

Full Length Research Paper

The national biomass energy policy communication campaigns for community access to sustainable renewable energy in east Africa

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Effective communication campaigns strategy for biomass energy innovations can create, raise, sustain and develop public awareness, knowledge, attitudes, perceptions and behaviour towards early adoption of biomass energy innovations in the east African lake victoria basin. This is an audience survey of a national biomass energy policy communication campaigns in Uganda (Wakiso district), results indicate that some efforts have been made to raise public awareness and knowledge of renewable biomass energy policy communications strategy should be intensified to raise public awareness for behaviour change among the target rural and urban households, institutions, firms and communities. So far, the current campaigns have been quite limited, sporadic and less participatory, with limited impacts on the target audiences. East African community member states should develop effective policy communications campaigns strategy for better family incomes, health, well-being, and welfare in the sub-region.

Key words: Public awareness, communication campaigns, energy policy, community welfare.

INTRODUCTION

Uganda's renewable energy policy faces low public awareness about the efficacy and potency of renewable energy technologies, their multiple potentials, technical limitations and constraints are generally underestimated (MEMD, 2002). The main obstacles to sustainable energy capacity building in the sub-Saharan Africa are, lack of awareness and communication difficulties among the agencies, institutions, government departments, NGOs and community groups involved in the capacity-building activity (ICSU, 2007). The proposed "Global environmental change-including climate change and adaptation- in sub-saharan Africa," research project plans to tackle the crucial challenges of building capacity for effective communication between science, technology and the society (ICSU, 2008).

The national awareness campaigns aim to publicize the change in policy and the opportunities that arise from it from the private sector, local authorities and communities

(MEMD, 2001). Climate change in Uganda is expected to significantly aggravate water stress, change growing seasons, reduce food security, increase impacts from extreme weather conditions and heighten the incidents of diseases (NEMA, 2004). Since the second Rio de Janeiro conference, a number of energy projects have been implemented in the region with varying degrees of success but the general sustainable energy project activity hopes to provide information and knowledge for enhanced supply and access to affordable energy in both rural and urban areas (ICSU, 2007).

Public awareness campaigns are among the measures that are necessary to support the implementation of the wood energy policy in Uganda (Simonis, 1999). Since biomass energy accounts for 98% of the energy used in Uganda (NEMA, 2004), there is an urgent need to promote fuel-saving stoves and tree growing to meet fuel wood needs (Migunga et al., 2007). Information, education and public awareness on climate change issues is in conformity with the national constitutional provision on the right of access to information by all (NEMA, 1995).

One of the main objectives of the national non-formal

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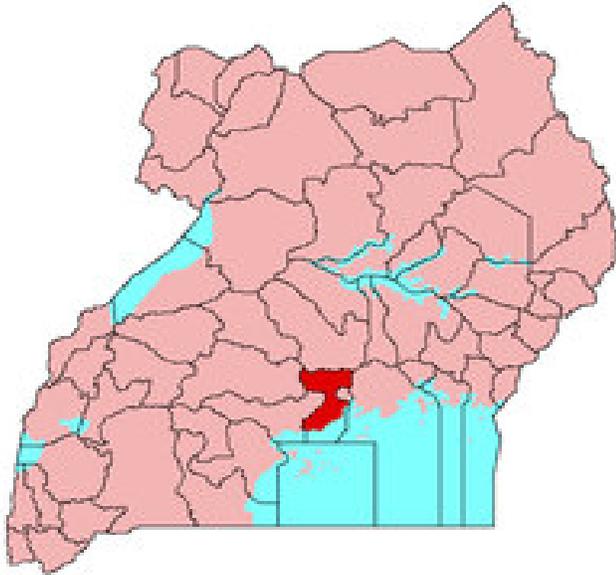


Figure 1. Shows Map of Uganda indicating Wakiso district (red shaded area).

community environmental education policy in Uganda is to develop awareness, knowledge, attitudes and skills needed to take full advantage of the environment for sustainable development (Okaka, 2002). The general objective of the proposed “sustainable energy project in sub-Saharan Africa aims to provide information and knowledge to enhance biomass energy resources supply and increased access to affordable energy options in both rural and urban areas households, institutions, industries, and firms for sustainable social, cultural, economic, environmental and political development (ICSU, 2007). Timely information flow with well crafted content has a stimulating role in enhancing biomass energy demand, supply and management options. There is a widening gap between advancing scientific knowledge and technology and the society’s ability to capture and use them properly.

