

SAMSET

Supporting Sub-Saharan Municipalities with Sustainable Energy Transitions



Welcome to the second SAMSET newsletter

SAMSET is now in the phase of identifying sustainable energy problems and opportunities in the six partner municipalities. In this newsletter we highlight some case studies we have undertaken. We hope you find it of interest.

The SAMSET Team

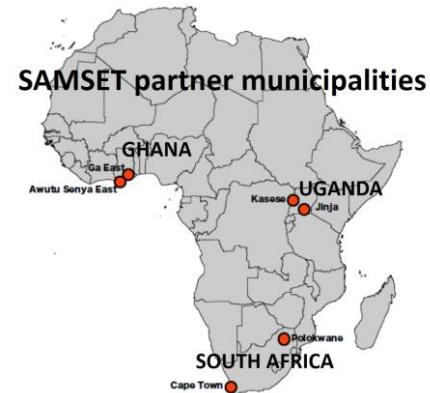
Local government: a key to sustainable urbanisation

The UN-Habitat State of African Cities 2014 report states “Upon their independence, African nations embraced a variety of imported development models. **It is now evident that all these models have failed to achieve the goals that African nations had set themselves**” (p7). The subsequent analysis points out the key role of local solutions in addressing current issues – not just local to Africa and to each country, but local to the specific urban area. This imperative is now reflected in many leading publications, where not only the need for local solutions is highlighted, but also the severe lack of capacity at this level to develop and implement these solutions. The implication is clear: **municipalities should be a far greater focus of capacity building and resource allocation within African countries if we are to meet the challenges of rapid urbanisation**. Energy has been described as the life-blood of urban activity, without it, everything grinds to a halt. Sustainable energy solutions are therefore one of the keys to a future which supports welfare and economic activity, and a competence that municipalities will need to develop.



Africa's first BRT in Lagos. 'Locally appropriate' and successful in this context, but we should not assume it is appropriate in all urban areas (Pic source: UN-Habitat State of African Cities 2014).

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SAMSET project info

About

SAMSET is a 4-year project (2013-2017) supporting Sustainable Energy Transitions in six urban areas in three African countries – Ghana, Uganda and South Africa. A key objective is to improve ‘knowledge transfer frameworks’ so that research and capacity building efforts are more effective in supporting this challenging area.

The Team

The project team includes a leading university in each of the three Africa countries – [University of Ghana](#), [Uganda Martyrs University](#) and [University of Cape Town](#) - as well as an NGO in South Africa, [Sustainable Energy Africa](#). In addition, the team includes two leading universities in the UK – [Durham University](#) and [University College London](#), and a UK consultancy, [Gamos](#).

Project funders

This project is co-funded by UK aid from the UK Department for International Development (DFID), the Engineering & Physical Science Research Council (EPSRC) and the Department for Energy & Climate Change (DECC), for the benefit of developing countries.

Project ref: EP/L002620/1

The views expressed in this project are not necessarily those of DFID, EPSRC or DECC.

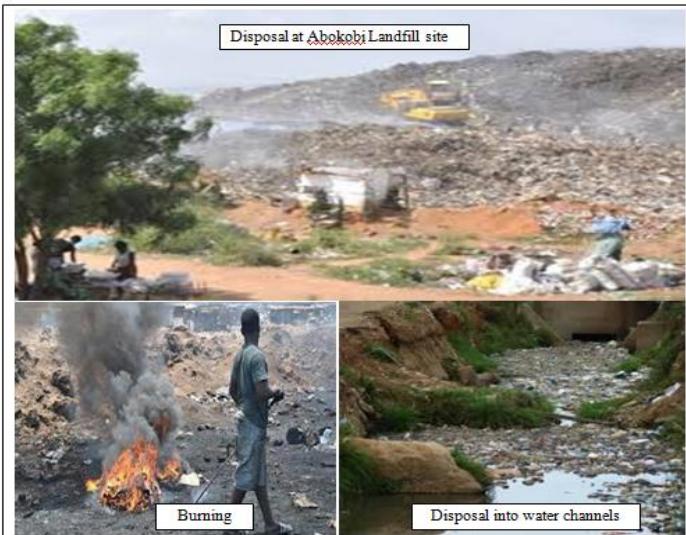
[More info: see the SAMSET website \(click here\)](#)

SAMSET case studies

The SAMSET project has produced the following case studies exploring key issues in partner countries (see **SAMSET Outputs** on subsequent pages to download these reports).

