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## **ENERGY AND RURAL POVERTY REDUCTION**

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## **INTRODUCTION**

The progress of any nation today is measured in terms of its efforts towards the achievement of the Millennium Development Goals (MDGs), such as eradication of extreme poverty and hunger, achievement of universal primary education, promotion of gender equity and empowerment of women, reduction of child mortality, improvement of maternal health, combat of HIV/AIDS, malaria and other diseases, and insurance of environmental sustainability (UNDP, 2004; Bigg & Satterthwaite, 2005). Rural areas can better serve as indicator for measuring any progress made towards achieving these goals. This is justified by the fact that these areas represent the most neglected, the most marginalized and the most disfavoured by national development policies, and any improvements reaching them would mean a great overall achievement.

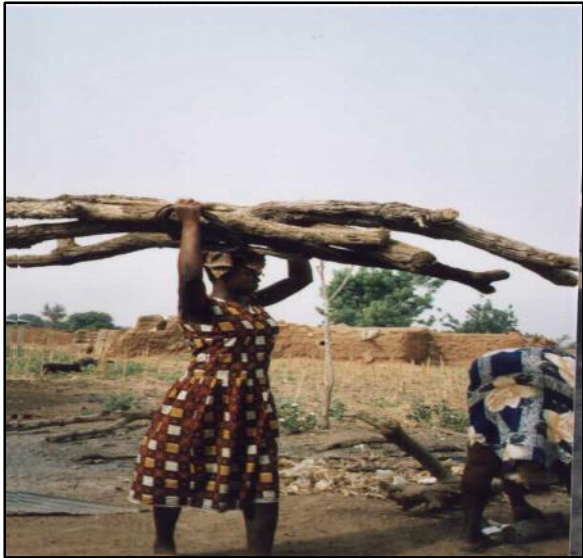
Unprecedented measures have been taken to commit the poorest nations of the world to develop policies and strategies geared towards full-scale poverty reduction, and this has culminated in the production of an avalanche of Poverty Reduction Strategy Papers (PRSPs). However, it has been noted that most of these papers give inadequate consideration to the MDGs and little attention to biomass-based technologies to satisfy rural energy needs.

This paper examines the relationship between biomass-based energy and income generation, food security, environmental protection and health, with a view to highlighting the weak link between the strategy of rural electrification and the goal of poverty reduction pursued by developing countries.

## **INCOME GENERATION**

Dependable energy is recognised as one of the factors that can make substantial contributions to the development of any community. Unfortunately, the poor—particularly in rural areas—depend almost exclusively on biomass fuel which is

not only inefficient but also increasingly scarce. This means that a lot of time is expended (mostly by the women!) in searching, harvesting, transporting and



cooking using this problematic source of energy. Much of the time spent on the above survival activities could be invested in more productive, income generating activities to address the escalating problem of rural poverty.

In their effort to address the rural energy crisis, most of the 30 PRSPs studied by Akong (2005) give high priority to grid electrification, with the less expensive, biomass-based technologies like improved biomass stoves, improved (including improved ovens for fish smoking, baking and cocoa drying, respectively, that share the key principle—heat retention) biogas, and gasification receiving the least attention. The question here is how many rural people can pay electricity bills and bear other associated costs? Or is the



electricity going to be highly subsidised, if not totally free? It is obvious that the option of electricity is (relatively) premature at this stage, as it might instead add more stress on rural people by increasing their expenditures and making them even poorer. In this

connection, it would be logical to start by introducing improved biomass stoves and then progress gradually through the development of other biomass-based technologies and finally to considering the grid electrification, as the rural economy eventually improves sufficiently enough to accommodate and sustain the latter costly option.

## FOOD SECURITY

The link between energy and food security seems not to be immediately and clearly visible. It is no surprise, therefore, that of all the PRSPs that Akong (2005) studied, only 8 highlighted the link between biomass use and food security while 16 make no reference to it at all. Burkina Faso's strategy of rural electrification is to encourage the use of energy in the production, processing and conservation of agricultural products, among other things. Ethiopia aims to



guarantee food security by encouraging initiatives that reduce the burden of female rural farmers having to transport goods and produce to and from the market, with a view particularly to making them more efficient and more productive. Improved biomass stoves and other biomass-based technologies provide an immediately accessible and sustainable means of addressing the

problem of female labour in this connection. It is generally noted that the rural African woman plays a leading role in the production and processing of food for the family, and it is therefore of crucial importance to increase her access to more sustainable and dependable energy sources.