Better communication of science and technology innovations to the public will help to transcend the diversity of experiences and enable constructive dialogue about the risks and benefits of scientific discoveries and technologies. Closing knowledge gaps will require putting in place national strategies for science and technology development that are linked to effective policies (ICSU, 2008). The national energy industries in Uganda and the rest of the east African countries are characterised by weak national planning, institutions, research and development activities, lack of co-ordination and information sharing. This affects various projects, government institutions and the private sector, information on energy supply and demand, and the national biomass energy potential.

There is inefficient production and use of biomass energy nationally. This has resulted in adverse effects on the environment and the health of biomass users in the coun-

try. The major source of the blame can be attributed to low public awareness about the efficacy and potency of renewable energy technologies in the economy (MEMD, 2002). The national awareness campaigns affect policy changes on rural electrification projects and programmes in Uganda (MEMD, 2001). Public awareness campaigns are among the measures that are being developed to support wood energy policy implementation in Uganda (Simonis, 1999).

Studies of communication strategies for energy policy leaders found high demand levels for radio, TV, libraries, radio, books, reports, NGOs, newspapers, magazines, professional journals, internet, colleagues, telephones and report reading (Miller, 1985, 1988; Miller and Prewitt, 1982) as the major sources of information on climate change and global warming. Awareness and knowledge of an innovation can be best disseminated by the mass media and there are 5 stages of adoption process: awareness, interest, evaluation, trial and adoption of the decision (Rogers, 1995).

Communications models or theories are yardsticks, which guide the campaign implementers or evaluators on what to do and at what pace. The conclusion is based on your field observation and what was observed by others or theory.

Public awareness campaign is a vital tool for creating, raising, developing and sustaining awareness and education for positive behaviour change in favour of sustainable tourism development, effective policy, mutual cross-cultural communication and interactions both national and intercontinental dimensions. Public campaigns are the bedrocks for strategic policy and decision-making, a sound investment development move, a major technology transfer issue and an environmental justice imperative which, calls for the knowledge creation and development, raising and sustaining public awareness and education across Africa and internationally. Effective campaigns are participatory at all levels, based on evaluations by all the key stakeholders, gender sensitive and are driven by relevant communications theories or models.

METHODS

Both quantitative and qualitative survey methods employed questionnaire based on Likert scale (5 point) were used in the study. Wakiso district which is located in the central part of Uganda has almost encircled Kampala district, the capital city of Uganda as shown in Figure 1.

Wakiso is divided into 2 counties (Busiro and Kyadondo) with one municipality at Entebbe. Wakiso district is a district in Uganda that encircles Kampala, Uganda’s capital city. Wakiso has a total area of 2,704 km². Its population was 957,280 (2002 census), making it the second-most populated district in Uganda. The current (2009) district population estimate is just over 1.4 million. Where Figure 2 shows survey sites in Wakiso District, Figure 3 Shows Survey Respondents in Education Levels.

The audiences of various income, gender, age, education, occupation and employment groups were interviewed or involved in the study as shown in Figure 4 and 5.

