



DEVELOPMENT AND ENERGY IN AFRICA (DEA)



Participants of the second national workshop in Tanzania

TANZANIA SECOND NATIONAL WORKSHOP PROCEEDING HELD ON 26TH NOVEMBER 2006 AT PALM BEACH HOTEL, DAR- ES -SALAAM.

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Acknowledgements

The Tanzania Traditional Energy Development and Environment Conservation Organization (TaTEDO) acknowledges with thanks the valuable contribution of participants to the “DEA National Second Workshop held on 26th November 2006, at Palm Beach Hotel in Dar es Salaam Tanzania.

Special thanks to the Riso National Laboratory of Denmark and Energy Center (ECN) of Netherlands (project Coordinators) Particularly Dr. Gordon Mackenzie for their decision to work with TaTEDO in implementing the Development and Energy in Africa (DEA) under which this workshop was organized. Many thanks go to the case study researchers, Ms. Napendaeli Sem, Mr. Emmanuel Michael and Ms. Detta Merinyo who conducted the studies and made their presentations on the findings for their good work. We thank chairman of the workshop for facilitation during presentation and plenary sessions out of which intellectual ideas and recommendations from participants were expressed.

The generous financial support from the EC COOPENER programme which enabled implementation of the project activities and the workshop itself is highly appreciated. Appreciation also goes to the Palm Beach Hotel management in Dar es Salaam for all arrangements and logistics in accommodating the workshop.

Lastly, we would like to thank all those, who either directly or indirectly contributed towards the success of the workshop. We are greatly indebted to them all.

TaTEDO
26th November 2006

Abbreviations

<i>ECN</i>	<i>Energy Centre of Netherlands</i>
<i>DEA</i>	<i>Development and Energy in Africa</i>
<i>TaTEDO</i>	<i>Tanzania Traditional Energy Development and Environment Organization</i>
<i>CSDI</i>	<i>Center for Sustainable Development Initiatives</i>
<i>ADF</i>	<i>African Development Fund</i>
<i>NGO</i>	<i>Non-Governmental Organization</i>
<i>RETs</i>	<i>Renewable Energy Technologies</i>
<i>CEEZ</i>	<i>Centre of Energy Environment and Engineering in Zambia</i>
<i>EECG</i>	<i>Energy, Environment, Computer and Geophysical Applications Group</i>
<i>NSGRP</i>	<i>National Strategy for Growth and Reduction of Poverty</i>
<i>EC</i>	<i>European Commission</i>
<i>PAF</i>	<i>Preliminary Assessment Framework</i>
<i>AF</i>	<i>Assessment Framework</i>

1.0 INTRODUCTION

The Development and Energy for Africa Project second national workshop was a follow up workshop after the first one which was conducted in September 2006 to introduce the project to national stakeholders. This second national workshop took place on 26th October 2006 at Palm Beach Hotel in Dar es Salaam, Tanzania. Organizers of this workshop were TaTEDO (a national center for DEA project in Tanzania) in collaboration with Riso Laboratory of Denmark and ECN of Netherlands (overall coordinators of DEA project).

The DEA second national workshop was organized as part of the DEA overall objective to engage in a dialogue with energy policy makers and other stakeholders in order to ensure that energy policy is better informed to take into account the complex linkages between energy interventions, social and economic development, and that energy interventions are better designed and contribute to the real development needs especially poverty alleviation and income generation thereby achieving the Millennium Development Goals..

2.0 WORKSHOP OBJECTIVES

The major objective of the workshop was to share and discuss a case study findings used to test ***DEA ASSESSMENT FRAMEWORK*** and discuss on how could an Assessment Framework like, which developed by DEA project used to improve future energy interventions.

Specific objectives were:

- To update the participants on the status of project implementation,
- To present and discuss the proposed Assessment Framework (AF) for energy interventions,
- To describe the findings of case studies carried out to test the AF and discuss on how the AF seen to be applicable to different types of intervention and technologies.
- To discuss and agree on how the AF would be improved to make it more operational and relevant
- To gather evidence and ideas on how impact analysis like DEA can feed back the policy/project cycle.

3.0 BACKGROUND INFORMATION

The Development and Energy in Africa (DEA) project under which this workshop was organized is a two and half year project from May 2005 to November 2007. The project is under EC COOPENER programme and it is implemented by Riso National Laboratory of Denmark (Coordinator) and Energy Center (ECN) of Netherlands. The project is being implemented in six Africa countries in-collaboration with six local based institutions namely; EEGC of Botswana, CEEZ of Zambia, TaTEDO of Tanzania, MFC of Mali, KITE Ghana and ENDA of Senegal. The principal aims of the project are: -

- (i) to identify and examine the developmental impacts of the energy innovations and actions linked to improving energy access and poverty alleviation;
- (ii) to use the information obtained to improve on-going and future energy interventions through the energy policy and institutions in the countries concerned.

