Scaling-up of Energy Services Access in East Africa to achieve the Millennium Development Goals

Anders Arvidson, Mattias Nordström, Helena Forslund, Katerina Syngellakis, Jean-Christian Marcel, Gregory Woodsworth, Francis Songela, Estomih Sawe, Ashington Ngigi, Daniel Macharia and Elizabeth Ngoye

A report prepared for

ENABLE
Energy for Water - Health - Education

and

Information Dissemination on Energy and Environment in Developing Countries (IDE)

Intelligent Energy · Europe

Sida

UNDP

ADEME

IT Power is a leading international sustainable energy consultancy with extensive experience evaluating the economic, social, financial, commercial and environmental aspects of renewable energy applications, as well as deploying renewable energy equipment in countries worldwide. In addition to consultancy and installation experience, IT Power has successfully completed a large number of R&D programmes in partnership with other companies and institutions. IT Power frequently works for developing country government departments and international agencies including the EC, the World Bank, UNDP, WHO, and UNIDO. IT Power is the coordinator of ENABLE.

The Stockholm Environment Institute (SEI) is an independent and non-profit international research institute specialising in sustainable development and environment issues. SEI was established by the Swedish government in 1989. Its research programme aims to clarify the requirements, strategies and policies for a transition to sustainability. SEI's mission is to support decision-making and induce change towards sustainable development around the world by providing integrative knowledge that bridges science and policy in the field of environment and development.

Transénergie is an international renewable energy consultancy that was founded in 1991. Transénergie provides services ranging from research and development (the company holds several licences in the field of energy management) to the design of complete electrification projects, market studies, feasibility studies and technical assistance to contractors and training courses.

IT Power Eastern Africa, a subsidiary of IT Power UK, is a sustainable energy and climate change consultancy working in the wider Eastern Africa region offering expertise and services that assist its clients to meet their energy and environmental challenges through integrated strategic planning and development of sustainable energy.

TaTEDO is a renewable/rural energy national development NGO based in Dar es Salaam Tanzania, with more than thirteen years experience in energy development issues. TaTEDO is one of the key rural/renewable energy development organisations in Tanzania. The particular expertise that TaTEDO brings to the energy sector are issues around strong country based renewable/rural energy knowledge and experience in energy policy formulation: energy projects planning, renewable/rural energy field studies, training and implementation.

QuinTsens is a multidisciplinary consulting Senegalese firm accompanying organisations (companies, institutions, governments) in the design, the preparation, the management and the monitoring of their projects and programs. QuinTsens has extensive experience and expertise in the fields of Energy, Information Technology and Organisational Change.

ASER, the Senegalese Agency for Rural Electrification, is an agency established as part of the energy sector reform in Senegal. ASER facilitates and oversees cooperation between electricity companies and private interests, particularly in the provision of technical and financial assistance related to rural electrification projects.

Scaling-up of Energy Services Access in East Africa to achieve the Millennium Development Goals

Report from a consultative workshop held in Arusha, Tanzania
13 - 15 March 2006

Anders Arvidson, Mattias Nordström, Helena Forslund, Katerina Syngellakis, Jean-Christian Marcel, Gregory Woodsworth, Francis Songela, Estomih Sawe, Ashington Ngigi, Daniel Macharia, Elizabeth Ngoye

June 2006

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Preface

The regional consultative workshop was held during three days in Arusha at the foot of the impressive Mount Meru and was a milestone in the fruitful collaboration between the East African Community (EAC), the United Nations Development Programme (UNDP), the ENABLE project and the Sida funded IDE programme.

The collaboration was initiated in Kenya in September 2005 when the ENABLE project consortium met with UNDP during the ENABLE national consultative workshop.

The East African Community has taken on the extraordinary challenge of reaching out to almost 50 million people with modern energy services to support poverty reduction and the achievement of the millennium development goals.

The four specific energy targets laid out in the Regional Energy Access Scale-up document and endorsed by the EAC's Ministers of Energy in August 2005, provided the EAC, UNDP and the ENABLE Consortium with a important common regional objective to support – increasing energy access to the poor in East Africa.

The consultations of the regional workshop provided an impressive amount of information that has already provided guidance and resulted in activities within the EAC and the National Governments in East Africa that will lead to the achievement of the energy targets.

The workshop was also an opportunity for non-energy experts to become acquainted with the issues and we believe that this has strengthened the support for the scale-up initiative.

We would also like to say that our organisations are ready and willing to continue supporting this regional energy access initiative in which ever way they can.

Finally, we would like to express our sincere appreciation to the impressive commitment and hard work of all the participants that came to Arusha and made this regional workshop such a rewarding experience.

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Acronyms used in this report

ACP –Africa, Caribbean and Pacific

ASER - Senegalese Agency for Rural Electrification

COOPENER – an Intelligent Energy Europe programme focusing on co-operation with developing countries

CSD – Commission for Sustainable Development

EAC - East African Community

ENABLE - "Building capacity in renewables in the health, education and water sectors to help meet poverty reduction targets in sub-Saharan Africa"

ESCO – Energy Service Company

EUEI – European Union Energy Initiative

GIS –Geographical Information System

GTZ – Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)

HILCS – High Impact, Low-Cost and Scalable Solutions

IDE – Information Dissemination on Energy and Environment in Developing Countries

IEE – Intelligent Energy Europe

MDG – Millennium Development Goals

MFP –Multi-functional Platforms

NGO – Non-Governmental Organisation

PRA – Participatory rapid appraisal

R&D – Research and Development

SEA –Strategic Environment Assessment

SEI - Stockholm Environment Institute

Sida – Swedish International Development Cooperation

SME – Small and Medium Sized Enterprise

SWOT - Strengths, Weaknesses, Opportunities and Treats

TaTEDO – Tanzania Traditional Energy and Environment Organisation

UNDP – United Nations Development Programme

WP –Work package

Executive Summary

From the 13th to the 15th March 2006, the ENABLE team together with UNDP facilitated a three day consultative workshop hosted by the East African Community. The principal objective of this workshop was to facilitate the design of a regional energy access workplan and accompanying investment programmes to support the achievement of the millennium development goals.

The workshop brought together almost 50 stakeholders from the East African region, representing various sectors (health, education, water, agriculture, environment, finance, etc.), organisations (public, private and NGOs) and donors, with the objective to identify and recommend actions that need to be undertaken in East Africa at regional, national and local levels in order to achieve the EAC Regional Energy Access Scale-up targets endorsed by the Ministers of Energy of Kenya, Tanzania and Uganda in August 2005.

In order to generate new and substantive information during the three days, a highly interactive and participatory approach was used, where participants worked intensively in small groups with a set of questions which examined the issues and actions needed to achieve the four EAC Regional Energy Access Scale-up targets, as listed below:

Target 1: Enable the use of modern fuels for 50% of those who at present use traditional biomass for cooking. Support efforts to develop and adopt the use of improved cook stoves, means to reduce indoor air pollution, and measures to increase sustainable biomass production.

Target 2: Access to reliable modern energy services for all urban and peri-urban poor.

Target 3: Electricity for services such as lighting, refrigeration, information and communication technology, and water treatment and supply for schools, clinics, hospitals and community centres.

Target 4: Access to mechanical power within the community for all communities for productive uses.

The main output from the workshop was a set of interventions for each of the energy access scale-up targets, structured according to level of intervention (regional, national and local) and organised thematically (financing, capacity building, planning, monitoring and evaluation, etc.). Subsequently the proposed interventions were prioritized by the participants with reference to their perceived feasibility and effectiveness.

The identification and prioritisation of interventions coming out of the regional consultative workshop translates into 13 key messages highlighting where action is needed in order to achieve the targets. These are presented below in descending order of priority.

1.   Involve and strengthen the capacity and authority at the district and municipal levels to plan for, implement and monitor actions to achieve the targets.

2.   Mobilise the involvement of more actors to be involved in reaching the targets.

3.   Utilise the opportunities that lie within regional cooperation including sharing costs and resources in developing and implementing common regional strategies to achieve the targets.

4.   Develop public-private partnerships and strengthen involvement of credit and financial institutions, as well as carbon trading schemes, in reaching the targets.

5.   Apply an energy efficiency approach in meeting the targets and develop an appropriate mix of energy efficient technologies and fuel alternatives to meet the targets.

6.   Take actions to get strong commitment from governments in reaching the targets.

7.   Develop tools and methods to facilitate energy planning, needs assessments, monitoring and evaluation of initiatives to initiatives to achieve the targets.

8.   Take actions to integrate analysis of the implications of energy services from a cross-sectoral perspective and take action to enhance cross-sector dialogue and coordination.

9.   Carry out studies and assessments to improve the information available to be able to take strategic and sustainable decisions relevant to meeting the targets.

10.   Use appropriate taxation instruments and subsidies to reach the targets.

11.   Put in place systematic knowledge management systems targeting professionals and decision makers regarding approaches to achieve the targets.

12.   Take actions to raise the public awareness on energy and its role and potential for sustainable development and poverty reduction.

13.   Take actions to harmonise standards on a regional and national level to support the achievement of the targets.

In conjuncture with the workshop, the Energy Committee of the East African Community Secretariat held a meeting on the 16th and 17th March 2006 which considered and further elaborated on the results of the regional consultative workshop and prepared 14 recommendations, which were presented and adopted by the EAC Council of Ministers and Heads of State at the end of March 2006.

2.   Background

Context

This workshop report has been prepared as part of two initiatives: the ENABLE project, whose full title is "Building capacity in renewables in the health, education and water sectors to help meet poverty reduction targets in sub-Saharan Africa" and the project "Information Dissemination on Energy and Environment in Developing Countries (IDE)".

ENABLE is supported by the European Commission's Directorate General for Energy and Transport (DG TREN), through the Intelligent Energy Europe (IEE) programme and its COOPENER funding stream. The project commenced in January 2005 and is due to be completed in June 2007. The COOPENER actions of the IEE programme aim to support and stimulate the activities of the European Energy Initiative (EUEI) for Poverty Eradication and Sustainable Development. The Coordinator of ENABLE is IT Power (UK) and the European partners are Stockholm Environment Institute (Sweden) and Transenergie (France). The partners in sub-Saharan Africa are IT Power East Africa (Kenya), TaTEDO (Tanzania), QuinTsens (Senegal) and ASER, the Rural Electrification Agency of Senegal.

The project "Information Dissemination on Energy and Environment in Developing Countries - IDE" is supported by the Swedish International Development Cooperation (Sida) and implemented by the Stockholm Environment Institute.

The workshop came about through close collaboration between the ENABLE project team above, the East African Community (EAC) Secretariat based in Arusha and UNDP Regional Service Centre for Eastern and Southern Africa., based in Nairobi. When, in late 2005, it was realised that there was substantive overlap between the EAC scale-up initiative and the ENABLE project it was agreed that ENABLE resources would be pooled with UNDP, which was already supporting the EAC process, to provide an additional opportunity for regional consultation to further refine the input to the planned EAC energy access work plan.