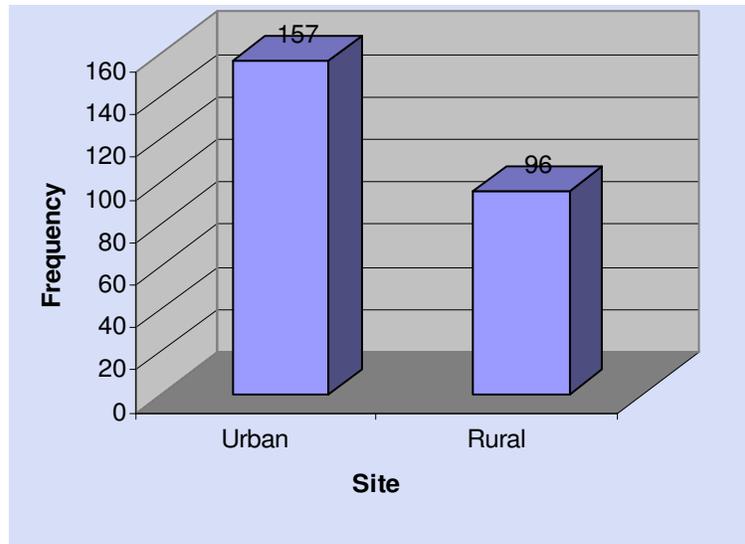


Figure 2. Represents the survey sites in wakiso district (Uganda).

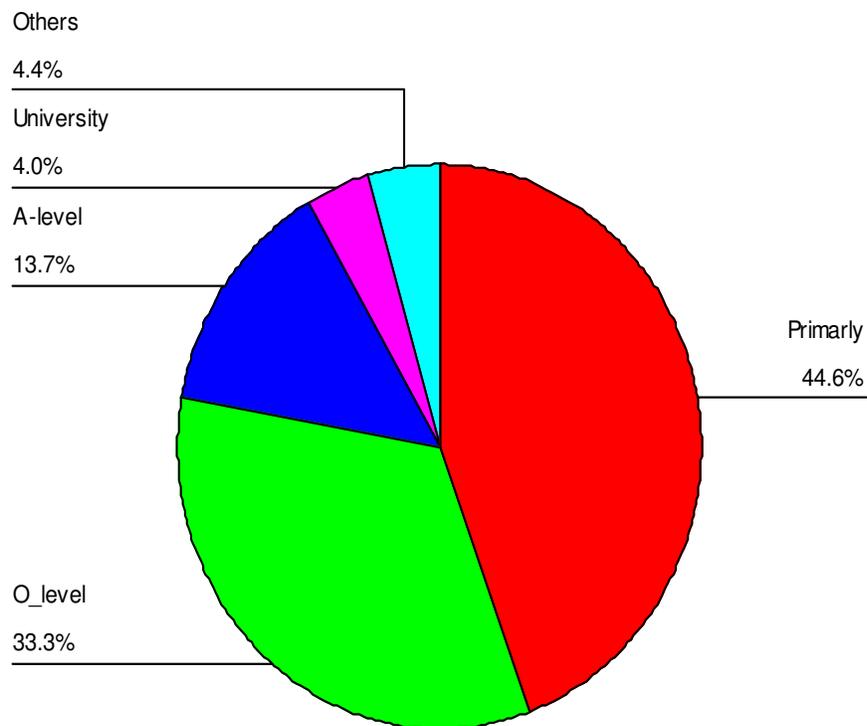


Figure 3. Shows survey respondents education levels in Wakiso district (Uganda).

The objectives of the current VicRes network project are to identify the types of biomass energy sources available, assess the types of biomass energy technology innovations in use, their limitations and the end-users aspirations for their modifications and enhancement, review the unique socio-economic demographics of the biomass energy consumers and their related indicative consumption variables.

Data from this study should help to inform the research results dissemination process in the east African lake Victoria basin.

