

## Low Carbon Development in Africa Workshop Report, 12<sup>th</sup> June 2015

Sincere thanks for participating in the workshop between 10-12 June 2015. This short report provides a brief summary of the outcomes of the workshop.

The [participatory workshop](#) defined the agenda with which the [Africa Sustainability Hub](#) will now engage. The Workshop articulated a clear mandate for the Hub to initially pursue three key activities:

1. A pan-African programme of comparative research addressing a range of existing knowledge gaps on low carbon energy access. In particular, demand was expressed for research that looks beyond the usual focus on engineering and finance to encompass socio-cultural considerations, the self-defined needs of poor people and the politics of low carbon energy transitions.
2. Training for finance ministries on accessing international climate finance.
3. Training for African negotiators on strategies for engaging with the UN climate negotiations in Paris in December 2015. In particular, there was interest in working with African negotiators on one particular policy proposal, based on past CDKN funded research in Kenya, which seeks to extend the UNFCCC's Climate Technology Centre and Network (CTCN) via the introduction of CRIBs (Climate Relevant Innovation-system Builders) at national levels in low-income countries.

As summarised in the concluding part of day three of the workshop, the outputs from the participatory sessions on day two will be collated into a detailed research agenda organised around the matrix below.

<i><b>World Café: Fields within which knowledge gaps might be identified</b></i>	<i><b>Afternoon breakout groups: Constituents with whom research must engage to address knowledge gaps</b></i>			
	<b>1. Policy</b>	<b>2. Academic conceptual frameworks</b>	<b>3. Private sector practice</b>	<b>4. Civil society practice</b>
<b>a. Finance</b>				
<b>b. Engineering</b>				
<b>c. User needs</b>				
<b>d. Politics</b>				
<b>e. Geography: Socio-cultural &amp; environmental contexts</b>				

In the following five pages we have provided some of the issues that were raised during the World Café. For more detailed information, including the workshop programme and more detailed notes on the outputs of both the World Café and afternoon breakout sessions, please visit the workshop web pages at <http://steps-centre.org/about/global/steps-work-africa/workshop-low-carbon-africa-2015/>

## World Café sample of issues raised

### 1. Politics

#### **What is the politics of energy?**

Is politics about policy making & rational decision making or power and interests?

- **Political economy of centralised vs. distributed energy**

Distributed renewables are harder for vested interests (government and private sector) to control vs. centralised fossil fuels so powerful actors favour the status quo

- **Country specific resource endowments**

Do different countries' fossil and renewable resource endowments result in different levels of political interest in renewables?

- **Devolution**

Where are decisions and power/interests playing out – national level? County level? Government? Private sector?

- **Politics of knowledge**

Who is communicating what to policy makers?  
How are they framing the problems and solutions?

- **Building or maintaining political capital**

How can politicians get recognition for renewables investment?

- **Community ownership**

What access is civil society given? Local communities?  
When does civil unrest arise? When communities don't have access to benefits on energy investment?  
Who speaks for the community? What about their own vested interests?

- **Corruption**

Where is it happening?  
How do we overcome vested interests and power?

- **Coordinated voice of renewable industry**

Do renewable companies and other actors lack a unified voice to advocate change?

- **Fiscal policy**

Does it work for small distributed renewables? E.g. feed in tariffs

- **Who pushes for change?**

Does change happen faster when govt pushes than private sector? E.g. Solar home systems in Kenya vs. Bangladesh

- **Methods to assist decision making**

Are there approaches that can assist decision makers to see full picture of trade-offs and benefits over the long term in investing in fossil vs. renewable energy?

## **2. User Needs**

### **User needs are diverse and complex**

- There are multiple types of users. For example, final energy service users (e.g. cooks use heat) and technology users (e.g. cooks use cookstove hardware, charcoal producers use kilns).
- There are users at multiple levels. For example, industrial actors as users, households as users, communities as users.
- All these types and levels of users have multiple needs – for instance there are imperatives around industrialization, job creation, health and wellbeing, personal security, etc.

### **User needs must be balanced**

- Prioritising user needs is a political process – i.e. it involves trade-offs and decisions about which to choose.
- How the choice is made should be based upon a good understanding of user needs and the implications of meeting those needs on wider society (i.e. negative spillovers).
- Sometimes those broad needs (ease of cooking, fitting with habits) do not reflect the narrow priorities of technology developers (i.e. efficiency, cleanliness).
- Needs must be met in an affordable way.