Specifically, the project focus on examining the energy interventions in the six African participating countries with respect to development impact and methodological Assessment Framework (AF) to feed results back into inception and design of new projects. The project targets the national energy and development policy makers and planners initially in the participating countries, but with the view to wider application in sub-Saharan Africa.

Implementation of the project activities started with initial context and policy analysis, which involves consultations, organizing workshop, literature review and compilation of catalogue of energy interventions followed by development of Preliminary Assessment Framework (PAF). The PAF was applied into case studies, which were identified in each project participating countries for the purpose of testing it and soliciting further inputs to improve it and make it more relevant for wider application. It was under these perspectives this second national workshop was organized in order to share results of such case studies with the national level stakeholders and gather inputs for refining the proposed PAF.

In Tanzania DEA implementing center is Tanzania Traditional Energy Development and Environment Organization (TaTEDO and the national focal point is at the Ministry of Energy and Minerals (MEM). TaTEDO is a renewable/rural energy national development NGO based in Dar es Salaam, Tanzania, with more than twelve years experience in the energy development issues. TaTEDO also develops and implements strategies for mitigating environmentally adverse effects of energy production and use. TaTEDO is composed of individuals, professionals, artisans, farmers, Community Based Organizations (CBO) and enterprises involved in the development and promotion of renewable energy technologies and services. The organization was registered in 1990 as a national non-governmental non-profit sharing organization for spearheading the development of renewable energy technologies and services while conserving environment.

Mission

TaTEDO's mission is to develop and promote rational use of renewable energy technologies (RETs) and environmentally sound practices through delivery of relevant information, knowledge and skills geared towards socio-economic development of communities.

Goals.

- To improve quality of life of Tanzanians by contributing to availability of improved and sustainable energy services, employment and income generating opportunities, which are essential for poverty reduction;
- To reduce environmental degradation resulting from increased use of wood and fossil fuels;
- To contribute in reducing the country's dependence on imported energy

4.0 WORKSHOP PARTICIPANTS

Attendances of the workshop were fourteen out of the eighteen invited participants from different development sectors (see annex II). The criteria used to select the participants include (i) development sectors involved directly with energy and poverty reduction including those which attended the first national workshop (to maintain continuity of discussion) and (ii) those who were directly involved with the case studies.

Policy makers and planners of six ministries; Ministry of Energy and Minerals, Health, Education, Planning and economic empowerment, Agriculture and food security were represented. Other participants include representatives from UNDP, TaTEDO, CSDI/ADF and Risø Laboratory of Denmark. List of workshop participants form annex I of this document.

5.0 WORKSHOP PROGRAMME

Prior getting into the workshop programme participants had time to know each other while taking a cup of tea/coffee and preparing themselves for the workshop programme events. It was agreed to select workshop chairperson and unanimously the votes went to Ministry of Energy and Minerals representative Mr. Paul Kiwele.

The workshop programme, which as well form annex II of this document was in three sessions namely introduction part, presentations and plenary discussions. The programme was set to provide room for continuous discussion and inputs.

6.0 WELCOME REMARKS

Ms. Gisela Ngoo from national center for DEA project (TaTEDO) gave the welcoming remarks. The welcome remarks started by salutation to the participants. The following is the content of the rest of the remarks:-

On behalf of the organizers of this workshop (TaTEDO and RISØ national Laboratory of Denmark), I would like to pass to you all, my sincere gratitudes for accepting our invitations and participate in the Second National Workshop on Development and Energy in Africa.

I warmly welcome you all to the one-day national workshop in which you will have opportunity to discuss issues around development and energy. The importance of this workshop cannot be over-emphasized, as energy is a bridge for attaining sustainable development.

I would like to convey my appreciation for the timing of this workshop, which coincides with the period of major energy crisis in our country. The country is currently on power rationing and load shedding, which was also experienced in 1992, 1994, 1997, and 2000. The cost of load shedding to our economy is so high. According to the recent information from the Ministry of Energy and Minerals, to every unit of electricity shed, the associated loss to the economy ranges between US\$ 1.1 to US\$ 2.4 per unit. A total of 111,858,566 units have been shed between February and July 2006. This amounts to an average loss of US\$144.86 million to the economy.