RESULTS

The findings indicate that the preferred communication media for the delivery of public communication campaigns to the audiences were electronic media (40.7%), popular media (30.6%), print media (4.6%) and 24.1% preferred multimedia formats. Half of the audiences agreed that the energy conservation and management

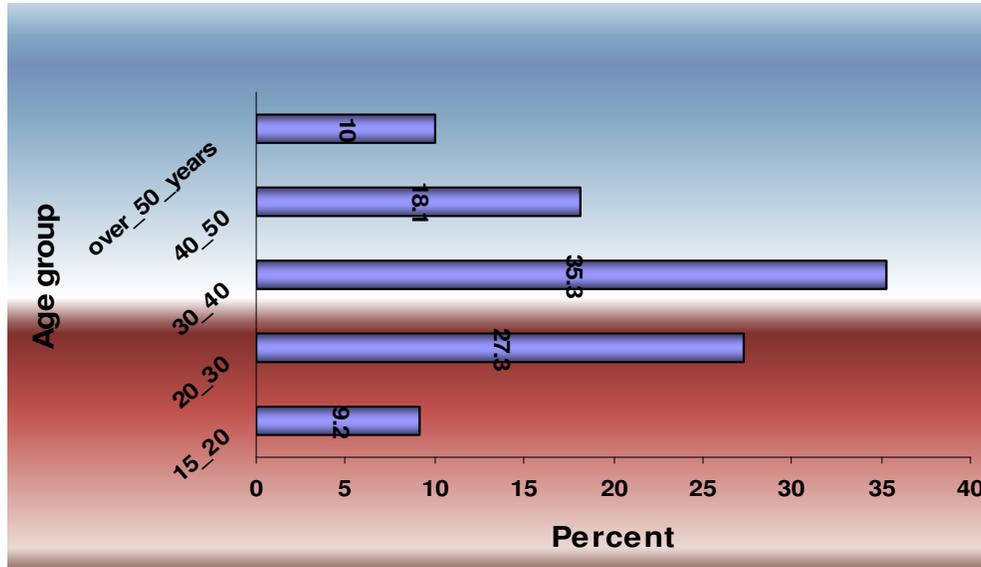


Figure 4. Shows survey respondents by age group in Wakiso district (Uganda).

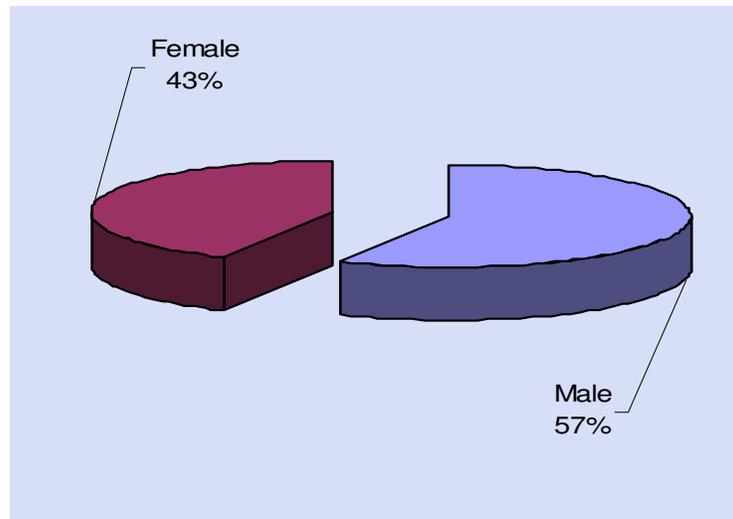


Figure 5. Shows survey respondents by gender in Wakiso district (Uganda).

information they encountered was easy to understand. Just over half (51.9%) did not think the campaign messages which they have encountered had increased their knowledge of energy saving values, 8.5% had no opinion, while 10% strongly disagreed. When asked whether the current national energy policy awareness campaigns strategy should be improved, the majority of the respondents (62%) strongly agreed and 31% agreed.

Data indicate that there was an overwhelming majority (92%) approval of the need for more improvements in the present renewable energy awareness campaigns on policy in the country. The study found that a huge majority

(90%) of the target audiences were reportedly willing to participate in the energy policy communication campaign strategy if they asked to do so in sharp contrast with a small group (10%) of the locals who had no opinion on the issue. The campaign messages did not reach half (50%) of the respondents who reported that they had never been exposed to the campaigns messages, fewer than a half (37%) of the intended audiences encountered the messages, and 13% of the locals had no opinion on message reach based on the awareness campaign on renewable energy innovations (technologies) in the district.