GHANA: Waste as a Resource for Energy Generation in the Ga East and Awutu Senya East Municipalities: The Policy Discourse

The study identifies municipal waste-to-energy projects as having significant potential to improve the energy supply situation, reduce environmental impact, and support waste collection effectiveness. Currently only about half of the waste generated is collected and the rest is informally dumped. Barriers to progress in this area are also identified in the study: while the overarching national policy context appears favourable, there are no incentives to facilitate waste-to-electricity projects, and data on waste and resulting energy potential is severely lacking.



Forms of waste disposal in Ghanaian municipalities – formal and informal

SOUTH AFRICA: Small-Scale Embedded Generation in South African municipalities (solar PV focus)

Solar Photovoltaic (PV) price decreases together with national electricity price increases are leading to the increased adoption of rooftop solar PV by end users which are connected to the South African electricity distribution networks (or 'embedded'). Because many municipalities are electricity distributors in the country, municipalities are having to formulate a response to regulate this practice. On the one hand it represents a positive shift to renewable energy in urban areas, on the

other hand municipalities need to grapple with potential safety, power quality and revenue loss consequences of this trend. The study describes the challenges and approaches being explored in different municipalities, and the status of national standards covering this area.



A 500kW rooftop solar PV system on a Cape Town commercial building.



LEAP is a modeling program that enables different sustainable energy futures to be assessed based on expected trends and chosen sets of interventions. It can be used for local or national-level modeling.

The Energy Research Centre at the University of Cape Town reviewed a range of models for exploring different energy futures in African cities, and found LEAP appropriate.

LEAP does not require specialist modeling skills, is tried and tested and well supported, and can be customized to match data availability.

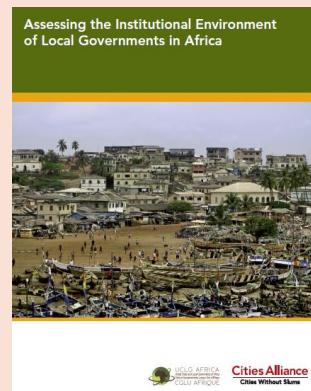
LEAP was developed by the Stockholm Environmental Institute and is free to governments and NGOs.

To download:

<http://www.energycommunity.org/>

Featured publications

Assessing the institutional environment of local governments in Africa



A first of its kind assessment of local government capacity across Africa, in recognition of their critical role in sustainable urbanization. Covers governance, planning, finances and performance indicators, amongst others (Cities Alliance and United Cities and Local Governments of Africa, 2013)

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SAMSET case studies (cont...)

SOUTH AFRICA: Joe Slovo, Cape Town: Sustainable low-income settlement densification in well-located areas

This study describes how the Joe Slovo informal settlement was upgraded using a different approach to the standard ‘box-type’ housing constructed throughout the country. Increased density on this well-located land, as well as improved passive solar design and sustainable energy interventions were implemented. While the new housing double-storey structure costs were higher than the ‘box-type’ housing, infrastructure savings were significant, and overall costs were therefore very similar.



Joe Slovo sustainable settlement (left) and old-style ‘box’ housing (right)



Transport images from Accra, Dar es Salaam, Cape Town and Kampala (top to bottom)

Other SAMSET work

Knowledge Exchange Framework

A lack of understanding of the complex operating constraints and dynamics in municipalities has often resulted in ‘knowledge generators’ (e.g. researchers and development organisations) not impacting on intended ‘knowledge recipients’ (i.e. municipalities in this case). A more effective Knowledge Exchange Framework is now being collaboratively developed and tested in the SAMSET partner municipalities. The energy transition ‘landscape’ will be mapped out and analysed to understand the potential futures being shaped through work on energy in each of the municipalities. Key to this work will be a focus on thinking about the autonomy of municipalities to intervene and shape their own energy systems, how this might be strengthened, and the lessons emerging from the six towns and cities.

Netmapping: Understanding the roles of institutions

Everyone always talks about doing a stakeholder analysis, but few people actually get around to doing it. In a complex setting like ‘Municipalities’ there are many institutions that might have some interest in clean energy transitions. For example, there are national bodies that have a policy overview, local government with local interests, civil society working both with a particular sector or with a particular interest group, and of course private sector, both large and small scale. Add a few international donors interested in clean energy and development, and international bodies interested in climate change, and you have a large list of institutions that might be interested in these issues.

