



## CASE STUDY

# Mainstreaming and sector-wide approaches to sustainable energy access in Ethiopia



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## ABSTRACT

Access to modern and sustainable energy services is a real challenge for countries where the majority of rural population is living in austere poverty. The importance of sustainable energy access is recognized in many developing countries, and there is growing international development assistance in the sector. However the achievements are still meager particularly in Sub Saharan African countries. Most countries often fail to prioritize sustainable energy services at the local level as a means to achieve economic growth at the national level as well as the Millennium Development Goals. This study is focused on Ethiopia and investigates the existing challenges and future prospects of mainstreaming sustainable energy access into the development planning process of the country, and the implications this may have for international donor agencies, national policy makers, private actors and local energy planners. The paper analyzes the institutional framework, sector policy and financial mechanisms in the country. It also discusses operational modalities of state and non-state actors in the process, and extracts policy recommendations.

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## 1. Background of the study

Energy access deeply influences the life of rural communities. It is fundamental to all aspects of human welfare, including access to clean water, health care, education and agricultural productivity. Still 2.7 billion people lack access to efficient and clean energy for cooking and heating and 1.2 billion are without access to electricity. About 84% of this deprived population lives in rural areas of either Sub-Saharan Africa or South East Asian countries [1]. Unfortunately, energy access has never been a top priority in Sub-Saharan African national and regional development plans and strategies. Many studies have identified the low income level of the

rural poor, and thus affordability, as a major challenge for the provision of modern energy services in the Sub-Saharan Africa region [2–4]. Still, electrification will not automatically occur as a result of higher per capita income. In fact, access to electricity is higher among low income populations in Asia and Latin America if compared to Sub-Saharan Africa [5,6]. The institutional framework and prevailing electrification policies and programs have a great role to play in improving the access rate [7,8].

The synergies and linkages between sustainable energy access and climate change mitigation and adaptation have been subjected to increasing attention [9–11]. The energy transition and climate vulnerability are closely connected in Least Developing Countries (LDCs), where rural communities are struggling over poverty and declining natural resources [12]. Several studies have highlighted the need for sustainable and

affordable energy services to rural poor communities as a means to achieve the Millennium Development Goals (MDGs) and improve the human development index (HDI) [13–15]. Moreover positive correlation is also found between the expansion of modern and sustainable energy services and macro and micro economic improvements [6,16–18]. Fortunately, the issue of sustainable energy access has ascended the global policy agenda and is now a central theme in international development policy making. In 2012, the United Nations General Assembly established the international initiative of Sustainable Energy for All (SE4ALL) to facilitate universal access to modern energy services by 2030. The initiative seeks to actively engage a wide range of actors including governments, public and private sector organizations, civil society and energy users themselves, and prioritizes access to electricity and clean energy for cooking, as well as productive uses of energy

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[19]. All countries are invited to “opt in” to the Sustainable Energy for All Initiative, and a range of country support packages are offered depending on each country’s needs. Ethiopia is among those countries with large population lacking access to sustainable energy services, and could benefit from such a significant package of global support.

However, integrating sustainable energy access into development plans is a formidable challenge and requires participation of diverse stakeholders from local community-based organizations to international development partners. The main objective of this paper is to explore how sustainable energy access can be used for the achievement of national development goals. This is done by investigating the challenges and future prospects of integrating the issue of sustainable energy access into development plans and policies in the country. In this context, the paper examines the roles and approaches of state and non-state actors, and their role in planning, financing and implementing sustainable energy access programs. The analysis provides insights into how sustainable energy access mainstreaming at the national level can create better coherence and reduces implementation barriers, thus attracting donors, investors and implementing agencies. This would also enhance the impact of vital development initiatives such as climate change financing instruments being applied in the region.

Following this background, the research methodology adopted in this study is discussed in Section 2. The theoretical framework used for the analysis is highlighted in Section 3. The context of energy access in Ethiopia, together with strategic considerations and priorities in the country’s development plans are critically reviewed in Section 4. The three main rudiments of mainstreaming and sector wide approaches for sustainable energy access-institutional framework, sector policy and financial mechanisms are scrutinized in Section 5. Private sector participation as a major implementer in rural energy sector of Ethiopia is also assessed in Section 5. Strengths, weaknesses, opportunities and threats found in the rural energy sector are outlined in Section 6 to extract SWOT-driven sectoral strategies. Conclusions, lessons and recommendations are finally extracted in Section 7.