Findings show that over 50% of the locals were not aware of any organization or group involved in energy saving campaigns. However, less than half (47%) of the respondents reported that they were aware of at least some group or organization involved in the energy technology campaigns. The main findings indicated that there were variations in the choices of media communication format preferred for the delivery of renewable energy public awareness campaigns among the audiences as follows electronic media (64.8%), popular media (30.6%), and print media (4.6%). The majority of the respondents preferred the electronic form of media.

The majority (51.9%) said that the campaign messages did not increase their knowledge on the available alternative biomass energy saving technologies in the country. This was followed by 18.5% who had no opinion and another 10% who also strongly disagreed. The majority of the respondents (93%) suggested that the policy awareness campaigns should be improved. Most residents (90%) were willing to participate in the current renewable policy awareness campaigns if contacted, but 10% had no opinion on the issue. Half (50%) of the audiences were not aware of any organizations or groups involved in biomass energy campaigns in the district. Less than half (47%) of the audiences were aware of some groups or agencies involved in the renewable energy campaigns.

DISCUSSION

Results show that the campaign strategy employed had some influence as it was able to raise public awareness, increase knowledge and involve some members of the target audiences. Public (Okaka, 2006) awareness campaigns are vital for policy implementers, policy and decision makers in the country. Development of a communications campaign should follow a basic process that involves setting up a realistic goal, assessing the audience, selecting appropriate media and crafting a message that pre-tests successfully with the target audience (Day and Monroe, 1999). The goal, the audience, the media, the strategy and the messages interact with each other to create a successful public awareness campaign.

Knowledge of innovations in biomass supply, demand and management is critical for best practice or behaviour change in communities, households, institutions, and industries. Diffusion of innovations (new ideas) process is the spread of a new idea from its source of invention or creation to its ultimate users or adopters characterised by awareness, interest, evaluation, trial and adoption (Rogers, 1995). Adoption process occurs to an individual whereas, the diffusion process occurs to a group or a society as a whole.

This could be a result of "ignoring" development communication theory or model whose focus is participatory approach involving the campaign audiences. There was a loud call by the communities for improvement on the current campaigns strategy to create, raise and develop

awareness and knowledge about the relevant RETs available in the energy industry. This is a huge challenge which should be addressed. Part of the problem with the public communication campaign is lack of awareness among the campaign practitioners, evaluators and their sponsors about what methods are appropriate and available for effective public communication campaign (Coffman, 2002).

The current socio-economic status of communities indicate high poverty level in the study areas; culture which encourages huge mount, type and frequency of food cooked and type of energy used to cook, age structure determines the type and kind of food to be cooked, the common activities in the low income groups includes maize roasting, chips frying, roasting. These activities mostly use charcoal and firewood. The availability and accessibility of biomass energy resources in these areas influence the choice for their use. There is unprecedented demand increase of biomass energy across Uganda.

Communication campaigns evaluators should have communications background, and since most of them do not have, they would not encounter outcomes like media exposure in measures like media impressions in their campaign evaluation work. Studies show that better results or outcomes could be achieved with a combined multimedia and inter-personal communication strategy. Gender balanced and participatory message design approach is recommended. Awareness campaigners love practical gender equality and women's empowerment for sustainable biomass energy management.

Public communication campaign should identify, assess, analyze, and evaluate the effectiveness of the communications campaigns strategies for biomass energy conservation and management policy in Uganda. A professionally crafted public campaign puts the intended target audience at the centre of the designs, Pretesting, delivery and evaluation of the campaigns effectiveness of any biomass campaign strategy. Mody (2002) found out that designing messages for development communication must allow audience participation.

CONCLUSION

The role of public communications campaigns is vital for effective dissemination of renewable energy technology innovations to the urban and rural end users in Africa. Lack of awareness about the existence of alternative biomass resources and technologies for energy conservation among stakeholders was a common issue. More time should be spent in the field to create and raise awareness and knowledge of the subject. There is very low or lack of public awareness about renewable energy policy and legal framework, low investments and lack of credit facilities for biomass energy dealers, inefficient technologies and slow rate of diffusion of innovations due to cultural and economic factors, increasing environmental degradation due to wood energy crisis in East Africa;

research and development activities in renewable energy are grossly under funded in the sub-region.

