Access to Sustainable Energy – The Gender Dimensions

Policy Brief

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The findings of this policy brief result from a field visit in May 2012 to organisations working on energy projects at the grassroots level in Malawi. The purpose of this paper is to provide a field-based perspective to policy makers on gender, climate change and access to energy.

Mary Robinson Foundation
Climate Justice

Introduction

Development is not possible without energy and sustainable development is not possible without considering non-fossil fuel forms of energy. Making sure that poor and vulnerable men and women can reap the benefits of improved access to sustainable energy is an essential component of climate justice. Held in 2012, the UN-designated International Year of Sustainable Energy for All, the UN Conference on Sustainable Development (Rio+20) recognised "the critical role that energy plays in the development process, as access to sustainable modern energy services contributes to poverty eradication, saves lives, improves health and helps provide for basic human needs".[1] The conference provided a platform to explore opportunities for improving access to sustainable energy and to consider more generally the implications for gender equality and women's empowerment. Access to sustainable energy **for all** is essential in order to achieve climate justice principles including highlighting gender equality and equity, supporting the right to development and sharing benefits and burdens equitably.

Energy is an integral part of a chain that enables women and men to achieve other development outcomes and must be understood within the priority challenges faced in any given context. Development dividends can be gained when time freed up from energy related activities (such as collecting firewood for household use, drawing water for agricultural and household activities, and cooking and processing food) converts to a greater investment in human development. This includes increased benefits to family health (child care, care of sick, food preparation), improved food security (agricultural production), engagement in alternative forms of livelihood support (income generation), increased attendance at school by girls and improvements to women's health.

[1] *United Nations General Assembly Resolution 66/228. The future we want. Annex 125. http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E [Accessed 17 July 2013]*