As you might be aware, this workshop is organized under DEA project through EC COOPENER programme coordinated by RISØ National Laboratory - Denmark and Energy Centre of the Netherlands (ECN) and is implemented jointly with six African centres. The aim of the project is to identify and examine the development impacts of energy innovations and use information obtained to improve ongoing and future energy interventions.

This workshop brings together stakeholders from almost the same sectors, which participated in the first workshop in order to maintain continuity of the discussions on progress of the project activities.

The objective of this workshop is to share and discuss on how the assessment frameworks like DEA could be used to improve future energy interventions thereby realizing the intended development objectives. It is our hope that knowledge and experience from this workshop will link very well with the development objectives of the National Strategy for Growth and Reduction of Poverty (NGSRP) and Millennium Development Goals (MDGs).

Ladies and Gentlemen, let us freely share our views and contribute our experiences based on the application of energy in our respective sectors as represented in this workshop and it is our hope we will come up with measures for supplementing and improving the results and impact of this project in Tanzania

I would like to conclude by passing our sincere gratitude to the EC, Danish and the Netherlands Governments through RISØ National Laboratory, led by Dr Gordon Mackenzie for the financial support to the DEA Project as whole and for sponsoring this workshop.

Finally, I wish you success in the workshop deliberations ahead; I also hope you will all enjoy the day.

Thank you for your attention.

7.0 WORKSHOP PROCEEDINGS

7.1 Brief Overview of DEA

An overview of DEA project, implementation status and methodologies were presented by project coordinator Dr. Gordon Mackenzie. The presenter used several diagrams to illustrate the link between energy intervention and the development impacts and how can the information on energy interventions influence policy and project design.

Dr. Gordon highlighted that work packages 1-6 (refer as project activities) have already been implemented since the start of the project. Specifically activities which have already been implemented are first national workshops and consultations to introduce the project to different policy makers and stakeholders, Other activities include compilation of catalogue of energy interventions, Literature review and developing Preliminary Assessment Framework (PAF) which involves classifying linkages, designing procedures, identifying indicators. Thereafter the PAF was tested in the selected case studies and the findings presented in a second national workshop in each participating country.

The presenter went ahead describing the DEA AF as a step-by-step list or procedure of how to carry out an assessment of an energy intervention or project in order to obtain information about developmental impacts. The AF conceptualises on what happened after injecting the INPUTS from the energy interventions i.e. what are the OUTPUT-OUTCOME-IMPACTS. For more detail information on the AF see slides on annex IV of this document.

The presentation outlined the procedures used to select case studies that were used to test the DEA AF as follows: -

Global criteria:

- Representative: the case studies should span a number of different types of interventions in order to “test” or develop the AF
- Coverage of key sectors and energy project types

Local criteria

- National relevance
- Should be achievable, data available for both the energy intervention and potential impacts
- Baseline available
- Availability of assessment tool

List of projects selected as case studies were presented as shown in annex III of this document.

Plenary discussion was as follows:-

Participants wanted to know differences between logical framework and the proposed AF. The presenter informed that the AF is similar to Logical Framework used in planning of most projects but in this case specific elements, indicators, units of measurements, source of information and methods to be applied is determined in each stage and used to assess results at each stage.

The issue on whether results of one case study per country are adequate for testing the AF immersed. Discussion on this issue lead to agreement that such results may be inadequate but the room is open for students and other interested stakeholders to use AF. It was informed that in some countries e.g. in Tanzania two case studies were conducted.

The importance of having baseline information was discussed and participants show they worry on the accuracy of some baseline information, which may be used during the project design. Some project may lack some baseline information but some information may be obtained through interviewing people while conducting the study although this method depends on people's memory, which may have high level of uncertainty.

8.0 PRESENTATIONS OF THE CASES STUDIES

8.1 Case Study Findings on use of Renewable Energy Technologies for Water Pumping for Irrigation

The case study overview, methodology, findings, assessment framework, conclusion and recommendations were presented by the two researchers Napendaeli Semu and Emmanuel Michael. The study did assess two irrigation projects in Ukerewe District, Mwanza using wind (located in Nakatunguru village) and solar (in Namagubo village) to pump water from Lake Victoria. The projects were funded by UNDP and executed by Ministry of Agriculture and food security.

The presenter highlighted on methods used for data collection as review of project documents including procedures and guidelines, which were developed at FRINGILLA, Zambia during the Second DEA workshop, Interview and structured questionnaire. Data were analyzed by using Ms Access software.