The timeline for the EAC process during the last half of 2005 and first half of 2006 includes the following milestones:

- August 2005   Draft Energy Scale-up Strategy endorsed by Energy Ministers of East Africa back to back with FEMA, NEPAD support

- December 2005   EAC Energy Committee recommends incorporation of Energy Scale-up Strategy into a workplan

- March 2006   Regional Consultative workshop on Energy Access in East Africa

- March 2006   Formulation of EAC Energy Committee workplan and recommendations to EAC Council of Ministers

- March/April 2006   Adoption of EAC workplan and recommendations by Council of Ministers and Heads of State
- May 2006   EAC Representation at Commission for Sustainable Development (CSD-14)

The sponsors of the regional consultative workshop were:

- East African Community - who hosted the workshop and invited stakeholders to consult around the development of a Regional Energy Access Strategy.

- UNDP – whose mandate is to support EAC in the process of developing energy access workplan and investment programmes.

- ENABLE – a COOPENER project financed by IEE to support the development of sustainable energy services for poverty reduction in East Africa.

- The Swedish International Development cooperation Agency (Sida) - whose overall energy sector development objective is to assist in the development of sustainable energy systems that enable poor people to improve their lives.

3. Introduction to ENABLE

The EU Energy Initiative, COOPENER actions and the EU Energy Facility

The ENABLE project is funded by the European Commission's IEE programme COOPENER funding stream. The actions supported by COOPENER aim to support and stimulate the activities of the European Union Energy Initiative for Poverty Eradication and Sustainable Development (EUEI). Broadly speaking the initiatives funded under COOPENER aim to contribute to the achievement of the Millennium Development Goals (MDGs). More specifically COOPENER actions focus on the following areas:

- Raising political awareness among high level decision-makers of the important role energy can play in poverty reduction.

- Clarifying the need for energy services for poverty reduction and sustainable development.

- Making apparent the need for energy services in national and regional development strategies, and

- Encouraging the coherence and synergy of energy related activities and stimulating new resources such as capital and technology and human resources from the private sector, financial institutions civil society and end-users.

Another way of explaining what COOPENER actions are about is to say that they aim at *creating the institutional conditions for improved access to energy in sub-Saharan Africa.*

To complement activities of strengthening institutional capacity for improved access to energy services, the EU has also initiated the ACP-EU Energy Facility which provides co-funding for energy and poverty actions in order to achieve the MDGs.

A budget of 225 million Euro has been allocated for the ACP-EU Energy Facility. Of this budget 5 million has been set aside for the EUEI Partnership and Dialogue Facility to support EUEI upstream dialogue (for example, policy, capacity building and partnership development). The remaining 220 million is designated to improving rural peoples' access to modern energy services in Sub-Saharan Africa, as well as support to energy efficiency and renewable energy investments in the Caribbean and Pacific Island States. The bulk of the funding, at least 60%, is intended for co-financing in Sub-Saharan Africa.

The ENABLE project

The ENABLE project contributes to the fulfilment of COOPENER objectives by:

- Articulating needs and options for meeting energy service needs in the health, education and water sectors in rural areas, and

- Supporting the development of cross sector planning tools and their implementation.

The rationale behind the development of the project and the reason for implementing it is based on the assumption that:

> *With enhanced capacity to understand the range of different options through which energy service can be provided to the social service sectors, and an ability to judge both the advantages and disadvantages of the various options, and an appreciation of the costs and benefits of the alternatives and, understanding of the cross-sector linkages that energy services provide to the social sectors, Ministries should be better equipped to formulate and implement national strategies to increase energy service access to meet sector objectives.*

The overall aim of the project is to develop awareness of the opportunities and limitations to use renewable energy to meet poverty reduction targets in the sectors of health, education and water in Kenya, Tanzania and Uganda in East Africa. Thus, the project provides capacity building to aid the identification of sustainable energy strategies that contribute to meeting sector objectives.

The role of the ENABLE project

Each of the social sectors; health, education and water, undertake activities in order to fulfil their sector objectives as outlined in their respective policies and strategy papers. As an example, the objectives of the education sector in Tanzania are presented in Figure 1.
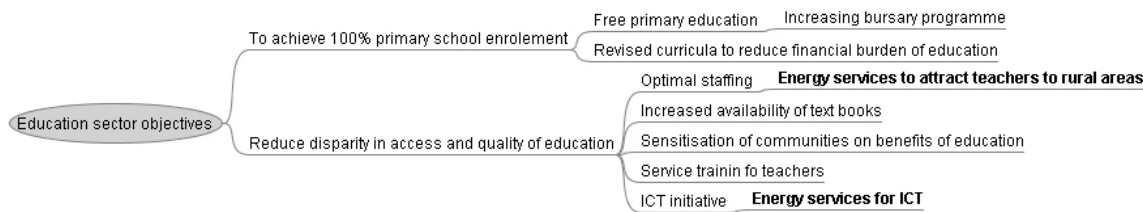
Figure 1 Example of strategies to meet sector objectives and possible linkages to energy services

As is illustrated in Figure 1, some of the envisioned strategies to meet the sector objectives may require an input of energy services in order to be achieved. This could for example relate to being able to attract teachers to live and work in rural areas, to enable the use of information technology such as computers or to provide possibility for evening classes. The relevant type of energy services to attract teachers may be lighting and ability to power TVs, radios and small appliances. The relevant type of energy services to allow for computers is electricity and to enable evening classes appropriate lighting is needed.

Depending on the conditions of the particular location and the end-user demands, its distance from the electricity grid or other existing forms of energy service delivery at the location, other sector's end-user energy service demands, etc. – there are probably a range of technical and organisational options to choose from in order to facilitate access to identified energy services.

An assessment of the alternatives or a scenario analysis can facilitate the formulation of a strategy. Once a strategy is adopted and implementation takes place the strategy will start to generate an impact in the society. The impacts of the implementation can be monitored and should provide feed back to the ministries. Such feedback can in turn call for policy changes that would then alter strategies adopted to meet the sector objectives.

As shown in Figure 2 the shaded area represents the part of this planning process where the ENABLE project contributes. The contribution is primarily in the form of assisting in the design and development of selected planning tools and in providing the necessary training to users of the tools. This includes data collection tools which would serve to facilitate the formulation of energy service needs, developing energy guidelines and an electrification planning tool, which will serve to aid the prioritization between different energy service supply alternatives and standard energy packages to the respective sectors in order to help the formulation of each sector strategy.

The ENABLE project also aims at facilitating cross sector links between the energy sector and the health, education and water sectors. This is possible if a dialogue takes place between the ministries and cross sector links are recognised throughout the planning process. The project will contribute to a policy analysis that can highlight and clarify the linkages between sustainable energy and poverty reduction targets. In consultation with the concerned ministries the project will, as described briefly above, develop a set of tools and training will be provided to targeted users that will be identified in consultation with the

selected ministries. Finally, the project will have a replication part from East to West Africa, whereby the results of the project will be transferred to Senegal.
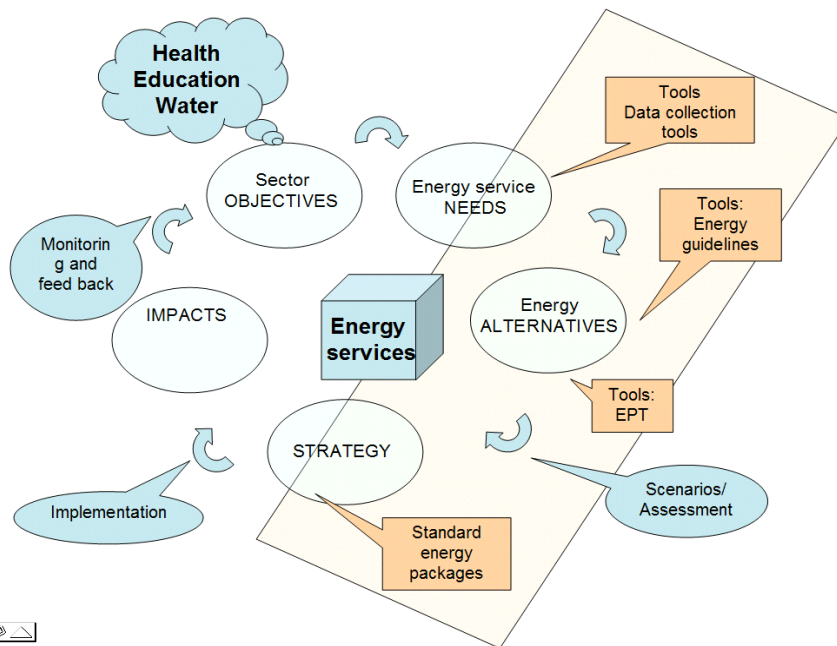
Figure 2 Conceptual framework: the role of ENABLE in relation to the planning process
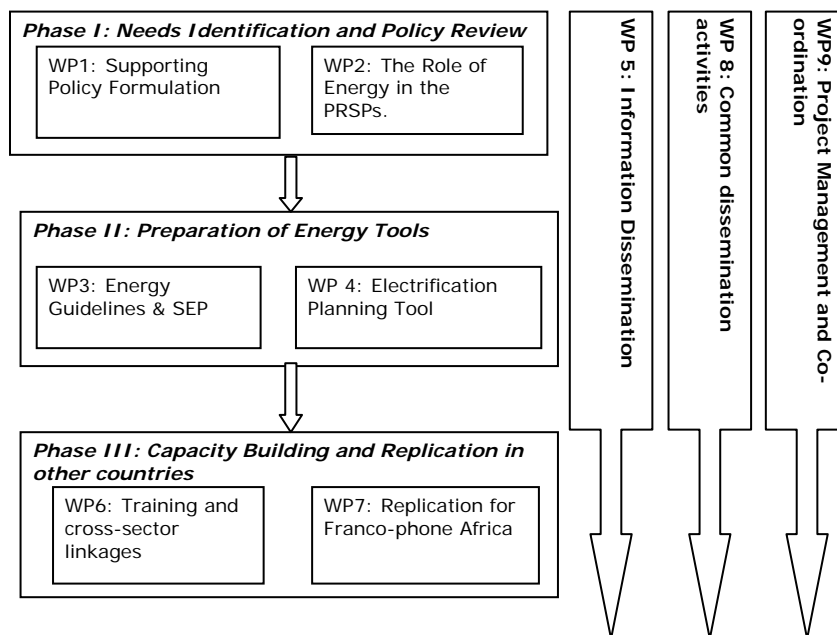
Figure 3 Flow chart showing phases and work packages of the project

Figure 3 above illustrates the project set up and visualises how different components fit together. The project consists of three phases. The first phase is a needs identification and policy review phase, containing WP1; on *Supporting Policy Formulation* and WP2; *Establishing the role of energy in the PRSPs*. Both these work packages are lead by SEI. In the second phase the attention will turn to preparing the planning tools. This part is divided into WP3; with focus on development of *Energy Guidelines and Standard Energy Packages* and WP4; focusing

on the development of an *Electrification Planning Tool*. IT Power UK is the leader of these work packages.