## ENVIRONMENTAL PROTECTION

The continuous use of biomass energy in the poor rural areas has implications for the environment, especially in regard to deforestation and air pollution. Many authors on the environment attribute the gradual but steady disappearance of the African rainforests to the increasing demand and use of fuel wood, although agricultural and logging activities take the larger share of

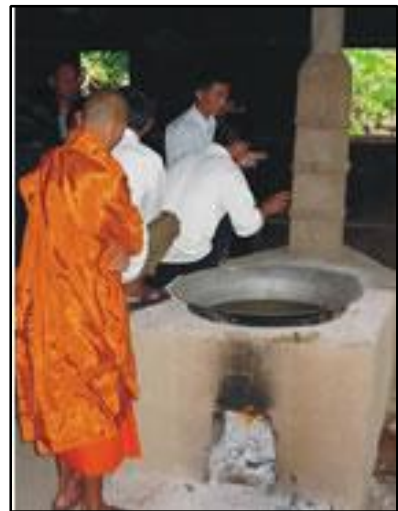
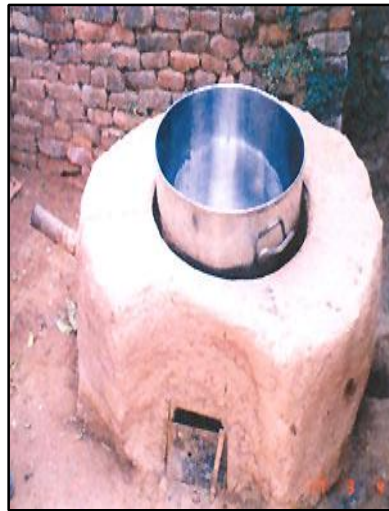


the blame. Over 18 PRSPs have established the link between biomass use and environmental degradation, but the emphasis is on deforestation, desertification, and soil erosion and fertility. However, on the issue of climate change, only 3 PRSPs mention how this is linked to biomass use (Akong, 2005). The use of improved biomass stoves and other biomass-based

technologies is strongly recommended for their energy efficiency and heat conservation potentials and for the resultant reduction in air pollution.

## HEALTH

Rural poverty is often accentuated by regular health-related expenditures incurred by most households. The frequent illnesses are linked not only to poor sanitation but also to biomass use with the concomitant indoor air pollution.



The use of biomass fuel for cooking affects not only the health of the woman whose customary role is to ensure the availability of food for the family but also of the children who often sit around in the kitchen and inhale the smoke as they often have to wait for many hours for the food to get ready. As has been noted above, using improved biomass stoves and other biomass-based technologies would not only help reduce indoor air pollution and the attendant health problems but also significantly cut down the cooking time by virtue of the heat conserving capacity of these new technologies. According to Akong (2005), energy-health relationship received little attention in the PRSPs, and 18 do not make mention of this important aspect at all. Burundi's PRSP highlights the connection between electricity access and health only with respect to the preservation of certain kinds of medication, maintenance of medical equipment and insurance of proper hygiene.

## **CONCLUSION**

It is noted that dependable energy is critical to economic development just as clean energy is essential for good health. However, energy options for rural areas should also take into serious consideration the costs and the financial capabilities of the rural beneficiaries. For example, the option of grid electrification advocated by many PRSPs may need to be positioned in some rural areas in favour of improved biomass stoves (including improved ovens for various uses) and other biomass-based technologies when the bills and associated costs cannot be defrayed without an unnecessary stress on the rural people. Also, as we have seen, there is an obvious link between improved biomass stoves and environmental protection, health and poverty reduction. This new technology reduces the energy related impact of rural communities on the environment through decreased use of biomass and reduced air pollution,

which in turn minimise the associated health hazards. By the same token, the energy efficiency and heat conserving capacity of the technology save a lot of time that could be usefully put into more income generating activities to ameliorate the poverty situation.

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## **PAID-WA IN DEVELOPMENT AND POVERTY REDUCTION**

The Pan African Institute for Development – West Africa (PAID-WA), situated in Buea, Cameroon, is one of four regional institutes in Africa that are dedicated to the development of the continent. It has been an active actor in the domain of development since 1969. With a core staff drawn from a variety of cultural, national and disciplinary backgrounds, and supported by a powerful network of external consultants from universities and the private sector, PAID-WA serves as a clearinghouse for highly skilled, experienced and dedicated

individuals who are available at all times to answer to questions of development and other related domains.

The issue of energy and poverty reduction discussed in this paper is by no means unrelated to what PAID-WA can do and has been doing. The institution has a good track record in the area of community sensitisation, mobilisation and capacity building which are significantly important in tackling the issue of biomass use and biomass-based technology. The development and transfer of this new technology to the rural communities is an area that falls squarely within the competence of this great institution.

### **DISCLAIMER**

The views and opinions expressed in this paper are purely those of the author and are by no means a reflection of those of the Pan African Institute for Development – West Africa.

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