The case study findings shows that the project did operate for three months only which limited expected outputs so do the outcomes and impacts. However, the presenters outlined several findings accrued due to the use of water (outputs) for such short period. The outcomes were presented to be:

- Increased awareness and knowledge on the use of modern energy for productive activities and better farming methods (horticulture, etc.), managing and maintaining wind /solar irrigation facility
- Good leadership of groups
- Short term increased productivity due to increase in farm sizes, crop varieties and quantity
- Strengthening community relations
- Increased crop productivity
- Increased access to water

It was difficult to show the real impact due to this intervention although the presenter tried to link the outcomes with reduced income poverty, employment creation, environmental conservation, Time saving and reduced women drudgery.



Researcher presenting a case study of water pumping findings to the participants

The researchers used the findings to input the AF and suggesting areas for improvements as follows:-

Plenary Discussions

Plenary Discussion on this presentation raised the following issues:-

Project design: Participants advised that designing of project should include all necessary information especially baseline information.

The AF should be able to provide information on the project stakeholders and show their responsibilities.

At the input level of the AF have crucial elements that need to explicitly be outlined so as to make the AF useful for project designing. Therefore the AF should define such elements to make it more effective. However, although it was difficult to clearly show the impacts due to the two cases studies the AF were able to identify areas of improvements for future interventions.

8.2 Case Study Findings on Efficient Stoves

This case study was presented by Ms. Detta Merinyo who conducted the study with Mairi Darwin a research student for MSc Environmental Change & Management at University of Oxford. The case study was conducted to evaluate the impact of the impact of an improved cook stove project, which was implemented for six month by TaTEDO. The project was implemented in Monduli in Arusha Region and financed by UNDP under small grant programmes.

The research was undertaken through: -

- In-depth, semi-structured interviews
 - Villagers: ICS users, non-users & ex-users

- Village & sub-village chairmen, district officials
- TaTEDO employees
- National government official
- Focus group with Village Environmental Committee
- Email communication with project donors
- Analysis of results using N*Vivo

Apart from describing project activities (Inputs), the presentation made analysis of the institutional set to implement and monitor the project. Presentation gave highlights of findings and recommendation to improve the AF as shown in the table 1 below

	Point discussed	Recommendation
Data	<ul style="list-style-type: none"> • Reliance on qualitative assessment of perception prevented definitive demonstration of change 	<ul style="list-style-type: none"> • Select methodology consistent with study's aims and resource limitations • Where feasible combine qualitative and quantitative methods to improve rigour of results
Indicators	<ul style="list-style-type: none"> • Pre-determined indicators developed with incomplete site knowledge can be inappropriate and do not encompass unexpected change 	<ul style="list-style-type: none"> • Involve range of stakeholders in selecting indicators • Include, don't restrict methodology to, indicators
Baseline	<ul style="list-style-type: none"> • May be missing or inappropriate 	<ul style="list-style-type: none"> • Consider baseline availability at outset of IA and appropriate methods of reconstruction
Nested Institutional Analysis framework	<ul style="list-style-type: none"> • Reduction of complexity is necessary to investigate reality but restricting an IA to impact identification limits potential learning from the process • Application of the NIA framework generated potential explanations for why identified results emerged 	<ul style="list-style-type: none"> • Research incorporation of framework into IA • Continue to modify the framework and to broaden its range of application • Base framework in theory and practice
Policymakers	<ul style="list-style-type: none"> • Can influence the effect of IA results on the policy process 	<ul style="list-style-type: none"> • Involve at all stages of IA • Ensure information is compatible with their needs.
Defining Impact	<ul style="list-style-type: none"> • Requires a value judgement about change 	<ul style="list-style-type: none"> • Involve range of stakeholders in defining impact
Unit of analysis	<ul style="list-style-type: none"> • Complete reliance on case study approach in investigating energy-development linkages is resource intensive and may limit suitability of information as a policy input 	<ul style="list-style-type: none"> • Investigate assessment at national and programme level; • Use IA information from selected projects to investigate causality



A case study researcher on improved stoves presenting findings to the participants

Plenary discussion:-

- The AF should be simple to be used by all stakeholders
- The institutional analysis is critical in determining the project success. Therefore the AF should consider such analysis

9.0 WORKSHOP DELIBERATIONS

Participants agreed on mechanisms on how the AF can reach the policy makers both at national and local levels. To this effect it was agreed to develop a guiding manuals on how to use the AF and build capacity at both national and local level to use it as a monitoring tool.