The third phase of the project features capacity building (WP6) and replication in a pilot West African country (WP7). IT Power will lead the training under WP6 and Transenergie will lead the replication for francophone Africa in Senegal. Throughout the project information dissemination activities are carried out lead by both SEI and IT Power . Finally, the overall project management and coordination is carried out by IT Power.

Energy and national development: links to the MDGs

In August 2005, the Ministers of Energy in the East African Community (EAC) endorsed a document titled "Scaling up Modern Energy Services in East Africa to alleviate poverty and meet the Millennium Development Goals" (see).

This document outlines priority energy services that need to be scaled up in East Africa in order to meet the Millennium Development Goals. The EAC has taken on the challenge of developing a regional strategy and implementation framework, leading to an investment portfolio to achieve these targets – a process that is supported by the UNDP.
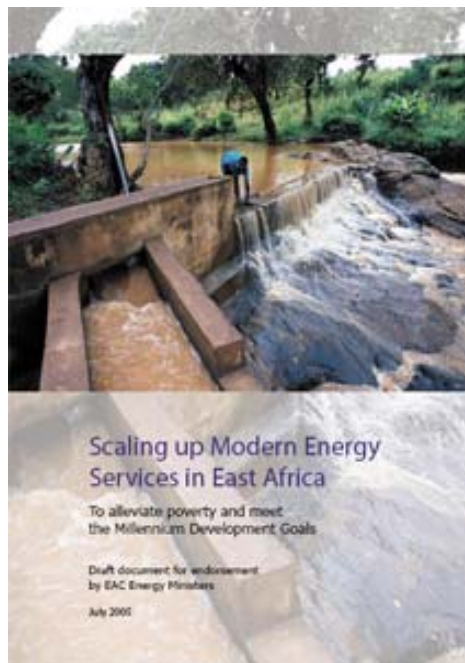
Figure 4 The "Scale-up document" is available to download at: www.enable.nu

In particular, four energy targets are identified in the "Scale-up document":

Target 1: Enable the use of modern fuels for 50% of those who at present use traditional biomass for cooking. Support efforts to develop and adopt the use of improved cook stoves, means to reduce indoor air pollution, and measures to increase sustainable biomass production.

Target 2: Access to reliable modern energy services for all urban and peri-urban poor.

Target 3: Electricity for services such as lighting, refrigeration, information and communication technology, and water treatment and supply for schools, clinics, hospitals and community centres.

Target 4: Access to mechanical power within the community for all communities for productive uses.

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The endorsement of the document by the Ministries of Energy marked the beginning of the next phase: to define the process and further develop the regional strategy and the implementation framework, including the institutional framework for moving forward.

Several activities necessary to develop a regional strategic framework for East African countries to meet objectives for scaling up access to modern energy services through the development of MDG-based investment programmes have been identified, including the following:

- Agreement on an implementation framework to meet the four targets including planning capacity at relevant administrative levels;

- Strategies to mobilise financial resources to implement the formulated energy policies; and

- Learning from the ECOWAS experience in defining a regional energy strategy.

In order to foster the processes envisaged in the Scale-up document, the Energy Committee of the EAC in December 2005 decided to develop a regional strategic framework for the Scale-up Initiative. Furthermore, the EAC decided to communicate its engagement in energy issues for development by presenting the Scale-up initiative as its regional energy programme at the Commission for Sustainable Development, CSD-14 held in New York 1 – 12 May 2006.

Links between the Regional Scale-up Initiative and ENABLE

In support of the Scale-up Initiative, the ENABLE project team offered to support the convening of a regional workshop tailored to complement the ongoing processes of advancing the regional scale up document into a corresponding workplan.

The ENABLE project has scheduled a number of outputs that can contribute to achieving some of the necessary activities defined as part of a regional scale up initiative. In particular, important activities related to Work Package 1 and 2 of the ENABLE project are:

- Analysis of prioritised energy services for rural areas;

- Evaluation of opportunities that renewable energy systems provide in delivering prioritised energy services for health, education and water sectors in Kenya, Tanzania and Uganda; and

- Strengthening of the analysis of linkages between poverty reduction targets and energy services in the national PRSPs.

These activities are complementary to the regional scale up initiative. Furthermore, activities in Work Package 3 (development of Energy Guidelines for the health, water and education sectors) and Work Package 4 (development of an Electrification Planning Tool) of the ENABLE project can facilitate the implementation of the scale up initiative by building capacity through development of tools and training in the use of the tools needed in assessing and planning for the implementation of energy service delivery strategies.

The focus of the ENABLE project is on rural areas not likely to be connected to the grid in the next 10 years (timeframe of the MDG achievement period). Also there is a focus on

energy service delivery to meet sector objectives of the social service sectors of health, water and education.

5.   The workshop approach and method

Purpose of the workshop

The overall objective of the workshop was to analyse the processes and resources that are needed in order to implement the regional energy scale-up initiative.

The purpose of the workshop was to offer direct support to the EAC Energy Committee, and particularly its meeting to be held on the 16th and 17th March 2006, by engaging major stakeholders in the region to identify the principal elements of a regional energy access strategy and investment programme that would be part of an EAC workplan. Specifically the purpose of the workshop was to:

- Explore the issues that need to be addressed in order to achieve the regional scale up initiative targets;

- Elaborate on the required activities at regional, national and local levels; and

- Prioritise the proposed activities in terms of their capacity to be high impact, low cost and scalable on a regional level.

The results of the workshop were intended to be used as:

- Recommendations to the EAC regarding components of a regional action plan to achieve the scale-up targets;

- Contribution into the formulation of investment programmes;

- Input to the EAC Energy Committee meeting 16-17th March, 2006;

- Fulfilment of the objectives of Work Packages 1 and 2 of ENABLE, as detailed above, and input to Work Packages 3 and 4 – health, education, water – capacity strengthening;

- Feed-back to donors - ENABLE would facilitate awareness raising to a wide spectrum of key actors

In order to achieve useful results from the workshop, which were relevant to the four targets laid out in the regional scale-up document, the participants were tasked to discuss how to reach the energy services targets based on three different types of energy carriers:

- Electricity - key for providing services such as lighting & access to communication tools (radio, telephones);

- Cleaner fuels for household uses - heating and cooking services; and

- Mechanical power – for productive purposes such as pumping and milling.

Venue and participants

The workshop was hosted by the EAC and held at the Arusha International Conference Centre. It was attended by 48 participants, including staff from ministries along with representatives from industry and civil society. There was also representation from the European Commission and the Swedish Embassy in Tanzania. The ENABLE team and UNDP staff based in Nairobi were part of the workshop facilitation team. For a complete list of participants see Annex 1: Participants list.

Workshop structure and method

The workshop was an objective-oriented and interactive "working" workshop, with structure and facilitation to identify the processes and resources needed to implement the Scale-up Initiative. This included work that would contribute to designing an EAC work plan, including a prioritisation of interventions. The workshop agenda was structured around five sessions; introduction and visioning; energy services for cooking; modern energy services for all urban and peri-urban poor; modern energy services for rural institutions and communities; and open space (see below).

Monday 13 March

SESSION 1

- **Introduction and visioning**

This session aimed at introducing the participants to the mode of work used in the workshop, and also to start thinking and identifying themselves with the targets in the Scale Up Strategy.

SESSION 2

- **Energy services for cooking**

Rotating working groups, with facilitators, worked with a set of predefined questions to identify activities and interventions needed to reach target one of the EAC scale-up strategy.

Tuesday 14 March

SESSION 3

- **Modern energy services for all urban and peri-urban poor.**

Rotating working groups, with facilitators, worked with a set of predefined questions to identify activities and interventions needed to reach target two of the EAC scale-up strategy.

SESSION 4

- **Modern energy services for rural institutions and communities.**

Rotating working groups, with facilitators, worked with a set of predefined questions to identify activities and interventions needed to reach targets three and four of the EAC scale-up strategy.

Wednesday 15 March

SESSION 5

- **Open space: What have we forgotten to speak about?**
- **Assigning priorities**
- **Handing over the results and closing**

Open space session on outstanding issues and questions not covered so far. Assigning priorities by all participants to the results of sessions 2, 3 and 4. Formal handing over of results to the EAC Secretariat.

Preconditions for success

The workshop was designed to provide the participants with opportunities for real engagement, to use their initiative, to be innovative and to produce results. At the same

time the boundaries of the discussions and the intentions from the sponsors' perspective was clearly communicated.

Generally, there are certain conditions that need to be met in order to arrive at the expected results of a consultative workshop (see Box 1). These preconditions were present which is also reflected in the results of the workshop and the consecutive actions that have been taken since.

- Dealing with a controversial and highly complex issue that does not have a known answer

- Clear and transparent boundary is defined by the process-owner (EAC and ENABLE)

- Engaged and informed participants that bring a diversity of perspectives and interest to the discussion

- A structured method that supports the discussions and allows the participants to engage themselves and take responsibility

- A process-owner or sponsor that has not committed him or herself to a pre-conceived result

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Box 1 Preconditions for success

Boundaries for the discussions

The boundaries defined for the workshop where intended to focus the outputs on relevant and useful input to the ongoing East African energy access initiative. Thus, for each session, during the question-answering and prioritisation processes, the participants were asked to keep the following criteria in mind at all times:

- The four targets from the scale-up strategy

- High Impact, Low-Cost and Scalable solutions (HILCS)

- Not interventions at the "project" level but focus on programmatic and political activities

- Creativity and innovation without loosing sight of the four targets

Structure

The workshop was structured around five sessions. In four of the sessions the topics for discussion was pre-decided by the organisers and in the fifth session the topic for discussion was open for suggestions by the participants. The participants were seated around six tables with about seven participants around each table. Each table also had a facilitator.

Session 1

In the first session, following the opening and introduction to the objectives and scope of the workshop, participants were given the opportunity to discuss and picture themselves, their family, organisation, profession, etc. in the future, envisioning that all the targets in the Scale-up document were fulfilled. The purpose of this exercise was to generate an image, focus the attention on the topic of the workshop and instil an appreciation of the

role that energy has in achieving the MDGs. The results of this group discussion was organised and placed on the walls.

Sessions 2, 3 and 4
Half a day was devoted to each of the sessions 2, 3 and 4, each covering one of the themes relevant to the energy scale-up targets. Each session was introduced by a short presentation on the challenges related to the specific energy access targets of that session (the presentations can be downloaded from www.enable.nu). There after, the six facilitators each posed a particular question to their table on the theme of the discussion.

A set of pre-defined questions where used to keep the output coherent between groups and sessions (see Box 2). Not all participants worked with each question for each target, but most participants were exposed to the six questions during the course of the 3-day workshop.

- What cross-sectoral institutional collaboration activities are necessary, to formulate and implement policies and programmes to achieve the target?

- What types of training and awareness raising activities are needed to achieve the target?

- What types of information collection and processing tools and methods are needed for planning, implementation and monitoring to achieve the target?

- What actions can minimize the cost of achieving the target?

- What actions will encourage private sector engagement in achieving the target? (financing, supply of energy goods and services)

- What actions relating to regional cooperation will contribute to the achieving the target?

