverty eradication and sustainable development.**<sup>18</sup> Existing public and private mitigation financing schemes need to focus on projects that benefit and support women's community-level forestry, food production, cooking and other energy-related activities. At the very least, gender and social impact assessments need to be undertaken during programme and project design. Where feasible, carbon financing options should ensure more equitable benefits for men and women by helping expand women's access to and control over energy and supporting their existing energy-related activities. This includes efforts to qualify small-scale projects (e.g. improved stoves and forestry management) for financing by simplifying application processes and targeting rural women.
- **Mainstreaming gender in energy policies and programming is good social policy and would enhance the efficiency of energy policies.** Incorporating gender perspectives into energy projects, policy and planning is critical to ensure the effectiveness and sustainability of not only energy programmes and policies, but also all development activities that involve energy use. The use of gender budgeting and gender audits is one critical tool for ensuring an ongoing integration of gender perspectives into energy policy and programmes.



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*The lack of meaningful access to sustainable energy services hampers progress towards economic and social development, achieving the Millennium Development Goals and climate change adaptation and mitigation objectives.*



**REFERENCES:** 1. United Nations Development Programme (UNDP), 'Towards An "Energy Plus" Approach For The Poor – A review of good practices and lessons learned from Asia and the Pacific', 2011. 2. UNDP, *Human Development Report – Sustainability and Equity: A Better Future for All*, 2011; International Energy Agency (IEA), 'World Energy Outlook 2011: Energy for All – Financing Access for the Poor; Special Early Excerpt of the World Energy Outlook 2011', 2011; World Bank, 'Modernizing Energy Services for the Poor: A World Bank Investment Review – Fiscal 2000–08', 2010. 3. UNDP 2011, note 1. 4. ENERGIA, 'Fact Sheet on Energy, Gender and Sustainable Development', 2011. 5. IEA 2011, note 2. 6. World Bank, 'Gender and Climate Change: Three Things You Should Know', fact sheet, 2011a, available at: <http://go.worldbank.org/TN0KYRX8Q0> (accessed 22 October 2012). 7. Alstone, P., C. Niethammer, B. Mendonça and A. Eftimie, 'Expanding Women's Role in Africa's Modern Off-Grid Lighting Market', Lighting Africa Project, International Finance Corporation, 2011. 8. World Bank, *Gender Equality and the Millennium Development Goals*, Washington, DC, 2003. 9. UNDP 2011a, note 1. 10. World Health Organization, 'Gender, Climate Change and Health', 2011. It should also be noted that women tend to carry greater loads compared to men, but have a lower intake of calories, because customs usually dictate that men receive more food and water. See *Id.* See also Dankelman, I., *Gender and Climate Change: An Introduction*, Earthscan, 2010. 11. World Bank, 'Gender, Time Use, and Poverty in Sub-Saharan Africa', working paper, 2006; World Bank, *Gender in Agriculture Sourcebook*, 2009. 12. Carr, M. with M. Hartl, *Lightening the Load: Labour Saving Technologies and Practices for Rural Women*, IFAD and Practical Action Publishing, 2010. It is important that technology works for women. For example, women were walking for 10 to 180 minutes in Nepal to reach the mills and waiting an average of 30 minutes for their turn. See *Id.* 13. UNDP, *Gender & Energy: A Toolkit for Sustainable Development and Resource Guide*, 2004. 14. Schalatek, L., 'Gender and Climate Finance: Double Mainstreaming for Sustainable Development', Heinrich Böll Foundation, 2009, available at: [http://www.boell.org/downloads/DoubleMainstreaming\\_Final.pdf](http://www.boell.org/downloads/DoubleMainstreaming_Final.pdf); United Nations Conference on Trade and Development, 'Applying a Gender Lens to Science, Technology and Innovation', Current Studies on Science, Technology and Innovation, 5th ed., Geneva, 2011. 15. UNDP, 2011b, note 2; World Bank, *World Development Report 2011, Gender Equality and Development*, 2011; Carvajal-Escobar, Y., M. Quintero-Angel and M. Garcia-Vargas, 'Women's Role in Adapting to Climate Change and Variability', *Advances in Geo Sciences*, issue 14, 277–280, 2008; Alstone et al. 2011, note 7. 16. Alstone et al. 2011, note 7. 17. ENERGIA, 'Where Energy is Women's Business: National and Regional Reports from Africa, Asia, Latin America and the Pacific', 2007. 18. UNDP, 'Ensuring Gender Equity in Climate Change Financing', 2011; Schalatek 2009, note 14.



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