

New Market Mechanisms and Africa: A Concept for Further Development

**Submitted by SouthSouthNorth Trust
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SouthSouthNorth (SSN) welcomes the opportunity to present its views on lessons learnt regarding various market approaches and the New Market Mechanism (NMM).

Background and Context

The Markets and the Future

It is clear that new mechanisms in the transfer of carbon in markets need to be considered. The carbon market has all but collapsed in 2012. The price levels of carbon are at an all time low. But this is certainly not an end to cap and trade – maybe just the crisis required for reformulation of mechanisms and their regulation prior to new mitigation ambitions being negotiated. The third phase of the European Union Emissions Trading Scheme (EU ETS) starting next year will see increased stringency on targets and allocation methodology. In the next couple of years new cap-and-trade schemes will be launched in the State of California¹ (2013), several states in the US and Canada² (2013), and at national level in Australia (2015). Emissions Trading Schemes are also planned at national level in China (2015), Korea (2015) and considered in Mexico, Brazil, and a number of other developing countries³.

Carbon prices have fluctuated dramatically over time, but in the past couple of years the European Union Allowances (EUA) reference price has not exceeded 15-20 Euros (US\$19-26) per tonne CO_{2e}. However, due to a combination of post-2012 policy uncertainty and the economic crisis, current EUA price levels are well under €10/tonne and secondary Certified Emissions Reduction (CER) prices even under €5/tonne. This is not enough for investment decisions on even the cheapest of options on the abatement curve and as such many Clean Development Mechanism (CDM) project developers have pulled out of the market, leaving only the players with a long-term view. Prices are however expected to pick up again during Phase III of the European Union Emissions Trading Scheme (EU ETS).

In addition, the growing new world order as reflected in the Durban Platform principles agreed at COP17 will, by definition drive a new market system. The “old” line between the Annex and non-Annex countries, which was central to the format of the CDM and Joint Implementation (JI), will vanish over time. New “lines” may emerge. It is likely that the

¹ The California ETS will cover 85% of California’s emissions is set to become the world’s second largest Emissions Trading Scheme after the EU ETS.

² Western Climate Initiative; <http://www.westernclimateinitiative.org/>

³ Through the World Bank's Partnership for Market Readiness fund Brazil, Chile, Mexico, Colombia, Thailand, Vietnam, South Africa, Turkey and Ukraine are assessing domestic trading schemes.

larger emitting countries in the so-called developing world, now in the Kyoto non-Annex, will take on quantified emissions reductions targets of some sort, with some form of legal character. By definition this means that they cannot be suppliers of CDM credits anymore. Since these were traditionally the bigger emitters in the non-Annex, their withdrawal from any future CDM means that as a market mechanism it will shrink hugely in scale. We need to study the implications, but for the moment general assumptions would seem to lead us to this conclusion.

We can perhaps envisage some form of emissions trading between the countries in the “block” with targets under the Platform. Given that there is a long “tail” of smaller emitters it is difficult at this point to see how the block would be ring-fenced, but one would expect the larger countries (India, China, Brazil, etc) to be in; indeed some smaller countries will enter the block voluntarily such as Chile and others, perhaps by virtue of their Organisation for Economic Cooperation and Development (OECD) status. Others will want to do so for competitive reasons.

This raises two immediate questions:

- What of the countries outside the “block”?
- What about the period from now to that moment when this new regime arrives?

We would like to focus on Africa when trying to answer these questions, and our discussion forms the basis of a proposal to do work considering market reform.

Africa

It is becoming increasingly difficult to make simplified statements about emissions and emission reductions in Africa. Nigeria is set to outsize South Africa by 2015 as the continent's biggest economy. New gas finds will have impacts on Mozambique, Angola and others. Many other countries in Africa are now growing fast and more will join. China and others are investing heavily in Africa. A snapshot of the present is simply not enough: we need to look at the projected emissions baselines for all the economies on the continent for the next 30 years in order to get an adequate picture of Africa's role as emitter in the global picture.

Much of Africa's emissions lie in the future. Suppressed demand for energy services, driven by the slow (or sometimes quicker) rise of the poor into the middle class, means that emissions will rise. The countervailing force to this is the rise of Low Emissions Development Strategies (LEDS) in African countries. Kenya, Ethiopia, Rwanda and also South Africa (among others), are all planning their development within a LEDS approach, and are beginning to introduce low emissions energy generation and other infrastructure.

The emerging emitters in Africa (which we will for convenience call the Emerging Group (EG)) will include a range of countries from the poorest Least Developed Countries (LDCs) (with very few emissions reductions on offer, no matter what the mechanism) to those for whom a market might drive LEDS programmes and consequent development gains. It is here that we would like to pause and look closer at design options.