Box 2 Working group rotating questions

Participants discussed a question for 30 minutes. The points made during the discussion were recorded on post-it notes. After 30 minutes of discussion, the facilitator proceeded to the next table bringing with him/her the information gathered so far on that question. The facilitator then introduced the same question to a new group and also briefed the participants at the table about discussion at the previous table(s). Each table got to discuss three different issues during the one and a half hour duration of each working session.

Picture 1 Participants and issue facilitators working at the tables

Picture 2 Participants organising the post-its generated during the discussions

By using this methodology, participants are exposed to a different set of questions on a related theme and their previous discussion is likely to influence their thinking when exposed to a new question. This way, one discussion is likely to benefit from another and

also trigger thinking in an alternative way. By briefing the participants of the discussion from a different table, it also sets a new scene for starting discussion on the question.

After having had discussions on the same question with three tables, the facilitator returned to the table where he/she started and, together with the participants at that table, started to organise and make sense of all points generated. The material generated in each session was organised and presented on six large panels. Figure 5 below shows the structure of the workshop sessions, the movements of the participants and the flow of information.

Parallel coordination team
During sessions 3, 4 and 5 a smaller coordination team worked in parallel to the main sessions with the task to further synthesise the results generated in sessions 2, 3 and 4. The members of the coordination team were energy experts from the Eastern African region, as well as some of the members of EAC Energy Committee. Again facilitation was provided by the ENABLE team and UNDP.

Picture 3 The Coordination team discussing and identifying thematic clusters
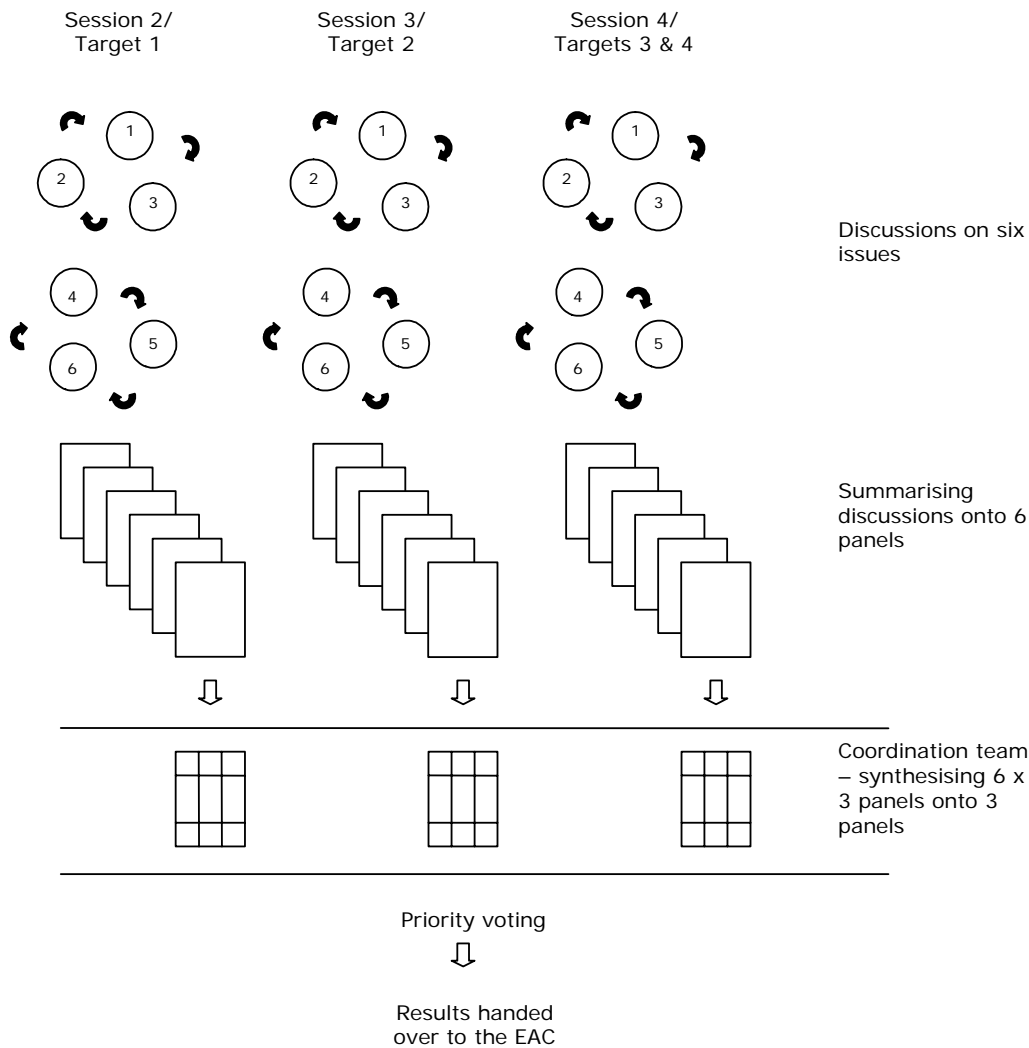
Figure 5 Schematic of the workshop steps

The task of the coordination team was to synthesise the material on the six panels onto one panel. This was done for each of the three sessions. The coordination team was asked to generate a matrix with actions grouped into appropriate themes, while at the same time assigning these actions to either the regional, national or local level under the chosen theme. The themes were left to the coordination team to identify, based on the information produced by the main body of workshop participants. The split into regional, nation or local levels of action was a structure pre-determined by the workshop process-owners. The overall structure of the results is shown below.

Level/Theme	Theme I	Theme II	Theme III	Theme IV......
Regional	Action X Action P			
National	Action Z	Action Y	Action T	
Local		Action S Action U	Action W	Etc...

Prioritisation

When the coordination team had completed the three panels that synthesised each of the discussion sessions and the identified actions and identified at which level (regional, national, local) the action would be most relevant the participants were invited to give their priorities to the activities they felt were the most important to address. Participants were asked to give priority to the actions that would lead to high impacts, low cost and scaleable solutions. Each participant was given six red marker dots to indicate their priorities. Participants could place the markets on any of the identified actions and could put one or several markets on each action they gave priority.

Picture 4 Participant about to vote with the red markers

6. Results from the workshop

The workshop was held from the 13th to the 15th March 2006. The results fed directly into the 10th meeting of the EAC Energy Committee which was held, back to back with the workshop on the 16th and 17th March. The EAC further synthesised the results of the workshop and formulated 14 recommendations to the EAC Council of Ministers and Heads of State (see Box 3). The Council of Ministers and Heads of States considered and approved these recommendations on April the 3rd. The whole process took 18 days from Consultative Workshop to decision in the Council of Ministers and Heads of State.

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1. Partner States be committed to developing a strategy for accelerated provision of sustainable modern energy services to the rural, urban and peri-urban poor, to meet the Millennium Development Goals (MDGs), within the framework of High Impact Low Cost Scalable (HILCS).

2. EAC to set regional targets, strategies and investment programmes for energy access to meet the MDGs.

3. EAC should harmonize energy policies, legal frameworks and regulations including technical standards and fiscal incentives.

4. Partner States should ensure that gender is mainstreamed in energy access activities and undertake appropriate strategic environmental assessments of energy access options.

5. EAC should mainstream energy access issues into national policy, planning and budget frameworks.

6. EAC to mobilize and allocate resources for accelerated access to modern energy services from Partner States, regional and international financial institutions, development partners and financing facilities e.g. Carbon Funds.

7. EAC to adopt knowledge management as a core service including the establishment of regional centres of excellence on modern energy service delivery.

8. EAC should identify and invest jointly in HILCS programmes.

9. EAC to strengthen the capacity to design, plan, implement and monitor the energy access activities in the region.

10. EAC should undertake massive regional awareness efforts to encourage progressive shift from traditional fuels and energy technologies to access modern energy services.

11. EAC to monitor, evaluate and report on progress of energy access activities to meet MDGs.

12. EAC should facilitate adoption of best practices in modern energy technologies and services.

13. The EAC Secretariat should facilitate the development of time frames and resource requirements for each intervention under HILCS.

14. The EAC should prepare proposals to secure funding from already identified facilities and other Development Partners.

Box 3 Recommendations made to the EAC Council of Ministers and Heads of State by EAC Energy Committee based on the results of the workshop

Clustered and prioritised interventions

The main output from the workshop was a set of thematically clustered interventions that participants saw as necessary to achieve each of the targets. In the workshop, the thematically clustered interventions were structured according to level of interventions (regional, national or local). Subsequently the proposed interventions were prioritised by the participants with reference to the perceived positive feasibility and effectiveness.

The synthesis of the prioritised actions made during the workshop is presented in Annex 3. After the workshop the ENABLE team has further analysed the prioritised proposed interventions that came out of the workshop. This analysis was done by revisiting all of the proposed interventions that received priority votes by the workshop participants and subsequently re-clustering them into priority themes. The analysis was made only of those interventions that received priority votes and is not a comprehensive list of all proposed actions. The thematic clustering that emerged from this analysis is presented in Table 1. Emerging from the priority themes are a number of key messages which are presented in this section.

Votes	Clustered action theme
31	Stakeholder involvement in planning, implementation and monitoring
21	Mobilising actors to be involved in reaching the targets
17	Regional approaches
15	Public-private partnerships
14	Technology development
13	Political support and governance issues
11	Planning, monitoring and evaluation tools
11	Cross sector collaboration/coordination in planning and implementation
9	Strategic analysis and studies
9	Financial instruments
8	Professional information dissemination and knowledge management
8	Public information dissemination
4	Harmonisation of standards

Table 1 Thematic clusters (generated from ENABLE analysis)

Key messages

The key messages that emerge from the analysis of the proposed actions prioritised by the workshop participants are presented below in descending order of priority. Out of this analysis thirteen key messages emerge. These are highlighted in bold followed by a brief summary of their content.

1.   **Involve and strengthen the capacity and authority at the district and municipal levels to plan for, implement and monitor actions to achieve the targets.**

The strongest message that comes out of the workshop is that the local stakeholders at district and municipal levels, including administration, and women and men need to be

given the mandate, the tools and the powers to be more involved in planning, implementing and monitoring activities that aim at achieving the four energy access targets. This is clearly illustrated by analysing the number of prioritised actions that emerged related to the theme: Stakeholder involvement in planning, implementation and monitoring (see Table 2). This also reinforces the message coming out of previous national consultations carried out within the ENABLE project. It also provides a justification to the ENABLE team and others who are involved in strengthening capacities to plan for and implement energy interventions at the district and municipal levels and points at the demand for tools and training to efficiently and effectively carry out such tasks.

