

USES conference, Nakuru, December 2017

**Governance of a project on “Supporting African Municipalities in
Sustainable Energy Transition”**

Dr Xavier LEMAIRE

Senior Research Associate

University College London, Energy Institute

X.Lemaire@ucl.ac.uk



Energy situation & growing inequalities in African cities

- African cities consume major part of the energy of the country
 - Middle class = consumption per capita can be equivalent to middle class in European cities
 - Informal settlements = consumption can be as low as 1 tonne carbon per capita
- Huge increase in demand of transport
 - Cars needed to travel in cities
 - Segregation – urban sprawling – ghetto/private development poorly linked -
 - But most people too poor (to have a car) & inequalities are growing
 - Unreliable public transport (crowded collective minibus taxis); walking is often the only option
 - Very long commute
 - Urban environment “hostile” to pedestrians and cycling

Poor local urban governance in African cities

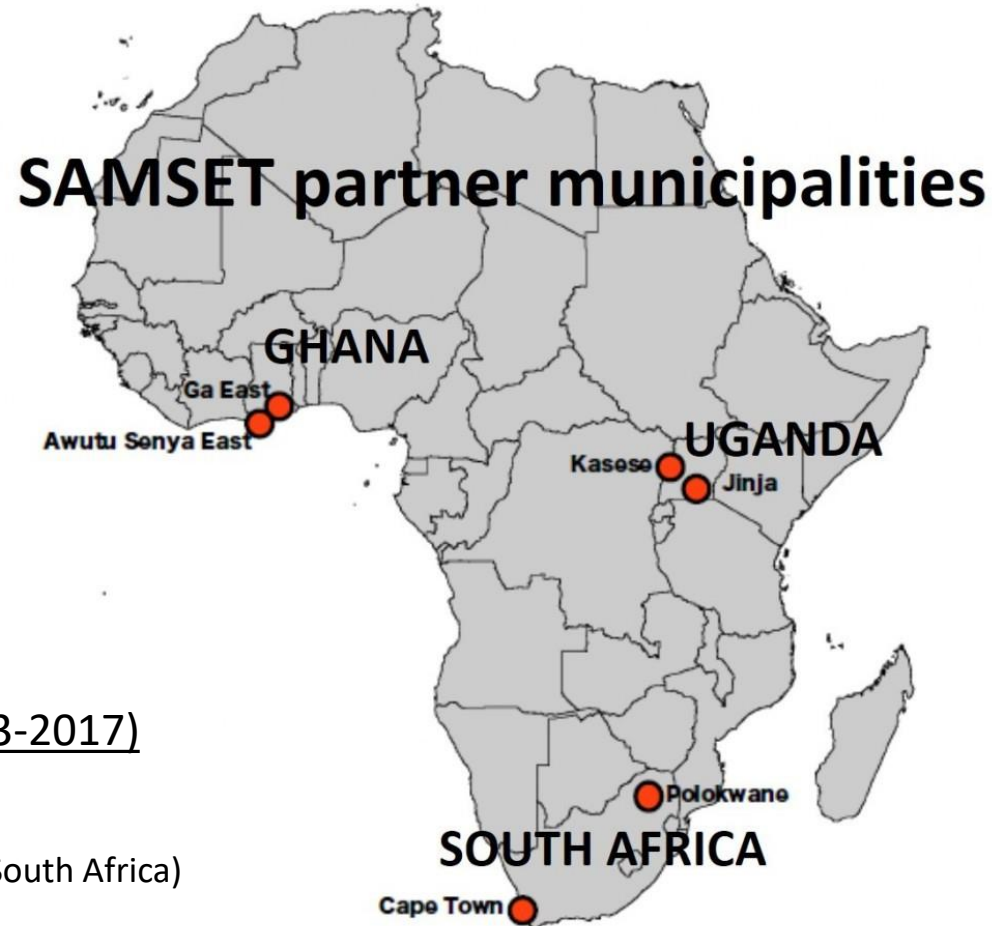
- Limited (political) power – decentralisation
- Limited financial and human resources of local authorities
 - Local fiscal resources sometimes non-existent
- Lack of enforcement of regulations and laws
- Private initiatives vs public good
 - Informal settlements
 - Private developers
- Lack of overall coordination/planning
- Unsustainable growth
 - Maximise consumption of energy
 - Mountains of waste
 - Treatment of water? No sewage system,...
 - Traffic congestion, air pollution

