

MAPS

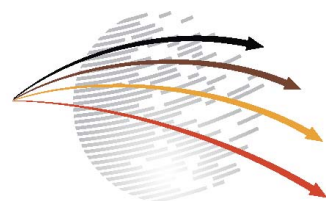
Provocateur Briefing Report

Forum on Development and Mitigation

DEVELOPMENT FOCUS

Energy Security

- **Date:** 28 February 2014
- **Author:** Hilton Trollip
- **Institution:** Energy Research Centre, University of Cape Town
- **Contact:** hilton.trollip@uct.ac.za



M A P S

Mitigation Action Plans & Scenarios

From 27-29 January 2014, over one hundred professionals working mainly in the climate change mitigation field, in Southern contexts, gathered at the Cape Town Waterfront for the Forum on Development and Mitigation (the Forum). The event was hosted by the Energy Research Centre of the University of Cape Town, the Centre for Policy Research in New Delhi, and the international Mitigation Action Plans and Scenarios (MAPS) Programme. As a feature of the Forum nine South African development experts, the 'Development Provocateurs' were invited to participate in the event and write a short reflective piece afterwards. These briefing notes considered the discourse at the Forum from the perspective of each Provocateur's particular area of expertise, looking at shared priorities, disconnects and other points of contact.

This briefing note responds from the perspective of 'Energy Security' by Hilton Trollip. The full set of briefings have been compiled into a compendium, available at www.devmitforum.ercresources.org.za and www.mapsprogramme.org.

The content of this brief is the responsibility of the authors. The views expressed in it are those of the author alone.

ENERGY SECURITY

There are many similarities between analysing and formulating solutions for South African energy security and formulating solutions for (global) climate change mitigation.

Both problems are large, but relatively simple to describe, from a technical perspective. The costs of inaction are high and far outweigh the costs of action. Action is required now. There is a dis-connect between those who will bear the brunt of inaction and those who will decide on action at adequate scale and fund the costs of these actions.

Energy poverty and climate change have similar impacts: large scale, increased suffering of the poor, community devastation, escalating social unrest, threats to future socio-economic development and social and political stability.

This brief will use one dimension of energy security, *access to affordable electricity – and energy poverty in that sense*, in order to illustrate how energy security and climate change suffer from a lack of adequate action.

Lack of access to affordable electricity in South Africa is directly associated with one of the four biggest causes of death of children under five years old (Barnes et al 2009); namely respiratory disease caused by indoor air pollution from the use of paraffin, coal and wood, for cooking. These fuel sources also contribute to shack fires which regularly destroy thousands of homes and devastate communities (Pithouse 2008) as well as paraffin poisoning. Energy poverty means having insufficient safe and convenient energy to meet basic needs. This is crippling for the socio-economic development of large numbers of people and in South Africa more than 3 million South African households are not connected to the grid (Tait and Winkler 2012). Of those that are connected, some twenty-five percent, find electricity too expensive to use and so use the inferior fuels which cause the suffering mentioned above (STATSSA 2012). Also, after gains in access to electricity between 1990 and 2005, progress has reversed, and for some time the number of new electricity connections has not kept up with household formation, leading to the number of households without electricity increasing. Lack of electricity has been cited (Nleya, 2011) as one of the main causes of community protest action, which has brought more than two million people (5% of the population) onto the streets each year since 2008 (New Statesman 20 August 2012), and these protests are increasing in regularity.

Both problems; of climate change and lack of access to basic services such as electricity, have been well publicised and are on the political agenda of every level of government, both locally and internationally. Poverty and climate change are often at the top of espoused agendas of constituted authorities such as the UN, national, provincial and local governments. Even so, as highlighted by many speakers at the Forum, this often does not result in action. Progress in actual action against and funding of poverty at the scale required, often falls woefully short. This applies to funding of climate change mitigation programmes as well. The problem seems to be escalating to the point that it is probably too late to prevent a serious level of climate change.

Similarly, after decades of working towards decreasing lack of access to affordable electricity in South Africa, the situation has not been resolved. Local electricity distribution infrastructure is crumbling, electricity connection programmes are falling behind household formation rates and adequate electricity supply is becoming increasingly expensive for poor households.

Why has society been unable to act with sufficient resolve and scale to address these two problems?

Firstly, the problems have developed over a long period of time and are deeply rooted in social and economic structures that include vested interests which insulate those who benefit from the status quo. There are both physical aspects and aspects related to beliefs and perceptions that impact on this insulation.

The real aspects are temporal, spatial and socio-economic barriers between those that bear the brunt of inaction and those that currently benefit from the socio-economic systems and barriers that have developed over a long period of time. Social barriers related to place are well known. There are obvious barriers such as physical location (the poor are far away, in countries on the other side of immigration control, or far away enough, in a shanty-town or in another school). There are less obvious ones, such as the perceptions held by current beneficiaries of the socio-political system, that they have a moral right to their wealth and income, no matter its source, or impact on other people or the environment. Separating out the real and perceptual is problematic – the relationships between moral, ethical, social and physical aspects are closely interlinked. Economic divisions are further barriers, in the form of structural separation between rich and poor in class-based societies.

It can be argued that climate change emphasises the temporal aspect, firstly because those that bear the brunt will be future generations, and secondly that inaction now, will greatly increase the costs of negative impacts and later action, to the extent that too little action too late, will be catastrophic. However, lack of action around social equity issues, such as poverty, has temporal aspects as well, and if too little is done, there could be catastrophic social and environmental impacts, such as has happened throughout history and is well documented (e.g. the French Revolution of 1789 and end of the Tsarist regime in Russia in 1917). Thus the temporal aspect of climate change is not a new issue.