Votes	Proposed action relating to local stakeholder involvement
6	Mainstream energy in district and municipal planning
3	Ensure community ownership and responsibility in interventions
2	Make funds available directly at local level. Procurement to be made by the local implementing body
2	Localize MDGs at the district level
1	Establish coordination committees at local & community levels
1	Establish coordination committee at district level
1	Involve communities in the planning, implementation and monitoring
1	Involve communities in identifying and implementing options to reach the target
4	Build capacity at the local level
3	Mainstream gender issues in reaching the targets
1	Take gender issues and cultural aspects into consideration
2	Involve the private sector in developing national master plans for electrification
1	Involve NGOs in evaluations of the socio-economic impacts
1	Use PRA participatory rapid appraisals in planning
1	Promote energy guidelines for institutions in health, water in education
1	Design standard energy packages

Table 2 Stakeholder involvement in planning, implementation and monitoring (31 votes)

2.   Mobilise the involvement of more actors to be involved in reaching the targets

Another clear message is to encourage and make use of existing and potential actors in providing energy services and in manufacturing technologies and fuels necessary to reach the targets. This is specifically proposed to be locally based actors such as rural energy service companies, artisans and community based organisations.

3.   Utilise the opportunities that lie within regional cooperation including sharing costs and resources in developing and implementing common regional strategies to achieve the targets.

The participants clearly identified the need to seize the existing opportunities imbedded in active regional cooperation to achieve the targets faster and at a lower cost (see Table 4). Such opportunities lie within sharing investment costs, research and development costs, carrying out studies and developing plans as well as creating a larger market for services, fuels and appliances.

Votes	Proposed action related to actors involved in providing services
3	Promote local production of energy services and equipment
3	Promote energy service companies to run Multi-functional Platforms at the community levels
2	Promote the creation of small and medium sized enterprises to provide energy services
1	Help private sector to take root - provide incentives in the first years
2	Use local materials and people to produce improved stoves
2	Government should create incentives for NGOs and private actors producing energy service equipment
2	Encourage small local enterprises to produce fuels such as briquettes
1	Reduce maintenance costs by applying proper incentives, considering life-cycle-costs in procurement and ensure adequate training for maintenance
2	Train energy technology artisans
1	Disseminate existing technologies through NGOs
1	Decentralize manufacturing of energy technologies and fuels
1	Mobile training programmes/ e-training

Table 3 Mobilising actors to be involved in reaching the targets (21 votes)

Votes	Actions related to regional cooperation
3	Sharing costs, joint implementation, joint resources
2	Joint master plan, joint investment
2	Infrastructure development to access rural communities
1	Cross-border cooperation in trade
1	Strengthening regional institutions
5	Formalizing regional strategy that enhances sustainable biomass utilization (5)
2	Develop a regional rural energy master plan (2)
1	Document regional strategy (1)

Table 4 Regional approaches (17 votes)

4.   Develop public-private partnerships and strengthen involvement of credit and financial institutions as well as carbon trading schemes in reaching the targets.

Participants identified and prioritised the need to engage financial institutions in achieving the targets and to create stronger commitment and links with these (see Table 5). Joint initiatives and partnerships are called for.

Votes	Actions related to public-private partnerships credit institutions
3	Engage with credit and financial institutions
3	Create links between financial institutions and end-users
3	Arrange micro-financing for energy projects
2	Design interventions and secure financing from carbon trading measures
2	Joint public-private funding of micro-enterprises
1	Government should partner with the private to facilitate infrastructure development
1	Budget allocations towards achieving the targets from the government, donors and the private sector should be increased

Table 5 Public-private partnerships (15 votes)

5. Apply an energy efficiency approach in meeting the targets and develop an appropriate mix of energy efficient technologies and fuel alternatives to meet the targets

The participants perceived it to be a priority to apply an energy efficiency approach in meeting the targets so as to use available energy resources efficiently and thereby be able to reach out to more end-users (see Table 6). Another prioritised action is to diversify and develop an appropriate mix of gaseous, liquid and energy efficient biomass technologies to meet the cooking and heating related targets.

Votes	Actions related to energy efficiency and modern biomass fuels
5	Improve the efficiency with which charcoal is produced
2	Apply and energy efficiency approach in reaching the targets
2	Emphasize the use of energy efficient appliances to save energy in order to meet more energy service needs
3	Develop liquid and gaseous biofuels alternatives to meet the targets
1	Research institutions to research on more effective biomass technologies
1	Diversification of regional energy mix

Table 6 Technology development (14 votes)

6. Take actions to get strong commitment from governments in reaching the targets.

Government awareness and commitment is an identified and prioritised action in order to achieve the targets (see Table 7). Such commitment can be shown by allocating funding towards actions needed to meet the targets, by instituting proper regulatory and legal frameworks as well as rhetorically recognising and communicating the importance of the targets for sustainable development and poverty reduction.

Votes	Actions related to governance and political commitment
2	Put in place the legal framework to enable private sector participation e.g. in electricity distribution
2	Reduce time in financial transactions (public sector
4	Good governance, government to be committed to achieving the targets
1	Carry out sensitisation of government and ministers
1	Make policy makers aware of the rationale behind promotion of energy services
1	Involve the President (head of state) to influence public commitment
1	Governments should invest in infrastructure
1	Secure funds from Millennium Development Goals funding in facilities

Table 7 Political support and governance issues (13 votes)

7. Develop tools and methods to facilitate energy planning and carry out needs assessments and to monitor and evaluate initiatives to achieve the targets.

The development and application of a range of tools and methods, ranging from needs assessments, to monitoring and evaluation tools are identified and prioritised by the participants in the undertaking to achieve the targets (see Table 8). Participants also recognised the need to build capacity within institutions and amongst individual to apply these tools and methods.

Votes	Actions related to planning, monitoring and evaluation tools
6	Needs assessment at district level
1	Train local government to assess the energy capacity and practices
1	Develop realistic monitoring and evaluation method, set targets and allocate resources
1	Setting measurable targets/indicators is paramount to successful monitoring & evaluation of the energy services
2	Tracking survey to monitor implementation

Table 8 Planning, monitoring and evaluation tools (11 votes)

8. Take actions to integrate analysis of the implications of energy services from a cross-sectoral perspective and take action to enhance cross-sector dialogue and coordination.

Cross sector coordination and dialogue is important in effectively meeting the targets according to the participants (see Table 9). The message is that cross sector coordination regarding accelerated energy services delivery needs to be enhanced from the central government level down to the district level.

Votes	Actions related to cross-sector collaboration and coordination
4	The implications of energy services should be considered at an early planning stage in all sectors
2	Ensure cross sector coordination in infrastructure development
2	Streamline the collaboration between Ministry of Energy and other ministries
1	Apply an integrated development approach
1	Take actions to enhance information sharing between sectoral ministries
1	Train planners to be able to link energy and poverty

Table 9 Cross sector collaboration/coordination in planning and implementation (11 votes)

9. Carry out studies and assessments to improve the information available to be able to take strategic decisions relevant to meeting the targets.

A number of strategic studies and assessments are prioritised and seen as necessary by the participants in order to meet the targets (see Table 10). The message is to use existing institutions to generate and provide relevant information for strategically planning the approach to meeting the targets.

Votes	Actions related to strategic analysis and studies
3	Carry out strategic studies of alternative energy service supply systems to meet the targets sustainably (environment and reduce costs)
2	Use GIS to map different energy resources at different sites
1	Carry out resource assessments
1	Carry out studies to forecast sustainable biomass supply & demand
1	Use existing institutions in systematically updating existing information
1	Carry out power demand assessments covering different time perspectives: 5,10,20 years

Table 10 strategic analysis and studies (9 votes)

10. Use appropriate taxation instruments and subsidies to reach the targets

The identified activities are related to changes in the use of taxes such as removing taxes and levies as well as providing tax incentives; end-user financing; financing of energy service and energy technology suppliers; diversifying and mobilising funding sources to specifically achieve the targets

Votes	Actions related to financial instruments
3	Removal of taxes and levies from LPG and appliances
2	Tax incentives for rural electrification
1	Government to provide guarantees to banks so that they can lend to business
1	Cost implication of switching to modern cooking services
1	To establish a fund or financial institutions whereby soft loan is given to private sector
1	Favourable terms for loans to invest in rural energy services

Table 11 Financial instruments (9 votes)

11. Put in place systematic knowledge management systems targeting professionals and decision makers regarding approaches to achieve the targets.

Participants recognise and prioritise the need to establish and enhance professional knowledge management to effectively achieve the targets (see Table 12). This relates to

sharing of best-practices, information that is relevant for the development of energy markets and information on energy end-users.

Votes	Actions related to professional knowledge management
1	Sharing of information/data/best practices
1	Exchange best practices on operation of ESCOS (reg. Level)
1	Educational programmes focused on R&D
1	Establish information dissemination centre
1	Have pilot project
1	Investment profiling
1	Private sector involvement: lowering risk for PS involvement in energy projects, information on customers and demand level
1	Systematic update of existing info using existing institutions

Table 12 Professional Information Dissemination and knowledge management (8 votes)

12.   Take actions to raise the public awareness on energy and its role and potential for sustainable development and poverty reduction should be taken.

The participants also recognise and prioritise the need to raise public awareness on energy issues amongst energy end-users (see Table 13). Proposed topics include awareness on productive use of modern energy services, consequences of indoor air pollution and energy efficiency.

13.   Take actions to harmonise standards on a regional and national level to support the achievement of the targets.

Finally, an area where actions were prioritised by the participants is to harmonise standards across the region and at national level to facilitate market development and to reduce costs (see Table 14).

Votes	Actions related to public awareness raising and information dissemination
2	Create awareness on productive use of modern/alternative energy to private sector, e.g. demonstrations
1	Awareness for masses:-smoke, -alternatives
1	Drama productions, songs & plays
1	Demonstration activities to train people for the use of alternative cooking systems
1	Awareness/training: exhibitions, fairs should be used for training & awareness on biomass technologies
1	Message on cost (benefit) energy efficiency to rural population
1	Consumer awareness and information (disseminated at district level)

Table 13 Public information dissemination (8 votes)

Votes	Actions related to regional harmonisation
2	Common standards for energy equipment (2)
1	Harmonisation of policies, regulations and operations of taxes (1)
1	Multi-nationals, different standards (1)

Table 14 Regional harmonisation (4 votes)

Messages emerging from the open space session

In addition to the results and key messages resulting from the discussions around the six questions pre-determined by the workshop organisers (see Box 2) the participants were given the opportunity to freely suggest topics and questions that they felt had not been treated sufficiently under the framework of the predetermined questions.

In this open space session towards the end of the workshop, the participants were invited to raise any topic they felt had not been adequately addressed in the previous sessions. Each participant proposing a topic was tasked with facilitating a group discussion on his or her proposed topic. The emerging key messages from this session are presented below. These were not, however, included in the prioritisation exercise carried out by the participants. The complete record of what was discussed in the open session is presented in Annex 4.

- **A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of EAC government to scale up provision of modern energy to rural areas should be made.**

Significant efforts for scaling up modern energy services to rural areas have been made with different degrees of success – some reasons for failures include the low income situation in target communities. The lessons from these failures and successes should be taken into consideration when moving forward.

- **Gender issues should be mainstreamed in any plans to achieve the targets.**

Concrete steps include assuring gender balance on planning committees, analysing the planned energy services from a gender perspective and gender issues in energy planning and building capacity amongst women to participate more actively in initiatives to achieve the targets.