How to improve urban governance

- No local authorities can work without income
 - Collect taxes
 - Land value capture from new development: municipalities to capture part of land value uplifts that private development and planning activity generates.
- Proper staffing
- Recognition of the role of cities in fighting climate change → decentralisation
- Shift of political priorities for cities inclusive & sustainable
- Networks of expertise

Six municipalities partner of a research-action project

Supporting African Municipalities in Sustainable Energy Transition



SAMSET Project (2013-2017)

University College London

Gamos (UK)

Sustainable Energy Africa (South Africa)

University of Ghana

University Martyrs Uganda

University of Cape Town

Actions taken in South Africa

- After the apartheid – lack of expertise
- Sustainable Energy for Environment and Development started in 1998
 - Identification of local energy issues
 - Partners with NGOs and cities
- Structured program of capacity building to integrate energy into municipal planning
 - housing, urban planning, electricity, transportation, waste and water
- Sustainable energy strategies in eight South African cities
 - Actions taken in: Nelson Mandela Bay, Jo'burg, Cape Town, Ekurhuleni, Buffalo City, eThekweni, Sol Plaatje, Tlokwe, Tshwane
- City Energy Support Unit <http://www.cityenergy.org.za/>
 - EE tools for municipalities,...
- Number of (large-scale) energy projects
 - Roll-out of 1 million Solar Water Heaters
 - Energy efficiency in townships (materials insulation of roofs/ceiling)
 - Municipal Energy Efficiency Demand Side Management Program
- 80-100 professionals are part of the network
 - Learning by doing when problem arise
 - Capacity building

The approach of the SAMSET project

- **To build on this South African experience**
 - Integrate energy issues in planning approach
 - To locate the knowledge exchange (already experimented in South Africa) in a theoretically sound, practically tested framework
 - Which could be replicated successfully throughout other cities to impact on sustainable energy transitions
- **To develop effective & systematise knowledge transfer framework**
 - Understanding of the complexity of municipal operations and constraints
 - Action research / bottom-up approach starting with “needs” of end users: municipalities
 - 2 cities selected in each 3 countries
 - Use modelling (LEAP) to identify major energy consumptions / municipality
- **To include middle-size cities (100.000 inhabitants) in situation of “urban stress” and not just large cities**
 - High demographic pressure
 - Limited Planning resources

Difficulties linked to the approach

- Bottom-up approach
 - **Each municipalities defines its own priorities**
 - But doesn't correspond necessarily to the experience or priorities of other municipalities
 - Waste to energy priority for some municipalities
 - **3 very specific country contexts**
 - South Africa a lot wealthier than Ghana or Uganda
 - Comparative research via cases studies between very different countries?
 - **Transfer of knowledge?**
 - Staff turnover (municipalities, academics)
 - Critical mass of “expertise” + champion in a country
 - Problem of funding: help municipalities to raise funding? (otherwise knowledge in itself not enough)
- Heterogeneous team
 - Academics: research driven leading to action taking into account specificities of each country
 - Consultants: action driven based on **modelling** – use model to bring stakeholders around a table

Administrative & logistic issues

- Articulation public/private
 - Lifecycle of the project for different stakeholders
 - Funders specific set of rules
 - Universities
 - Accounting – public money
 - Large organisations – generate own bureaucracy
 - Work long-term vs consulting short-term
 - » Cash flow / delays of payment
 - Budget allocated to leader very limited
 - » Only a small part stay within universities for lead organization
 - » Strain on administrative resources
- Logistic
 - Coordination
 - Large meetings = cost (time, financial resources, carbon impact)
 - More intensive utilisation of on-line collaborative platforms?

Impact

- Immediate
 - Change of mindset among municipalities
 - Small clean energy demonstration projects implemented
 - Solar street lights, energy efficient fridges, ...
 - Integration of energy in municipal action plan and national development plan
 - Feasibility studies
 - Small-scale embedded generation,...
 - Number of reports and working papers (<http://samsetproject.net/>)
 - Capacity building
 - Blog and website
- Future
 - Working groups – networks focused according to priorities (waste management,...)
 - How to access funding for large projects

Thank you!