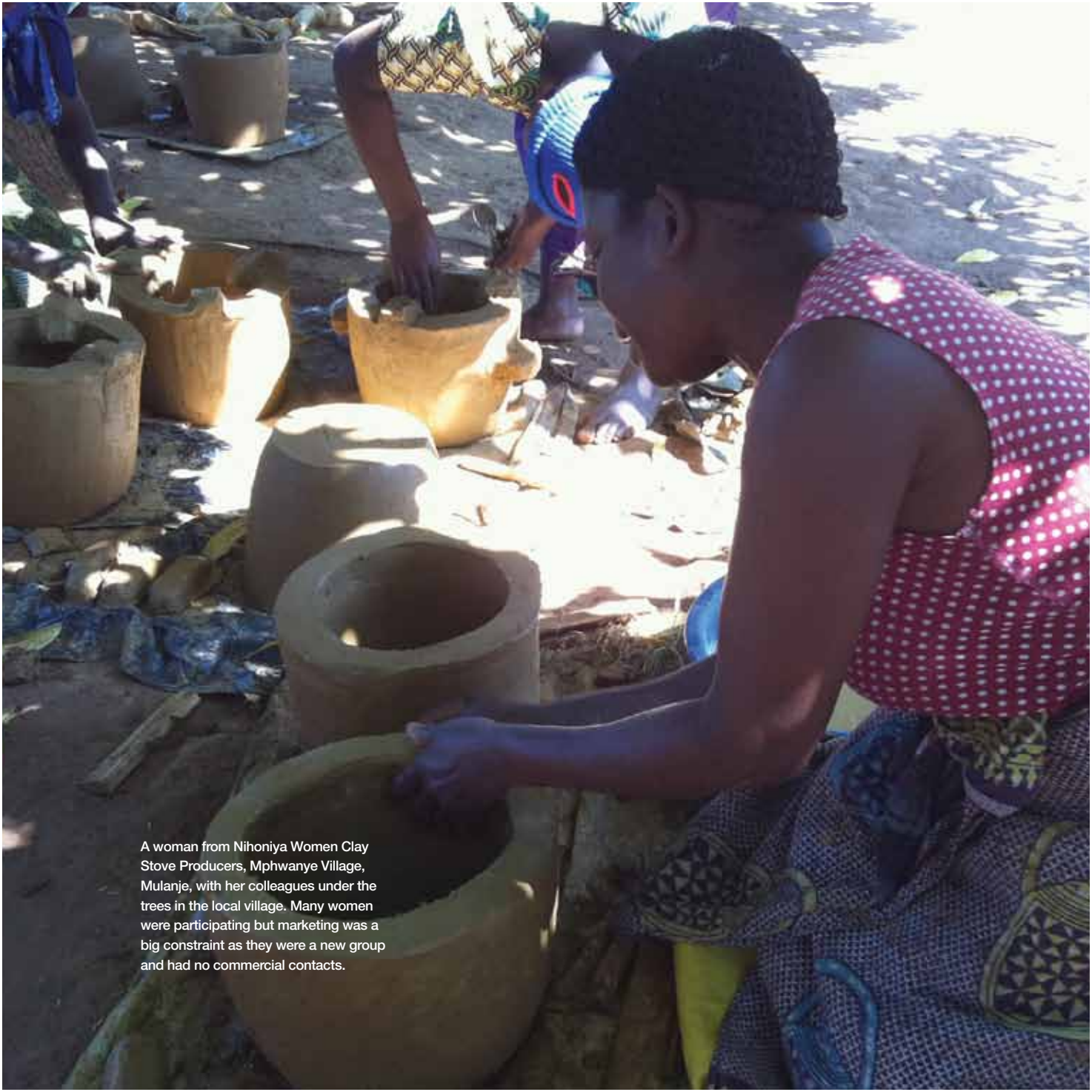
More than just energy

Renewable energy and fuel efficient technologies (including micro hydro, solar, thermoelectric generators, cookstoves) for lighting, recharging batteries, refrigeration and cooking have significant positive results for a range of human development indicators, including:

a. **EDUCATION:** The availability of electricity helps retain teachers in rural areas as they can read at night, recharge mobile phones, watch TV, or use videos in classrooms. Lighting facilitates adult education classes and allows students to study at night, while evening classes can be organised to give children who work during the day access to education. A reduction in the need to collect firewood decreases the demand for child labour and decreases the chances of girls being absent from school.

b. **HEALTH:** In the health sector, in addition to helping to retain staff, energy access enables health clinics to provide safer child delivery after dark (a huge priority for women), and refrigeration of vaccinations and drugs. It also facilitates the performance of some minor medical procedures and the use of basic equipment. Cookstoves which burn fuel more efficiently have health dividends in terms of reducing smoke inhalation by the user and her family compared with the traditional three-stone fire. They are cleaner and reduce the risk of burn injuries.

c. **NUTRITION:** To boost nutrition, children need several small meals a day but this may not be feasible where firewood is in short supply or women are too busy to cook or are working away from home. Likewise, grandmothers caring for orphans may no longer have the energy to collect firewood. In such situations there may be little choice but to cook once a day resulting in children losing out on essential meals. Cookstoves use firewood efficiently, food cooks quickly, and even when the fuel has burnt out the stove retains heat so that food can be kept warm, minimising the need to cook several times a day. With the benefit of heat retention, women can also leave prepared food for ill patients when they have to go out.



A woman from Nihoniya Women Clay Stove Producers, Mphwanye Village, Mulanje, with her colleagues under the trees in the local village. Many women were participating but marketing was a big constraint as they were a new group and had no commercial contacts.

More than just energy
Key messages

i. **Energy is not a stand-alone issue.** Energy provision should be integral to the achievement of health, education and nutrition outcomes, and be built into the design and maintenance of schools and health centres. It should also be integrated into policies, strategies and interventions related to food security, literacy, livelihoods programmes, income generation and forestry programmes. It should not be left to the energy and conservation sectors only. Without an integrated approach there is a risk that those who could benefit most from access to sustainable energy will not create the demand.

ii. **There is a need to understand the role of firewood and charcoal in the livelihood strategies of men and women.** There is a distinction to be made between women's demand for firewood at the local level to meet household needs, and the demand for charcoal which is predominantly a male income earning activity that supplies peri-urban and urban areas where the wood may be sourced further away from villages. Meeting these different demands for biomass requires different solutions that affect issues of land ownership, land use and management, community forestry management, access to resources, development of woodlots, and provision for fuel in the short term until woodlots are mature.