### **Key challenges**

- Avoid assumptions: engage with users early to understand their needs before designing an intervention, otherwise it may fail.
- Manage expectations: some interventions may fail because the expectations of what needs would be met are not in-line with the planned objectives.
- Ensure capacity of users, both of technological hardware (e.g. charcoal kiln users, cookstove users, micro-hydro technicians) and energy services (e.g. cooks, electrical appliance users)
- Build ownership: by engaging early, meeting well-articulated needs and building capacity, local ownership is more likely which is necessary for success of an intervention.

### **The way forward**

- Problem definition: Begin with articulating the problem with users so that there is agreement on what needs to be addressed
- Co-design: Work together to suggest solutions to resolve problems, taking into account cultural and traditional preferences.
- Experimentation, lesson-learning and adaptation: Pilot test technologies and solutions, giving users a tangible and affirming demonstration of technology attributes – users need to touch and operate to make informed decisions.

### **3. Finance**

Data – continuous collection over the long term in order to inform decision-making:

- micro data (e.g. on household energy use) to inform repayment models
- willingness to pay and actual data to inform decision-making (recognising that some future innovations, for example providing better quality energy, make these obsolete/ irrelevant)
- macro data on investments, repayments, financial flows - supports accountability
- disaggregated data across social groups to highlight whether we are talking about pro-poor or pro-middle class
- disaggregated data to inform assessments of cost effectiveness in terms of low carbon, productive use, income generation, gender etc
- reliable, comparable data on policies, projects and programmes that can be shared between donors and implementing agencies in to inform policy instruments and programme design
- comparative short-term *and long-term* data allowing an understanding of trade-offs between different objectives and options (on-grid, off-grid/ different energy technologies or business models)
- relevant evidence for both public and private actors - moving beyond donations (aid) to support long-term self-sustained development, return on investment to inform private sector decision-making
- include background information to understand what works in which contexts (which technologies, scales, socio-political conditions)

Government co-ordination and capacity-building in order to access and manage financial resources

- awareness – demystifying the process of accessing climate finance (GCF, MFPs, World Bank partnership for market readiness, taxes and trading, carbon finance especially monitoring and verification, AU – five pillars,
- governance and co-ordination in order to leverage public finance to support private finance
- researchers need to engage with policy-makers to sensitise, inform and influence decisions
- understanding government’s long-term role (e.g. investing in future generations, research and capacity-building beyond short-term profit motivation, that can be covered by the private sector)
- educating the international community (including financial organisations/ donors etc) on the realities in Africa, what works and doesn’t work and why

New economic paradigms – beyond projects to system reform through mass movements

- green economy objectives (growth, environmental sustainability, human wellbeing) – indicators and benchmarking – enhanced accountability to drive the revolution/ movement
- financial approaches that balance ‘short term pain’ with ‘long-term gain’ and cross-subsidise richer/ poorer communities and dirtier/ cleaner technologies
- look at impacts (both positive and negative) of ‘big finance’ (international markets, geopolitical changes) to understand macro context

Mechanisms – understanding and enhancing financial flows to pro-poor, low carbon activities

- New business models that provide the finance necessary for investment in low carbon energy among research (and development), government, firms, end users:
- Pay as you go (PAYG) biomass and other mechanisms such as M-KOPA using ICTs – need to build awareness in order to scale-up but also generate understanding in order to improve and share lessons... sometimes combined with imported hardware (international aspects)
- FDI – how to ensure investments from overseas do not contribute to high-carbon lock-in
- Credit-worthiness as a barrier to access to finance – how to overcome the low credit-worthiness (riskiness) and high interest rates that are constraining low carbon finance to smaller countries/ firms/ users

Grassroots engagement – working with communities to learn and influence behaviour

- Providing information and access to alternatives, education to change mind-sets
- Education for future generations in Africa – understanding how best to serve the urgent need for finance and investment
- Providing ‘nudges’/ incentives/ novel approaches (e.g. integrating clean technologies with other investments such as housing) in order to influence investment decisions at the household level
- Understanding household/ individual financial decision-making (risks, behaviours and biases)
- Learning from economic realities on the ground – recognising the priority of basic needs