There continues to be an increasing over-reliance on biomass energy for household, institutional, cottage Industry, and community needs in both urban and rural areas. Biomass energy products and services are mainly used for cooking, boiling water, brewing traditional beer and selling for income generation among poor households. Studies confirm that some of the environmental impacts include, forest degradation, indoor air pollution, air pollution related health hazards, escalating poverty, domestic violence against women, climate change and global warming effects due to accumulation of greenhouse gas emissions, and the vicious cycle of land degradation resulting in increased incidents of landslides, flooding, and acute wood fuels deficiency. Public awareness campaigns are based on the relevant communication theories or models, which can be replicated across the African continent.

The mass media is the most effective and efficient means of disseminating biomass energy policy innovations. There is urgent need for capacity building for effective biomass energy communication strategy for climate change and adaptation in east Africa. The way forward is to design and deliver participatory public awareness and ease communication barriers among the agencies, institutions, government departments, non-governmental organizations and community based organisations involved in public awareness campaigns capacity-building efforts in the Lake Victoria basin.

REFERENCE

- Coffman J (2002). Public Communication Campaign Evaluation: An Environmental Scan of Challenges, Criticisms, Practice, and Opportunities, Harvard pp. 1-12.
- Day AB, Monroe C (Eds.) (1999). Environmental Education and Communication for Sustainable World. Handbook for International Practitioners. GreenCom.Washington.
- Government of Uganda (2001). Rural Electrification Strategy and Plan-2001-2010. Ministry of Energy and Mineral Development. Kampala.
- International Council for Science Regional Office for Africa. (ICSU). (2008). Science Plan: Global Environmental Change (including Climate Change and Adaptation) in sub-Saharan Africa. Pretoria, South Africa.
- International Council for Science Regional Office for Africa. (ICSU). (2007). Science Plan: Sustainable Energy in sub-Saharan Africa. Pretoria, South Africa.
- Jon DM, Damon B (1985, 1988). Communication Strategies for Meeting the Information Needs of Science and Energy Policy. A Report to the National Science Foundation. DeKalb, IL: Northern Illinois University, Public Opinion Laboratory.
- Migunga GA, Ngaira JW, Mbego OJ, Okaka W (2007). Annual VicRes Report 2005-2006. Kenya, Tanzania, Uganda. IUCEA- VicRes. Kampala, Uganda.
- Ministry of Energy and Mineral Development, Uganda [MEMD] (2002). The Energy Policy for Uganda. Printing & Publishing Corporation. Kampala.
- Ministry of Natural Resources (1995). National Environment Management Policy for Uganda. Government of Uganda. Kampala.
- Mody B (2002). Designing Messages for Development Communication: Audience Participation Based Approach. Sage publications: London. p. 199.
- National Environment Management Agency, Uganda (NEMA) (2004/2005). State of the Environment Report for Uganda 2004/2005. Government of Uganda, Kampala.
- National Environment Management Authority, Uganda (NEMA) (1995). The National Environment Statute 1995 (No.4 of 1995). Hoonkab Printers, Kampala.
- Okaka W (2002). An Environmental Education Program: Uganda Polytechnic Kyambogo. Taylor and Francis. USA, An Int. J. Environ. Edu. Communicat. 1: 45-52.
- Okaka W (2006). Infusing Key Ethical and Gender Issues in Developing Public Communications Campaigns for Sustainable Development in Africa. Retrieved from website: www.dev-ethics-uganda.org/Wilson%20Okaka.pdf.
- Rogers EM (1995). Diffusion of Innovations. The Free Press. New York.
- Simonis P. (19995). Fuel wood: The Forgotten Energy Crisis. Energy Watch Newsletter Nov.1999 3(4). Uganda Renewable Energy Association [UREA] Kampala.