However, such a list is not so interesting. Instead, we need to know whether they are influential to the project, if they are interested in the research and how they are connected to each other. A helpful tool for this is Netmapping created by IFPRI (<http://netmap.wordpress.com/>). It seeks to move stakeholder analysis away from lists, into a useful network diagram showing how institutions are connected to each other. SAMSET has undertaken this exercise in each of the countries and has a baseline report. Over the course of the project we will use this baseline to engage with the wider stakeholders and to monitor how the interest of institutions changes over time.

Featured publications...

Poor People's energy outlook

Key messages on energy for poverty alleviation



Poor people's energy outlook 2014

PRACTICAL ACTION

Important publication representing the situation with household, livelihood and community facility energy provision, and proposing minimum standards for provision of energy services (Practical Action UK, 2014)

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SAMSET Outputs and key dates

SAMSET recent outputs ([click here](#) for these and previous outputs)

1. Case Study (Ghana): *Waste as a Resource for Energy Generation in the Ga East and Awutu Senya East Municipalities: The Policy Discourse*
2. Case Study (South Africa): *Small-Scale Embedded Generation in South African municipalities (solar PV focus)*
3. Case Study (South Africa): *Joe Slovo, Cape Town: Sustainable low-income settlement densification in well located areas*
4. *Knowledge Exchange Framework: Supporting African Municipalities in Sustainable Energy Transitions* (Paper A)
5. *Energy futures modelling for African cities: selecting a modelling tool for the SAMSET project*
6. *SAMSET Netmap Baseline* (Report)
7. *Energy and Urbanisation in SAMSET Countries: Synthesis of Three Reviews of Context and Literature* (Report)

Forthcoming outputs

- *State of Energy Reports* for:
 - Jinja and Kasese municipalities (Uganda)
 - Awutu Senya East and Ga East municipalities (Ghana)
 - Polokwane and Cape Town municipalities (South Africa)
- *Voortrekker Road corridor densification in Cape Town: Energy and Carbon Emissions Analysis* (Report)
- *International literature review on sustainable energy transitions at local government level* (Report)
- *Case Study (Uganda): Financing Municipal Energy Production in Uganda*
- *An Applied Methodology to Support African Municipalities* (Journal article)
- *Knowledge Exchange Framework* (Journal article)

Key SAMSET dates

Next Network Meeting (<i>internal to project team and municipal partners</i>)	13-14 Nov 2014 (South Africa)
Continual Professional Development courses: <i>Sustainable Energy and Urbanisation</i>	South Africa: 17-21 Nov 2014 Ghana: Nov 2015 Uganda: Feb 2017
<i>Regional Sustainable Energy Transitions workshops</i> (<i>open to relevant organisations and municipalities involved in sustainable energy and urbanisation challenges</i>)	Nov 2015 (Ghana) Jun/Jul 2017 (Ghana)

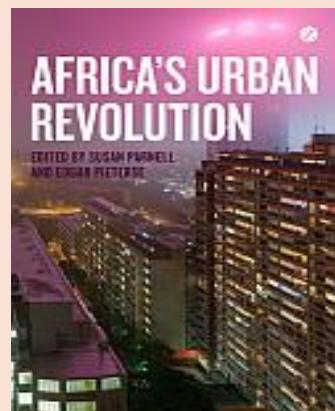
(Subscribe to this newsletter to stay informed of relevant events, date changes etc.)



Lagos from the air

Featured publications ...

Africa's urban revolution



Compilation of inputs from a range of practitioners and scholars giving insight into demographic, cultural, political, technical, environmental and economic issues surrounding African urbanisation. (Parnell S and Pieterse E (eds), 2014, UCT Press, Cape Town)



The SAMSET team at the Ghana Network Meeting (April 2014)

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SAMSET is a part of the Low Carbon Energy Development Network which links the twelve projects currently funded under the DFID/DECC/EPSRC "Understanding Sustainable Energy Solutions" programme.

The LCEDN is to become a central point of information for UK-linked research projects in the field of low-carbon energy, and energy for sustainable development. The LCEDN currently offers a database of low-carbon energy development research spanning the last decade through their website:

<http://lccdn.com/>

Featured publications ...

Strengthening climate resilience in African cities
A framework for working with informality



Strengthening climate resilience in African cities
A framework for working with informality

By Anna Taylor and Camaren Peter, African Centre for Cities

Provides a model for promoting climate compatible development in informal settlements in Africa, including 8 practical steps to implement the model. (Taylor A and Camaren P, 2014. African Centre for Cities, University of Cape Town)

SAMSET blog (click here)

(on the blog page click "Follow" to receive the blog by email)