iii. **Meeting women's demand for energy requires promoting, but also going beyond, fuel efficient cookstoves.** Incentives are required to encourage the adoption of renewable technologies. In addition, household structures and control over resources should be considered when assessing the ability to invest in such technology. As women have little control over resources, especially money, there is need for technologies to demonstrate that they offer benefits for both men and women. For example a small thermoelectric generator retrofitted to fuel efficient stoves serves the dual function of meeting women's cooking needs while also meeting both women's and men's needs by enabling the generation of a small amount of electricity for lights and mobile phone charging. Specific strategies should be developed to give vulnerable households[2] access to sustainable energy. For example, replacing subsidies for fossil fuels with subsidies for renewables, providing access to Village Savings and Loans schemes or including an energy dimension in social protection programmes.

[2] *For example, matrilineal households where there is little investment from men, or female/child/grandmother heads of households*

More than just energy
Key issues

i. **Women need firewood for household consumption and as a source of income, prompting the need for energy to be placed within a wider livelihoods framework.** For many poor women, collection of firewood for sale is one of the few ways that they can earn cash.

ii. **The poorest and most vulnerable households are not accessing technologies** because of the capital costs associated with buying a stove or solar panel, or wiring their homes in order to benefit from micro-hydro power. Yet these are the households that can benefit most e.g. households affected by HIV and AIDS or grandparent or child headed households where access to sustainable energy can reduce the time and effort associated with cooking and gathering firewood. Payment of user fees to access electricity is also a problem for such households.

iii. **Solving environmental and conservation problems is closely aligned with solving social problems and peoples' access to and control over resources.** Integrating women's energy needs within conservation and deforestation objectives has some, but limited effect. Forestry conservation has the conflicting aims of preventing deforestation while at the same time providing fuel wood for the local population. Once the objective of reducing demand for firewood has been achieved (e.g. through the use of fuel efficient stoves) there is little consideration of women's other energy and income generating needs. On the other hand, more innovative approaches adopt a supply chain of activities that support livelihoods e.g. cookstoves for cooking and as micro businesses, micro-hydro power for electricity, tree plantations and the growing of pigeon pea as a source of firewood, nutrition and soil enrichment.

More than just energy
Key issues

iv. **National policies need to adopt an integrated approach that creates an enabling environment for improving sustainable energy access:**

a. Recognise the potential role of different actors in energy provision so that the needs of different users can be met – government, private sector, NGOs.

b. Where restrictions are placed on the collection of firewood for conservation purposes, provide support to access renewable alternatives that are affordable, viable and accessible.

c. Provide incentives for local service energy provision and the adoption of small scale technologies that help rural households, e.g. consider waiving license fees and importation tax on solar lamps/panels, bulbs.

d. Ensure coherence and coordination between government departments. For example, marry the objectives of Forestry Departments (with an interest in forest management and conservation) with the objectives of Energy Departments (with an interest in the efficient use of firewood).

e. Where Ministries/Departments of Energy are centralised with little representation at regional or district level, consultation mechanisms need to be created so that policy making is informed by input from the community level in order to harness the experience of energy provision emerging from small scale rural based projects.

v. **Getting the benefits of carbon credits to poor rural areas/households is difficult.** Many NGOs are interested in having their energy projects verified for carbon credits but consider that the process is complicated and requires investment in skills, capital and monitoring, which over-stretches most NGOS. On the other hand, carbon credits offer the promise of extra resources to help in cost sharing of projects or to expand services to communities.