The feature being highlighted is the insulation of those that have to act and fund the costs of action (and who are also the beneficiaries of the current socio-political system) from those that bear the brunt of a lack of action.

In the case of securing access to sufficient quantities of household electricity to meet certain basic needs in South Africa, the costs will have to be covered by the well-off (middle-income and above) in South Africa. The poor simply do not have the resources. The well-off will thus have to accept funding this if this society chooses not to have another generation that suffers the misery of energy poverty and possibly in order to avoid wide scale social and economic disruption.

The same applies to climate change mitigation: adequate action will require the well-off to make sacrifices now to avoid increasing suffering of others, defined spatially and socially now, and then others, defined temporally, later. The likelihood is that the kind of climate change that will lead to real impacts at the scale to 'worry' those that have to make sacrifices now, i.e. the well-off will only really be seen after 2050, even after 2060-2070, when most of the current well-off that are in decision making positions and can secure action, are no longer alive.

Vested interests with sufficient power to act at adequate scale are controlled and run by this group of well-off and so their lack of inaction can be partly ascribed as above. The people that control these vested interests are not sufficiently engaged with the problem in a way that affects their personal comfort and hence, as could be expected, a solution is less urgent for them. A further consideration is that it is quite plausible that these people believe that their wealth, and technology, will protect their (economic, moral, genetic, national) descendants post 2060 once the real impacts of climate change are felt. This aspect however is not a focus of this short piece, but probably warrants more thorough investigation.

In the case of mitigation, the activities and positions on mitigation of, for example, entities with significant interests in fossil-fuels whether they be fuel producers, large fossil fuel energy users or 'fossil-fuel-countries' are well known. Most large producers continue large-scale exploration for additional resources, when it has been established that the combustion of even the already identified resources over the next 100 years will lead to catastrophic climate change. The disconnect is severe!

So where to?

During the Forum, delegates asked why there is no action when action is clearly urgent and imperative. One of the lines of explanation which emerged from the resulting discussions, was that technocratic, science-based problems and solutions presented were relatively settled but that more focus was required on analysis of the social and political challenges. There was unanimous support for the fact that there are difficult issues that need to be moved up the agenda, if progress is to be made in achieving action on climate change. There was some identification as to what some of these issues might be (most if not all, involve process difficulties that are currently unresolved):

- A technocratic approach to the problem i.e. communicating perfect, understandable information to the broader society that is then internalised might not change people's behaviour.
- The potential losers, i.e. the current beneficiaries of the current socio political system (the well-off who control the economy and protect their own vested interests), are a necessary part of the solution. Representatives of this group were largely not represented at the Forum. Engagement with these entities and individuals (outside the room) needs to be instigated (we don't yet know how), with those who 'have to be in the room', both in a joint formulation of the problem situation and in order to formulate options for solutions.
- Extending the problem and solution analysis into domains that address material, political and institutional interests and highlight conflicting interests and how these need to be addressed. This would require more analysis based in sociology, anthropology and political science and related disciplines.
- Acceptance that there are some fundamental win-lose situations.
- That many of the potential 'losers' will be amongst the most powerful people and organised interested parties on the planet and will need attractive options, or have their perception of the options changed.

Energy security in a developing country context and global mitigation, share similar challenges. The technical problem is clear, the technical solutions feasible and plans do exist to achieve the solutions. However the problem situation remains intractable because of (at least) the variety of factors required for implementation, the insulation of key parties from the brunt of the negative costs and the fact that these same parties will need to fund the costs of these solutions. The solution HAS to both engage with the trade-offs and address the issue of powerful potential losers. We need to move to apply our resources into these areas which are possibly uncomfortable from traditional physical science, engineering and economics perspectives, but that are amenable to analysis based on the social sciences. Effective first steps would be to consciously design a process aimed specifically at identifying the uncomfortable areas and also effectively engaging with those “outside the room”. (Engagement at The International Climate Negotiations is not what is meant here).

The argument above explores the question: What can we learn from current problems (in this case lack of energy security for the poor evidenced through lack of access to electricity which has known fundable solutions), of the gross inequity that exists between communities in this generation; a cause of widespread profound suffering and misery? How can we build solutions to solve similar inequities between this generation and the next, as far as climate change is concerned? Climate scientists have established the hard science through hard work. The next challenge is to incorporate other discourse in order to achieve the level of engagement with broader society and its incumbent vested interests, so that we to achieve the necessary level and scale of action, which is urgent.

References

Barnes, B. Mathee, A. Thomas, E. Bruce, N. 2009. Household energy, indoor air pollution and child respiratory health in South Africa. *Journal of Energy in Southern Africa*. Vol. 20 No 1 February 2009.

Martin Plaut writing in *New Statesman* 20 August 2012. Behind the Marikana massacre. Accessed on 12 March 2014 at <http://www.newstatesman.com/blogs/world-affairs/2012/08/behind-marikana-massacre>

Nleya, N. 2011. Linking service delivery and protest in South Africa: an exploration of evidence from Khayelitsha. *Africanus* 2011 50 (1) pp3-13, Unisa Press. ISSN: 0304-615X

Pithouse, R. 2008. The Solution to Shack Fires is Electrification, Not More Training. Online article by The South African Civil Society Information Service. accessed 12 March at <http://sacsis.org.za/site/article/149.1>

STATSSA 2012. Census 2011 – Census 2011 Methodology and highlights of key results. Report No. 03-01-42. Pretoria, Statistics South Africa, 2012.

Tait, L., and Winkler, H. 2012. Estimating greenhouse gas emissions associated with achieving universal access to electricity in South Africa. Energy Research Centre, University of Cape Town.