## 2. Research methodologies

The paper incorporates four main analytical elements: problem analysis, stakeholder analysis, objectives analysis and strategy analysis. Multiple sources of evidence have been used, with the principle of triangulation and search for convergence in the data collected from different sources, such as

literature, field visits, interviews and questionnaire survey. During one month visit to Ethiopia, individual meetings were arranged with the directors and managers of selected state and non-state actors. Eleven formal and open ended interviews were made with state and non-state actors involved in the Ethiopian rural energy sector. Before the field visit, review of relevant literature and secondary data related to the subject was accomplished and served as guidance for the interviews. The field visit helped to identify the major areas to be focused in the analysis and created the basis for designing a questionnaire survey. The role and approaches of stakeholders, stakeholders’ views on government initiatives and policies, specific implementation challenges, models of cooperation and collaboration and financial and institutional constraints were some of the key areas examined within the questionnaire survey.

Following field visit with interviews, semi-structured questionnaires were developed for different stakeholder categories (state and non-state actors) aimed at data collection and to capture the perception of the stakeholders regarding the issues related with mainstreaming and sector wide approaches in rural energy sector. The questionnaires were sent through emails. Thirteen respondents (out of 16) replied to the questionnaire. The survey was conducted randomly and covered almost all the major development partners working actively in the rural energy sector in Ethiopia (see Table 6). The information and perspective of the stakeholders were analyzed and structured to guide the process of mainstreaming and Sector Wide Approach (SWAp) which has been seen as an effective approach by the international community. SWOT analysis has been used as a tool to identify future strategic options and the main characteristics of the Ethiopian rural energy sector.

### 3. Conceptual framework: elements of mainstreaming approach and principles of sector wide approach

The process of development planning starts from an ideological paradigm which gives direction for national strategies. Strategies address the local needs of a country but are often influenced by global factors. Eventually, strategies are interpreted into specific policies and projects which will target societal needs in a given context [20]. The experience and knowledge gained along the way offers feedback which allows strategies to be redirected and policies and projects to be redesigned. However, most development projects and programs in LDCs such as Nepal and Ethiopia are started with the support from bilateral and multilateral donors, thus not necessarily relying on pre-defined long term strategies or specific

sector policies. As the program moves ahead, policies are often drafted to support the implementation of such development programs. Although the policies thus formulated emerge from genuine needs and can be instrumental in the development process, there is also risk that such donor-driven policies do not necessarily reflect the nation’s priorities [7,21]. Clear strategies and policies are needed for the successful implementation of rural energy projects and programs [22]. Therefore, there is need for a discussion on the elements of mainstreaming of energy access into national development strategies and principles of sector wide approach as proposed here (Fig. 1).

Mainstreaming sustainable energy access is bringing the energy issues into the main political agenda, integrating them into development strategies, plans and policies. Raising awareness, creating strong political will and prioritizing the issue in the government decision making process, as well as strengthening institutions are some of the key elements of the mainstreaming approach. Mainstreaming efforts currently being made for energy access in many LDCs are insufficient because the current interventions are mainly at the project level and are not well fed into national policy dialogues [23,24]. A strong political commitment, appropriate institutional framework, comprehensive sectoral policy and long term financial mechanism are necessary for the mainstreaming process (See Table 1 for further details). Mainstreaming energy access is a long term and multi-stakeholder process, requiring that decentralized energy access initiatives are well integrated within national development plans with defined energy access targets [25]. Identification of development priorities and allocation of adequate resource to meet priority goals are the main responsibilities of the government. This needs to be negotiated within the government, and with other non-state actors [26]. The Sector Wide Approach (SWAp) is a process rather than a blueprint and proposes participation of all stakeholders under a common umbrella, including financial expenditures and implementation arrangements [26,27,30]. During the period (1980–2000), development assistance in Least Developing Countries (LDCs) was focused on technical support for projects and many efforts failed since perceptions of sustainability and mainstreaming were missing [28,29]. Sector wide approach can help reduce previous short falls of project-based approaches. But it is important to remember that there is no single proven version of SWAp but rather key principles to be applied progressively following a country’s conditions and priorities in the process [31]. The key principles of sector wide approach are summarized in Table 1.

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