#### **4. Engineering**

1. What is the engineering for?
  - Connecting with user needs i.e. minimal needs or lifestyle demands, socio-cultural considerations, a participatory approaches during designing these technologies.
  - Understanding the context of the engineering solutions: tailor-making engineering solutions to suit specific contexts.
2. When is there enough engineering? Should there be a limit in what engineers develop? How hi-tech is enough? How do we know?
3. Engineering not properly aligned with business models and delivery models hence a problem especially for technologies that need scaling up
4. Knowledge gap on how engineers understand what they need to do, need for training and how they understand the context
5. Link between users and engineers is non-existent hence need for learning from experiences of the users and how to adjust the engineering that they do
6. The role of innovation centres: how they utilize the knowledge, how their clients develop innovations; how innovation centres can do better; how others external to innovation centres understand the role of the centres in relation to themselves
7. Need for reconfiguring our infrastructures, supply and value chains to fit into the new low carbon pathway thinking
8. Gap between policy and engineers: how policy promotes or marginalizes particular technologies and innovations, and low carbon energy service pathways

## **5. Geography (socio-cultural and environmental issues)**

**What are the key gaps in our knowledge on how to achieve pro-poor energy access in Africa?**

**Conflict and Security issues:** e.g. nomadic communities and also the displaced. Again, there should be multi-disciplinary connections to achieve low carbon economy. There is a risk in losing the modern technology products. E.g. cook stoves.

**Access and equity issues:** The poor are the ones being targeted or low carbon technologies yet they have low financial capacity e.g. when reaching the communities that could be facing conflict. Devolution is a factor that affects the adaptation process because of political divide and who owns the project may dictate the response of people towards the project. National versus local resources distribution is also another factor. Space could also be limiting factor because some people may lack geographical space to practice the new methods or even to store the low energy products.

**Context-** There are different aspects e.g. different goals and wants from the community that in return define the kind of product they will embrace. It is good to address problems per country and not in general as a country since different countries have different laws, resources e.g. fossil fuels, cultures, endowments, geographical aspects. This will bring about competing interests between countries which will bring development.

**Indigenous knowledge systems:** There is a tendency to downplay indigenous knowledge e.g. use of firewood, or integrated systems. The solution to this problem is building networks, sharing experiences and practices, formalizing the indigenous knowledge through the government.

**Language barrier:** The type of language being used in the communities is key in effective communication to everyone. The message should be the similar in the same platform and translation is also important to convey the message well.

**Best practices:** There is need to celebrate success versus cultural modesty in addressing these issues. Again, there is need to mobilize the knowledge. There is a problem among the policy makers where there is a tendency of thinking that one idea fits all. Centres of excellence need to harness knowledge to address the issue of social cultural and environmental matters?

**The perception:** In the rural areas there is negative perception about the environment. They do not think of methods of conserving the environment. There is also a financial constraint in buying an energy conservation product e.g. jiko cook stoves. There is a research being carried out through UNISA to find out the sociocultural perception about use of biogas. This can be solved through participatory capacity building about low carbon and there is need to encourage young researchers to research about low carbon methods.

**Cultural Values:** In rural areas there are gender defined roles. E.g. women are responsible for cooking and they do not want to spend more time chopping wood into small pieces as opposed to putting a big log/firewood in the fire that will burn for long without needing any change.

**Corruption:** Especially in land use which needs to be addressed through environmental policy.

**Cartels** in the charcoal market who want to keep the charcoal business going and have people so entrenched to it.

**Resistance:** People are not willing to change. We can come up with laws and sanctions that are geographically acceptable in that if a place is cold e.g. Limuru or Nyeri who rarely have solar. Thus cannot use it as a source of renewable energy. They are some who use it to warm the house. Tribal good and family good issues will be easily acceptable. Political influence dictates what to use and what not to.

**So many technologies/ Different energy sources:** This looks at use of technological innovation as a barrier to behavior change and identifying which one is the best to use? Some people do not trust the new technology anymore since it gets spoilt. There also needs to be e-waste management.

**Baseline surveys:** Proper cultural problem identification before introducing the product so as to understand their socio-cultural problems. Some people may not accept to use human waste bio-gas.

**Role of formal education systems in addressing these problems:** e.g. educating communities on separating waste. There is no separation. Most of this education is informal. E.g. in Sweden there has been a law since 1960 yet people had not been educated thus they could not embrace it.