- **Environmental concerns need to be integrated in any plans to achieve the targets by enforcing the application and building the capacity to carry out strategic environmental assessments**

- **Corruption, which negatively affects the efficiency and effectiveness with which the targets are met, needs to be addressed systematically.**

This is proposed to be done by establishing proper monitoring and follow-up mechanisms, liberalising the market and introducing more competitiveness, increasing the level of transparency and accountability of utilities and by having regulatory authorities that can properly enforce laws and regulations that curbs corruption.

- **The environmental and economic effects of population growth and immigration need to be taken into account when planning for and implementing programmes to achieve the targets.**

Practical actions to consider here are more continuous monitoring of population pattern changes, strengthening of environmental laws and institutions dealing with enforcement of such laws should be strengthened. Also the external effects of having access to more energy services need to be considered such as implications of energy service to draw larger amounts of water and its impact on institutions, ecosystem services and changes on livestock and food production.

- **Increase public awareness of the risks associated with utilisation of energy as well as the options to reduce e.g. indoor air pollution and to reduce energy consumption through he use of more energy efficient appliances.**

- **How sustainable are modern energy services?**

The need for sustained maintenance, adaptability and creation of productive markets was raised under this topic as an important preconditions for sustainability.

- **Creation of productive markets**

The importance of using the opportunities of improved modern energy services to create added value in production was discussed under this topic. Associated to this was information to end-users about such opportunities as well as assistance to energy entrepreneurs through access to financing.

- **Integrate the targets in the district development plans and establish energy sector representation at district and lower levels.**

This group discussed the need for capacity building on energy and environment issues and properly integrating this in district development plans.

- **Establishment of a regional e-network of champions for energy/implementation programmes**

The purpose of such a network would be to share best practices and to share knowledge and experience in how the targets can be met. One of the group participants volunteered to facilitate the start up of such a network.

- **Individual households to reach the targets**

This group discussed the need to properly assess the needs and priorities at the household level. How households could increase their incomes in the process of meeting the targets was discussed.

7.   Conclusions

Workshop approach and methodology. During and after the workshop it was evident that participants appreciated the interactive and creative approach taken, and the fact that the conclusions from the workshop could be presented to – and used by - an important target audience (the EAC Energy Committee). The fact that the results could be exploited by the EAC immediately following the workshop is testimony to the careful planning of the event by the organisers, as well as the commitment by all stakeholders who participated.

Completion of ENABLE work packages 1 and 2. The success of the workshop constituted a major achievement in the activities for Work Packages 1 and 2 of the ENABLE project. The objectives of these Work Packages were largely completed with the accomplishment of the workshop and the direct and indirect results it produced. These objectives were:

- To raise awareness and encourage dialogue amongst policy makers within ministries in Kenya, Tanzania and Uganda on the linkages between energy services and achievement of sectoral goals and the MDGs;

- To achieve this through a consultative process ;

- To engage ministries from the sectors of energy, health, water, education, agriculture and finance;

- To strengthen linkages between the different national ministries;

- To raise awareness of the need to include energy issues in national policy, including the PRSP documents; and

- To build capacity to better understand the range of possible solutions, including renewable energy solutions and the advantages and disadvantages of different solutions.

The underlying outcome being that these ministries will now be better equipped to formulate strategies and influence national policies to increase energy service access to meet their respective ministries objectives, alleviate poverty and work towards achieving the MDGs.

Relevance to the next phase of the ENABLE project. As can be plainly seen in the results chapter, the cluster of interventions deemed to be highest priority by the participants is the question of decentralised capacity for analysis and planning. As the next phase in the ENABLE project is focusing on the development and dissemination of local-level energy sector assessment and planning tools the workshop also provided more insight into what some of the priorities in the region are with regards to local level energy planning capacity.

Links to the regional energy access strategy. The workshop, together with the subsequent EAC Energy Committee meeting, highlighted that there are indeed important links between the focus on local level planning of the ENABLE project and the aspects of regional cooperation when energy planners are faced with coupling energy sector interventions to meeting the development objectives agreed on the national level.

Dissemination activities. As the workshop was so tightly coupled to the EAC regional process leading up to the CSD14 meeting in New York in May 2006, high visibility was ensured not only of the ENABLE project but also more substantively of the outcomes of the workshop.

Identification and Consensus. The workshop successfully brought out a consensus on the major elements that need to be considered in the eventual strategy, EAC workplan, and investment programmes and the priority activities associated with these elements (which essentially constitute a draft framework for the regional strategy and implementation framework). To achieve a broad agreement on a programme framework the workshop deliberately focused on energy access content based on the four regional energy targets. Broader issues such as process, timing, institutional roles, etc. were not sufficiently addressed for the purposes of a regional strategy.

Next steps. The results of the workshop fed directly into the 10th meeting of the EAC Energy Committee which was held back to back with the workshop. The EAC further synthesised the results and formulated 14 recommendations to the EAC Council of Ministers and Head of State. The Council of Ministers considered and approved the recommendations on the 29th of March, 2006. The recommendations in themselves are reflective of and provide the basic framework for a regional strategy and for the workplan that will be eventually adopted by the EAC Energy Committee.

The next step is the development of a regional strategy that will include the following elements:

1. The context, background and underlying analysis used in developing the regional strategy.

2. A strategic approach for meeting the targets. This strategy will identify key objectives, targets and MDG indicators as well as a discrete set of programmes with clear goals that together will enable EAC to meet its targets.

3. An implementation plan to execute the strategy including a regional action plan and set of investment programmes.

4. The institutional framework necessary to implement the plan including roles and responsibilities between the EAC regional body and individual government entities.

5. An investment plan that will provide ballpark quantification of near, medium and long term funding requirements.

6. A funds mobilising strategy including donors, cross sectoral government ministries and carbon and development finance.

Agreement of the detailed outline of the strategy document will be approved by the EAC in the beginning of June 2006. A draft version of the regional strategy will be a core document to be shared by stakeholders including donors, public sector, private sector, NGOs and beneficiaries.

Approval of the strategy document by Heads of State will give it the legitimacy and weight needed to put key funding activities in place.

Annex 1: Participants list

1	Isaiah Majembe	Amwanzo	Ministry of Water and Irrigations	Kenya
2	Everyn	Anupi	Ministry of Education	Kenya
3	Anders	Arvidson	Stockholm Environment Institute (SEI)	Sweden
4	Benon	Bena	Ministry of Energy and Minerals	Uganda
5	Kalisa John	Bosco	Rwanda Private Sector Federation	Rwanda
6	Jonathan	Duwn	UNDP	Rwanda
7	Anne Lie	Engvavall	SIDA	Tanzania
8	Chris	Gakahu	UNDP	Kenya
9	Joel	Gitonga	Ministry of Health	Kenya
10	Martin	Heya	Ministry of Energy	Kenya
11	Ray	Holland	GTZ	Germany
12	Bariki	Kaale	TASONABI	Tanzania
13	Eng. B.K.	Kabanda	Ministry of Water, Lands and Environment	Uganda
14	Jacqueline	Kabari	UNDP	Kenya
15	Elizabeth Kyotungire	Kaijuka	IT POWER	Uganda
16	Hezron	Kajange	Ministry of Education	Tanzania
17	Joseph	Kakunda	Ministry of Water	Tanzania
18	Simon	Kalanzi	Ministry of Energy and Minerals	Uganda
19	Savinus	Kessy	UNDP	Tanzania
20	Margaret	Lwanga	East African Energy Technology Network	Uganda
21	Daniel	Macharia	IT POWER Eastern Africa	Kenya
22	Jackson	Maina	Ministry of Energy	Kenya
23	Livinus	Manyaga	Kakute Limited	Tanzania
24	Nelson	Manyeki	Ministry of Energy	Kenya
25	Jean Christian	Marcel	Transenergie	France
26	Eugenio	Molini	molini - managing complexity	Sweden
27	John K.	Mungai	Ministry of Agriculture	Kenya
28	Daniel	Mwakasungula	Ministry of Health	Tanzania
29	David	Mwangi	Kenya Power and Lighting Co. Ltd.	Kenya
30	Eng. James L.	Ngeleja	National Environment Management Council (NEMC)	Tanzania
31	Ashington	Ngigi	IT Power Eastern Africa	Kenya
32	Sarah	Ngigi	IT Power Eastern Africa	Kenya
33	Elizabeth	Ngoye	Tatedo	Tanzania
34	Mattias	Nordström	Stockholm Environment Institute (SEI)	Sweden
35	Paul	Nteza	UNDP	Uganda
36	Elkanah	Onguti	Ministry of Planning and National Development	Kenya
37	Stephane	Pouffary	ADEME	France
38	Chris	Purcell	IT POWER South Africa	South Africa
39	Estomiah N.	Sawe	Tatedo	Tanzania
40	Gerald	Scholz	Stockholm Environment Institute (SEI)	Sweden
41	Francis	Songela	Tatedo	Tanzania
42	Katerina	Syngellakis	IT Power	United

43	Daniel	Theuri	Practical action	Kenya
44	Kayonga J. Marie	Vianney	ENEDOM	Rwanda
45	Prosper A.M.	Victus	Ministry of Energy and Minerals	Tanzania
46	Arnold	Waiswa Ayazika	National Environment management Authority(NEMA)	Uganda
47	Gregory	Woodsworth	UNDP	Kenya
48	Julius	Zedekiah	Ministry of Agriculture	Tanzania

Annex 2: Agenda

Towards a Regional Strategy and Coordinated Implementation Framework to Scale-up Modern Energy Services in East Africa

13- 15 March 2006 in Arusha, Tanzania

Monday 13 March

08.00 – 09.30	Registration	
SESSION 1	**INTRODUCTION AND VISION**	
09.30 – 09.45	Opening of the Workshop and Introduction	Prospus Victus,Chair of the EAC Energy Committee
09.45 – 10.00	Presentation of the targets to scale-up modern energy services in East Africa	Gregory Woodsworth, UNDP
10.00 – 10.15	Overview of the ACP-EU Energy Facility	Ray Holland, EUEI Partnership Dialogue Facility
10.15 – 10.30	Workshop objectives and boundaries	Katerina Syngellakis, IT Power
10.30– 10.45	Workshop methodology	Eugenio Moliní, SEI
10.45 – 12.00	Implications of meeting the targets/Envisioned future	Group discussions
12.00 – 13.00	LUNCH	
SESSION 2	**ENERGY SERVICES FOR COOKING**	
13.00 – 13.15	The specific challenges of meeting the target related to energy services for cooking	Francis Songela, TaTEDO
13.15 – 14.15	Identification of actions needed to achieve the target related to energy services for cooking	Group work with facilitators
14.15 – 14.45	Break	
14.45 – 15.00	Introduction to group work	ENABLE
15.00 – 16.15	Synthesising, clustering and organising of the material resulting from the group work on the actions needed to achieve the target related to energy services for cooking	Group discussions with facilitators
16.15 – 16.30	Closing the first day's work	ENABLE/UNDP