Case study 1 conducted May 2012

An integrated approach - Msamala Sustainable Energy Project

Concern Universal Malawi is implementing a five-year Sustainable Energy Project in Balaka, a drought prone area that is characterised by poverty and high levels of deforestation. It is affected by floods and wind-storms that result in loss of livelihoods and housing. The project encompasses the introduction of solar technologies, production and marketing of clean fuel efficient stoves, afforestation and micro-business. In recognition of people's livelihood needs, Concern Universal has a memorandum of understanding with the Catholic Development Commission which provides complementary livelihood support including inputs (fertiliser, seeds and livestock), conducts some adult literacy ceded to them by Concern Universal and promotes water, sanitation and hygiene. Fundamental to the adoption of technologies is a strong participatory approach and a close working relationship with district authorities including the departments of forestry, education, community development and environmental affairs.

Esther Maganga (right) and Margaret Zagwa, members of energy saving stove making group supported by Concern Universal in T/A Msamala, Balaka.

Photo: Concern Universal

Case study 1 conducted May 2012

An integrated approach - Msamala Sustainable Energy Project

- The introduction of stoves has helped to reduce firewood consumption by between 39-50% compared with the traditional three-stone cooking fire. In a two month period, a typical household reduced its need for firewood by 0.88 metric tons, representing a significant reduction in women's work burden.
- On buying a stove, the purchaser gets three kilos of pigeon pea seed which provides both nutrition and stalks as part of 'grow your own firewood initiative' to bridge the gap until household and community woodlots have matured.
- In recognition of the need for a business approach, and to support more livelihoods, the project works separately with the women who produce the stoves from those who sell the stoves (21 stove production groups comprising 384 people predominantly women, and 110 stove marketers). This is complemented by 143 Village Savings and Loans groups.
- The project qualifies for verified emission reductions and carbon credits. In 2011, 25,000 carbon credits were verified and this is expected to double in 2012. It is hoped that women/households participating in the scheme will be able to benefit from the funds generated potentially providing them with an income stream, and that there can be a cross-subsidy to the poorest households. The project is piloting the use of a thermoelectric generator developed by Trinity College Dublin that can be connected to the same ceramic stove with the expectation that it can be used for lighting, recharging a mobile phone and powering a small radio.
- Micro solar panels to recharge batteries and rechargeable devices such as mobile phones and solar bulbs are also being piloted.
- Charcoal producers are being trained in alternative forms of income generation and provided with business management skills.
- The project has a research component that will examine the health benefits of clean cooking and which explores usage and socio-cultural factors that may affect the uptake of clean efficient stoves.

Based on the experience of Concern Universal, donors are seeking to go to scale with cookstoves and in July 2012 the Government of Malawi joined the Global Alliance for Clean Cookstoves, a UN-led public-private initiative that seeks to improve livelihoods, empower women and combat climate change by developing a thriving global market for clean and efficient household cooking solutions.

Case study 2 conducted May 2012

Responding to women's and men's energy needs - the Bondo micro-hydro power scheme

Focus group discussions in Mulanje district indicated that women and men have very different expectations of a micro-hydro power community scheme that will provide electricity to the village. Women's expectations related to social and community issues while men's expectations related to greater opportunities for income generation. Understanding these different expectations is critical to the successful design and implementation of effective energy access solutions.

Firewood sellers in Mulanje. These women leave for the forest at 4 a.m. returning to Mulanje town by 8.30 a.m. to sell the firewood. Each bundle sells for Kwacha 400 (approx. US $1.50); this compares with a daily wage on the local tea plantations of KW 250 (approx. US $1).

Case study 2 conducted May 2012

Responding to women's and men's energy needs - the Bondo micro-hydro power scheme

Women's expectations

- Safer deliveries at the health clinic at night.
- Retention of nurses and teachers in the area.
- The availability of equipment at health clinics and schools.
- That a maize milling machine be installed in the village eliminating the current 7.4 km walk to the nearest mill.
- That a market would open locally obviating the need to travel some distance.

Men's expectations

- Using electricity to weld broken bicycle frames.
- Recharging batteries.
- Refrigerators for groceries and bottle stalls.
- Opening shops in the village which would give easier access to supplies.

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Trinity College, 6 South Leinster Street, Dublin 2, Ireland
t +353 (0)1 661 8427 | **e** info@mrfcj.org | www.mrfcj.org