AF Improvement: The framework should consider the followings

- Need to conduct baseline survey at the onset of the project in order to come up with appropriate indicators and reference data for monitoring and evaluation,
- Need to involve key stakeholders in all stages of project cycle (planning to evaluation)
- Need to involve policy makers in all stages impact assessment and ensure findings/information conform to their needs
- The assessment framework should be simple and easy to use,
- There is necessity for conducting further study in order to find out a way for incorporating AF in the impact assessment and continue to modify the framework to broaden its application
- The framework should be able propose general indicators (and specific indicators should come from specific cases by users),
- Need to document the case studies and publish a manual for assisting assessment of the projects using DEA assessment framework

Use of AF to feedback the policy/project cycle

- Use the AF to provide inputs to monitoring and evaluation process of the NSGRP and sector policies
- Find the possibility of forming the database for storing information from different sectors and feedback the policies
- Packaging the information from AF and make it accessible by all stakeholders,
- MRALG should be represented in the next workshop
- Conduct practical training for ministry M& E staff

The DEA Assessment Framework has four level causal chain namely Inputs-Outputs-outcomes-impacts. Presentation of the findings of two cases studies; “solar water pumping for irrigation” and “improved woodfuel stoves” which used to test the DEA AF showed that effects due to energy interventions have complex linkages between economic, social and environment development which may highly be determined by the institutional framework set for its implementation.

10.0 CONCLUSION

The national workshop assessed the two case studies using the DEA Assessment Framework (AF) and come up with deliberations of improving the framework. However, the framework needs to be tested in various environments and projects of different magnitudes prior to its recognition as a tool for impact analysis. After its development, the framework should be applied in the energy related interventions and find the possibility of introducing it to other sectors’ projects

ANNEXES

Annex I: Participants

S. No	Name	Organisation
1	Mr. Paul Kiwele	Ministry of Energy and Minerals P. O. Box 2000 Dar es Salaam Tanzania
2	Ms. A. Mwashu	Vice President Office (VPO) P. O. Box 902 Dar es Salaam Tanzania
3	Mr. Biswalo	Policy and Planning Division Ministry of Agriculture and Food Security P. O. Box 9192 Dar es Salaam Tanzania
4	Mr. H. Kajange	Ministry of Education and Vocational Training P. O. Box 9121 Dar es Salaam Tanzania
5	Mr. Nehemiah Murusuri	United Nations Development Programme (UNDP) P. O. Box 9182 Dar es Salaam Tanzania
6	Dr. F. Njau	Ministry of Health P. O. Box 9083 Dar es Salaam Tanzania
7	Dr. Gordon Mackenzie	Riso Laboratory Denmark
8	Ms. Gisela Ngoo	TaTEDO, P. O. Box 32794 Dar es Salaam Tanzania
9	Mr. Emmanuel Michael	TaTEDO, P. O. Box 32794 Dar es Salaam Tanzania
10	Mr. Jensen Shuma	TaTEDO, P. O. Box 32794 Dar es Salaam Tanzania
11	Ms. Napendaeli Sem	ADF, Tanzania Dar es Salaam Tanzania
12	Ms. Detta Merinyo	TaTEDO, P. O. Box 32794 Dar es Salaam, Tanzania

Annex III: Workshop Programme

The workshop programme was as follows:-

09: 00 – 10: 00	Registration/Tea/Coffee
10 00 – 10:10	Welcome remarks (<i>Ms. Ngoo</i>)
10: 10 – 11:00	Introduction <ul style="list-style-type: none">• Presentation of DEA implementation status (<i>Gordon Mackenzie</i>)• Presentation of the PAF• Discussion (<i>Workshop participants</i>)
	Presentations
11:00 – 11:15	Presentation of the case study findings on solar energy for water pumping (<i>Ms. Napendaeli</i>)
11:15 – 11:30	Presentation of case study findings on efficient stoves - How do they supplement 1 st case study? (<i>Ms. Detta Merinyo</i>).
11:30 – 12:00	Case studies from other countries - How do they supplement 1 st case study? (<i>Gordon Mackenzie</i>)
12:00 – 7:00	Discussion (<i>Workshop participants</i>)
1:00 – 2: 00	Lunch
2: 00 – 3: 15	Plenary session Discussion on - how can the AF be improve? <ul style="list-style-type: none">• make it more operational• make it more relevant - etc (<i>Napendaeli</i>)
3: 15 – 4: 30	Gather evidence and ideas on how impact analysis like DEA can feed back to the policy/project cycle. (<i>Emmanuel/Ngoo</i>)
4:30 – 5:00	Tea break
5:00 – 5:15	Conclusions, and closing (<i>Mr. Suma</i>)

Annex III: Case Study Presentations

Annex III: DEA overview presentation