Tuesday 14 March		

SESSION 3	MODERN ENERGY SERVICES FOR ALL URBAN AND PERI-URBAN POOR	
09.00 – 09.15	Introduction to the specific challenges of meeting the target related to modern energy services for urban and peri-urban poor	Anders Arvidson, SEI
09.15 – 10.15	Identification of actions needed to achieve the target related to modern energy services for urban and peri-urban poor	Group work with facilitators
10.15 – 10.45	Break	
10.45 – 12.00	Synthesising, clustering and organising of the material resulting from the group work on the actions needed to achieve the target related to modern energy services for urban and peri-urban poor	Group work with facilitators
12.00 – 13.00	Lunch	

SESSION 4	MODERN ENERGY SERVICES FOR RURAL INSTITUTIONS AND COMMUNITIES	
14.00 – 14.15	Introduction to the specific challenges of meeting the target related to modern energy services for rural institutions and communities	Chris Purcell, IT Power South Africa
14.15 – 15.15	Identification of actions needed to achieve the target related to modern energy services for rural institutions and communities	Group work with facilitators
15.15 – 15.45	Break	
15.45 – 17.00	Synthesising, clustering and organising of the material resulting from the group work on the actions needed to achieve the target related to modern energy services for rural institutions and communities	Group work with facilitators
17.00 – 17.15	Closing the second day's work	

Wednesday 15 March		

SESSION 5	WHAT HAVE WE FORGOTTEN TO SPEAK ABOUT?	
09.00 – 09.30	Opening	Eugenio Moliní, SEI
09.30 – 10.15	Open Space Session A	Group work with participants as facilitators
10.15 – 11.00	Open Space Session B	Group work with participants as facilitators
11.00 – 11.30	Break	
11.30 – 12.15	Assigning priorities to actions identified as necessary to achieve the EAC-scaling up targets.	All
12.15 – 12.30	Handing over of the results	Anders Arvidson, SEI
12.30 – 13.00	Closing	Mr Ahmada Ngemera, EAC Deputy Secretary General

Annex 3: Themes and prioritisation created in the workshop

The following section brings out the key messages that emerged on the themes identified by the coordination team and prioritised by all the participants in the workshop. Table 15 presents the activities clustered into thematic clusters in descending order of priority. Subsequently a few summarising points related to each of the clusters are made.

Theme	Number of votes
Financing	28
Policies, Strategies, Regulation	22
Promoting technologies & services	19
Joint initiatives, i.e. investments in NG.	16
Capacity strengthening	15
Planning	14
Enterprise development	13
Knowledge management	10
Political will: sensitization of government and ministers	8
Reducing barriers	7
Stakeholder participation	7
Technical and service delivery	6
Awareness creation & Information dissemination	6
Monitoring & evaluating outcomes	4
Lobbying & advocacy	1
Research & Development	1

Table 15 Prioritised clusters in descending order of priority

Financing

The thematic cluster that received the highest priority ranking by the participants was related to financing (see Table 16). The identified activities are related to changes in the use of taxes such as removing taxes and levies as well as providing tax incentives; end-user financing; financing of energy service and energy technology suppliers; diversifying and mobilising funding source to specifically achieve the targets; and improved efficiency in the use of funds.

Most of the activities in this thematic cluster are perceived as relevant on the national level and none at the local level. Activities were identified to be related to meeting targets 1, 3 and 4.

Votes	Proposed and prioritised action	Target	Level
3	Engage with credit and financial institutions in achieving the target	1	National
3	Remove taxes and levies from LPG and appliances	1	National
3	Micro-financing arrangement for energy projects	3 & 4	National
3	Create links between financial institutions and end-users	3 & 4	National
2	Design interventions and secure financing from carbon trading measures	1	Regional
2	Tax incentives for rural electrification	3 & 4	Regional
2	Reduce time in financial transactions (public sector)	3 & 4	National
2	Funds made available directly at local level/procurement made by the local implementing body	3 & 4	National
2	Joint public/private funding of micro-enterprises	3 & 4	
1	Increase donor and private sector investments	1	Regional
1	Secure funds from facilities targeting the achievement of the millennium development goals	3 & 4	Regional
1	Government to provide guarantees to banks so that they can lend to businesses	1	National
1	Favourable terms for loans to invest in rural energy services	3 & 4	Regional
1	Establish a fund for financial institutions whereby soft loan is given to private sector	1	National
1	cost implication of switching to modern cooking services	1	Regional

Table 16 Prioritised interventions related to the financing theme (28 votes)

Policies, Strategies and Regulation

Most of the prioritised actions related the policies, strategies and regulation (see Table 17) are proposed to take place on a regional level. This relates to harmonisation of standards, legal frameworks, policies, regulation and taxes to accelerate the achievement of the targets by facilitating the engagement of the private sector and other actors. The prioritisation suggests that participants want to see actions that stimulate a higher regional integration and a common regional market to achieve the targets.

Another sub-set of the priorities actions under this theme are related to strategies to raise and make more efficient cross-sector collaboration and to raise and make use of capacitates at the district levels.

It is also proposed that energy efficiency should be considered in strategies to meet the targets, that gender should be mainstreamed and that efforts should be made to formalize a common regional strategy that enhances sustainable biomass utilisation.

Votes	Proposed and prioritised action	Target	Level
5	Formalize a regional strategy that enhances sustainable biomass utilization	1	Regional
3	Gender mainstreaming	3 & 4	Regional
2	Common standards for energy equipment	3 & 4	Regional
2	Put in place legal framework to enable private sector participation e.g. in electricity distribution	3 & 4	Regional
2	Streamlining collaboration in energy in each ministry	1	National
2	Energy efficiency approach	3 & 4	National
2	MDGs localized at district level	2	Local
1	Multi-nationals, different standards	1	Regional
1	Cross-border cooperation in trade	1	Regional
1	Harmonization of policies, regulations and operations of taxes	3 & 4	Regional
1	Promote energy guidelines for institutions in health, water in education	3 & 4	National
1	Integrated development approach	2	Local

Table 17 Prioritised interventions related to the theme Policies, Strategies and Regulation (22 votes)

Promoting technologies & services

All of the priorities actions related to the theme promoting technologies and services are related to target 1 (see Table 18). Most are at a national level, but there are also proposed actions at local and regional levels. The proposed actions can be sub-divided into three categories. The first is related to actions that can enhance the understanding of the demand and available resources and options in terms of energy carriers that can meet the demand in a sustainable way. The second is actions that can diversify the mix of energy carriers relevant to meeting the targets such as development of supply of gaseous and liquid biofuels to meet the target. And the third is related to actions that can support and promote local production of technologies as well as decentralised delivery of energy services.

Votes	Proposed and prioritised action	Target	Level
5	Improve charcoal production efficiency	1	National
3	Promote local production of energy services and equipment	1	National
3	Develop liquid and gaseous biofuels	1	National
2	Use local materials and people to produce improved stoves	1	Local
1	Diversify the regional energy mix	1	Regional
1	Forecasts of sustainable biomass supply & demand	1	Regional
1	Resource assessments	1	National
1	Demonstration activities to train people for the use of alternative cooking systems	1	National
1	Dissemination of existing technologies through NGOs	1	Local
1	Decentralise manufacturing of the products	1	Local

Table 18 Prioritised interventions related to the theme Promoting technologies and services (19 votes)

Joint initiatives

Some of the actions grouped under the theme Joint Initiatives (see Table 19) give priority to mainstreaming energy and enhancing cross-sector collaboration when it comes to energy

service delivery planning at the district and municipal level. At the regional level prioritised actions are related to joint regional planning and sharing of costs and resources to address target 1 and related to establishment of an information dissemination centre.

Votes	Proposed and prioritised action	Target	Level
6	Mainstreaming energy in district and municipal planning	2	National
3	Sharing costs, joint implementation, joint resources	1	Regional
2	Joint master plan, joint investment	1	Regional
2	Ensure cross sector coordination in infrastructure development (e.g. road development connected to grid extension), use more way leave for grid /pipeline)	3 & 4	National
1	Establish information dissemination centre	1	Regional
1	Have pilot project	1	Regional
1	Coordination committee at district level	3 & 4	Local

Table 19 Prioritised interventions related to the theme Joint Initiatives (16 votes)

Capacity strengthening

The prioritised actions under the clustered theme Capacity Strengthening (see Table 20) are proposed to take place across all levels, regional, national and local. One sub-category that stands out as highly prioritised under this theme is strengthening the capacity at the district and municipal levels to plan for energy delivery to meet the targets and to make the relevant links between energy and poverty reduction. Another sub-category is suggesting to strengthening the capacity of local energy service and energy technology suppliers.

Votes	Proposed and prioritised action	Target	Level
4	Build capacity at local level	3 & 4	Local
2	Infrastructure development to access rural communities	3 & 4	National
2	Training energy technology artisans	3 & 4	Local
1	Governments should invest in infrastructure	1	Regional
1	Strengthening regional institutions	1	Regional
1	Training of the planners to be able to link energy and poverty	1	Regional
1	Mobile training programmes/ e-training	1	National
1	Take gender issues and cultural aspects into consideration	3 & 4	National
1	Train local government to assess the energy capacity and practices	3 & 4	National
1	Reducing maintenance costs through proper incentives, consideration of life-cycle-cost in procurement and adequate training for maintenance	3 & 4	Local

Table 20 Prioritised interventions related to the theme Capacity Strengthening (15 votes)

Planning

Two areas stand out as highly prioritised under the clustered theme of planning (see Table 21). One is to carry out strategic studies of alternative energy supply strategies under different demand scenarios to meet the targets in ways that are environmentally, socially and economically sustainable. Another is to carry out planning in a way that involves

stakeholders from relevant levels and across sectors. Most of the actions proposed under the theme planning are at a national level and all are related to achieving target 3 & 4.

Votes	Proposed and prioritised actions	Target	Level
4	Initial planning be integrated across sectors to benefit from the energy services	3 & 4	National
3	Carry out strategic studies of alternative energy service supply systems to meet the target (environmental and reduce costs)	3 & 4	National
2	Draw a regional rural energy master plan	3 & 4	Regional
2	GIS map for different energy resources at different sites	3 & 4	National
1	Power demand assessment: 5,10,20 years	3 & 4	National
1	Information sharing across sectors	3 & 4	National
1	Community involvement to identify and implement option to reach the target	3 & 4	Local

Table 21 Prioritised interventions related to the theme Planning (14 votes)

Enterprise development

Supporting and promoting the establishment of small and medium scale enterprises such as rural energy service companies was given quite a lot of priorities by the participants. All the prioritised activities related to the theme Enterprise Development (see Table 22) were seen as relevant on a local or a national level.

Votes	Proposed and prioritised actions	Target	Level
3	ESCOs promoted for MFPs and communities at the lower levels	3 & 4	Local
2	Create awareness on productive use of modern/alternative energy to private sector, e.g. demonstrations	3 & 4	National
2	Promote creation of SMES on energy (ESCO)	3 & 4	National
2	Government to create incentives for NGOs and private actors producing energy service equipment	1	National
2	Encourage small local enterprises (i.e. briquette making)	1	Local
1	Private sector involvement: lowering risk for PS involvement in energy projects, information on customers and demand level	1	National
1	Help private sector to take root - provide incentives in the first years	1	National

Table 22 Prioritised interventions related to the theme Enterprise Development (13 votes)

Knowledge management

A message that comes out of the thematic cluster Knowledge Management (see Table 23) is to improve the information basis relevant to achieving the targets. This means better mapping needs at the district level and using existing institutional structures to do this.

Votes	Proposed and prioritised action	Target	Level
6	Needs assessment at district level	3 & 4	Local
1	Document regional strategy	1	Regional
1	Exchange best practices on operation of ESCOS (reg. Level)	3 & 4	Regional
1	Investment profiling	1	National
1	Systematic update of existing info using existing institutions	3 & 4	National

Table 23 Prioritised interventions related to the theme Knowledge Management (10 votes)

Political will

Under the thematic cluster Political Will (see Table 24) the participants identified actions relating to sensitisation and awareness creation targeting government and ministers as one sub-theme. Another sub-theme was actions that would lead to good governance. Many of these actions were identified as actions that could take place at a regional level.

Votes	Proposed and prioritised action	Target	Level
4	Good governance, government to be committed to achieving the targets	3 & 4	Regional
1	Sensitization of government and ministers	1	Regional
1	Policy makers must be aware of the energy services promotion	1	Regional
1	President (head of state) influence involvement and commitment	1	National

Table 24 Prioritised interventions related to the theme Political Will (7 votes)

Stakeholder participation

The thematic cluster stakeholder participation (see Table 25) can be summarised into two types of sub-activity groups. One is related to an increased involvement of the private sector in meeting the targets through public private partnerships and the other is related to local stakeholder participation (non-governmental organisations and community based organisations) not only in the planning and assessment phases but also in implementation and delivery of energy services and in monitoring the results.

Votes	Proposed and prioritised action	Target	Level
2	Involving private sector in national master plans for electrification	3 & 4	Regional
1	PRA participatory rapid appraisal	1	Regional
1	Govt. Role: partnerships with private sector to facilitate infrastructural development	1	National
1	NGO involvement in evaluation of Socio impact	3 & 4	National
1	Coordination committees at local &community level	3 & 4	Local
1	Involvement of communities in the planning, implementation and monitoring	3 & 4	Local

Table 25 Prioritised interventions related to the theme Stakeholder Participation (7 votes)

Technical and service delivery

Under technical and service delivery theme (see Table 26), the prioritised actions relate to community ownership and responsibility. A solution to this which is identified is the design of standard energy packages which allows for decentralised involvement in planning and decision-making on energy services. Energy efficiency practices also came out as a prioritised activity under this theme.

Votes	Proposed and prioritised action	Target	Level
3	Community ownership and responsibility	3 & 4	Local
2	Emphasizing energy efficiency practices through use of efficient appliances leading to savings in energy that could be used for other services	3 & 4	National
1	Design standard energy packages	3 & 4	Regional

Table 26 Prioritised interventions related to the theme Technical and Service Delivery (6 votes)

Awareness creation & Information dissemination

Information sharing on best-practices on a regional level came up as a prioritised activity under the theme Awareness creation and information dissemination (see Table 27). There were also several prioritized activities that relate to awareness creation regarding energy services and energy efficiency targeting end-users.

Votes	Proposed and prioritised action	Target	Level
1	Sharing of information/data/best practices	1	Regional
1	Awareness/training: exhibitions, fairs should be used for training & awareness on biomass technologies	1	Regional
1	Educational programmes focused on R&D		National
1	Message on cost (benefit) energy efficiency to rural population		National
1	Consumer awareness and information (disseminated at district level)	1	Local
1	Drama productions, songs & plays	1	Local

Table 27 Prioritised interventions related to the theme Awareness Creation and Information Dissemination (6 votes)

Monitoring & evaluating outcomes

Developing monitoring and evaluation methods, setting targets and indicators and allocating resources to monitor and evaluate impacts and strategies came out as prioritised activities under the theme monitoring and evaluation outcomes (see Table 28).

Votes	Proposed and prioritised action	Target	Level
2	Tracking survey to monitor implementation	3 & 4	National
1	Develop realistic M&E method: - set target, - resources	1	Regional
1	Setting measurable targets/indicators is paramount to successful monitoring & evaluation of the energy services	3 & 4	National

Table 28 Prioritised interventions related to the theme Monitoring and Evaluating Outcomes (4 votes)

Lobbying and Advocacy

Under the theme lobbying and advocacy (see Table 29), mass awareness campaigns on the consequences of indoor air pollution and information on alternatives was prioritised as an action.

Votes	Proposed and prioritised action	Target	Level
1	Awareness for masses:-smoke, -alternatives	1	Regional

Table 29 Prioritised interventions related to the theme Lobbying and Advocacy (1 vote)

Research and Development

Research on more effective biomass technologies was the prioritised action under the theme research and development (see Table 30)

Votes	Proposed and prioritised action	Target	Level
1	Research institutions to research on more effective biomass technologies	1	Regional

Table 30 Prioritised interventions related to the theme Research and Development (1vote)

Annex 4: Results from the open space session[1]

SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of EAC government to scale up provision of modern energy to rural areas

Significant efforts for scaling up modern energy services to rural areas have been made with different degrees of success – some reasons for failures include the low income situation in target communities

- Factors leading to successes or failures should be critically analyzed

- Institutional arrangements for scaling up modern energy services should be examined from village to regional level – with added value from each level – through proper sharing of responsibilities

- Sustainability of existing energy services to local communities should be ensured to provide room for fuel switching (efforts should me made to meet the current energy needs of rural communities)

- Funds for scaling up modern energy programmes should reach the local communities (he bulk of the funds) and not to be tied on overhead costs at national or regional level

- The funds should remain in their area to build their capacity in the area of supply, processing and maintenance.

Environmental concerns being integrated at all levels

- Strategic environmental assessment (SEA) carried out for plans, programmes and policies

- Training planners at the local levels in SEA

- Development of environmental baseline indicators

- Carrying out environmental audits on existing facilities

- Capacity building at local level on environmental management

- Create awareness on the negative impact associated with energy sources. This should be realized by leaders in civil society.

- Monitoring to verify whether the issues of concern identified at the planning level are being implemented

- Encourage sector wide approach for planning

- Formulation of laws and by-laws and their enforcement to ensure that resources are put aside for the maintenance of the energy sources

- Political will

- Create energy sources that are multi-purpose

Gender issues in energy planning

- The committees to plan for energy should be gender balanced

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[1] what have we forgotten to talk about?

- The technology should be multifunctional

- Energy planning should mainstream gender issues at all levels

- Gender analytical tolls should e integrated in the energy needs assessment

- Women should be specifically targeted in capacity building to develop their skills in using mechanical energy, community artisans etc.

- Gender indicators should be integrated in the energy monitoring tools

- A gender specialist should be part of the implementation team at all levels

- The appliances developed should be gender sensitive

- The civil society should play an important role in raising gender awareness and available energy appliances

- Research on appropriate technology in the region

- Target subsidies towards women to increase the access to energy appliances

- Empower women on the committee to be able to articulate women issues

- Affirmative action to ensure women are brought at the forefront in energy issues and addressed

Corruption

Underlying Causes

- Unnecessary delays for connection

- Utilities companies are monopolists encouraging inefficiency

- Highly centralized and inefficient procurement

Proposed Measures

- Establishment of monitoring follow up mechanism

- Liberalisation of connection and or contracting out connection

- Introduction of transparency in utilities and accountability and audited accounts

- Reinforce good /timely procurement on utilities

- Establishment of regulatory authorities

- Establishment of performance contracting

Effects of immigration on energy planning

- Increase in population → deficit in projected demand of modern energy services

- Effects on the environment → loss of biodiversity, increase in land use

- Lack of funding to meet existing requirements

- Illegal issues of available energy → electricity distribution networks (sharing), health hazards (unprofessional connections, cholera)

- Inadequate food and other services

Solutions

- Government should monitor population pattern on continuous basis to assist continuous review on energy regional pattern

- Provision and expansion of some services to areas affected

- Strengthening of institutions concerned with environment to be strict with environmental laws on the protected areas (swamps, drought movement)

- Government to provide counter part funding to bridge the gaps

- Explore possibilities of reallocation of more funding from funding body/agents

- Private sector partnership for funding (emergency mitigation funding for such eventuality)

- Do not ignore energy needs of nomads and its impact on the environment

- Water services → institutions – challenge (livestock, food)

Risk awareness on utilization of energy

- Enforcement of the law on utilization → illegal connections (unprofessional)

- Deliberate education programmes on awareness

- User guides on equipment by manufacturers and suppliers

- School programmes on the use of electricity and dangers associated with electricity (workshops, programmes and campaigns) – companies in collaboration with schools

- Energy to management and conservation (wastage, encourage high efficiency equipment, zero rating in purchasing and consumption), excess energy to be used elsewhere

- First aid awareness in the event of accidents (demonstration campaigns in local and urban areas)

- Introduction of modern energy technologies to reduce respiratory illnesses (improved stoves → reduced smoke). Avoid use of plastics as fuels.

Challenge:

- Quality and quantity vs. global Markey and economic empowerment

Sustainability of modern energy services

This is an issue looking at how the modern energy services can be sustained through maintenance, adaptability and creation of productive markets

- Creation of local associations that will help the local communities with maintenance work and they are in position to pay in instalments

- Creation of markets will help local getting money to pay for the maintenance costs

- Identification of the productive business that can benefit from the modern energy services.

- Integration with other multi-sectoral programmes within the communities will help on the sustainability of modern energy services.

- Creation of a rural energy agency will help in provision of subsidies and counterpart funding to sustain modern energy services

Creation of productive markets

- Identification of markets for products being produced by the locals

- Adding value to the products produced at the local level in order to attract markets and get a better income

- Linking up with enterprise developments like micro-financing organizations

- Assist private sector entrepreneurs to establish production in rural areas

- Start where there is a guaranteed market (accessible, planning of buyers)

- Providing information about productive use opportunities using modern energy services

The role of legal authorities at district level to deliver modern energy

- Targets to be integrated in district development plan

- Energy representation at district and lower levels

- Capacity building in energy and environment at all levels

Establishment of a regional e-network of champions for energy/implementation of programmes

Purpose of network

- Sharing best practices

- Joint solving of bottlenecks in implementation

- Answers to questions and contribution to topical issues

- Join preparation and review of documents

- Reporting progress of projects/implementation

- Sharing knowledge/information (e-newsletter)

Needs

- Champions to sign in

- Establish focal point/facilitator

Initial actions

- Each member/champion establishes an email account on his/her desktop

- Volunteer facilitator identified

Individual household to reach the targets

- Assessment of household needs and priorities

- Priority to pay for energy and affordability

- Engagement of households in the various programmes

- Supply of energy should be accompanied by an allowance activity to enable household to pay for energy

- Promote biomass energy generation to engage household to provide biomass