The Clean Development Mechanism (CDM)

In order to reflect on how best to design the NMM to maximize benefits for developing countries it is worthwhile reflecting on one of the “old” mechanisms. The CDM was initially conceived in 1997 when the Kyoto Protocol (KP) was negotiated and agreed, the Marrakech Accords followed this in 2001. The CDM only came into force after ratification of the KP in 2005. The KP contained emissions reduction targets for industrialized countries, a compliance mechanism and methods to achieve emissions reductions, including the flexible mechanisms, of which the CDM is one.

The CDM has two main goals:

- Achieving real and measurable emissions reductions in projects in developing countries that could assist industrialised countries to reach their targets.
- Contributions to sustainable development in the projects’ host countries.

To date 3826 projects have been registered and 852 million tonnes of CO_{2e} issued. Of these registered projects 82% are in Asia and the South Pacific (with China dominating the portfolio), 16% from Latin America and the Caribbean, and 2% from Africa.

Has the CDM Worked for Africa?

Clearly for China, India and Brazil it has worked well and for those countries that have bought credits generated at lower costs rather than achieving emissions reductions domestically. However, African governments must ask why they were unable to take advantage of the CDM and why the opportunity passed them by.

Taking a closer look at the 2% mentioned above, which amounts to 66 projects registered in Africa, the following project spread emerges:

- 19 of the projects are hosted in South Africa, representing 30%.
- Egypt and Morocco together host 14 projects, representing 20% of the African projects.
- Nigeria has 5 CDM registered projects; the expected volume of credits from these projects is 1% of the expected carbon credits generated worldwide. Does this mean that CDM is working in Nigeria?
- Rwanda has 3 registered CDM projects as opposed to none in Botswana, is Rwanda seen as a better country to invest in?
- 16 projects are registered in 33 LDCs in Africa.

It is difficult to generalize about the relative failure of CDM in Africa. There are many contributing factors and to a large extent, much of the failure can be linked to the underlying enabling environment for doing business in Africa. This may change though, especially if we consider what business conditions are likely to exist in the EG in the medium and long-term future.

In order to further grasp the CDM story in Africa it is worth characterizing the African emissions baseline. The countries of sub-Saharan Africa emit a fraction of the greenhouse gas (GHG) emissions of China (Figure 1), but more importantly, the relative contribution of each source differs significantly, together with the associated potential opportunities for

CDM projects (Figure 1 and Figure 2). Over 99% of the emissions from China are generated by the industrial, energy and transport sectors. Moreover, emission reduction initiatives within these sectors are recognized by the CDM, which has led to the realization of numerous projects.

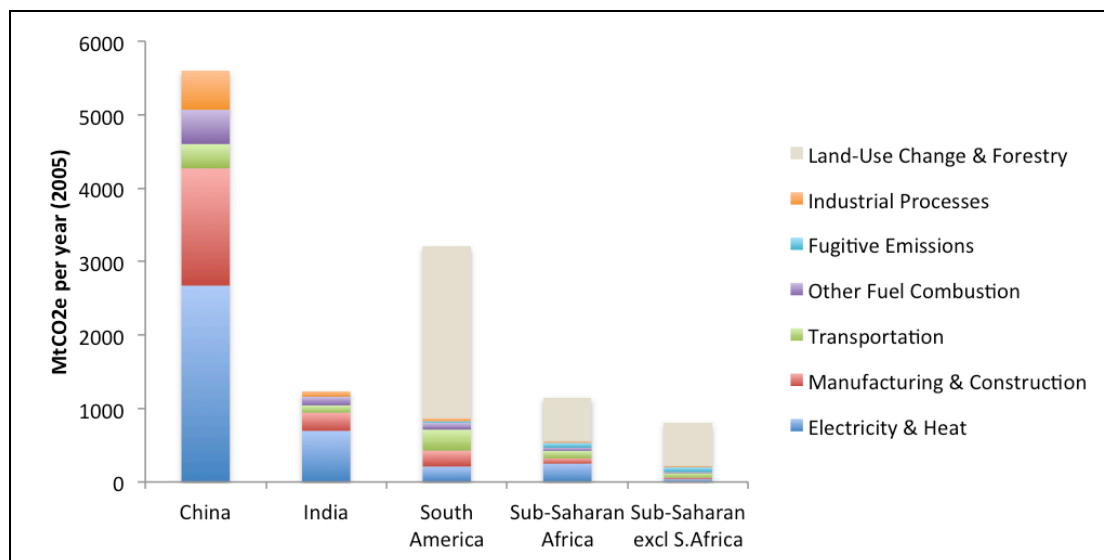


Figure 1: Annual GHG emissions generated by countries and regions of interest (MtCO₂e per year, 2005 data, CAIT 2012*)

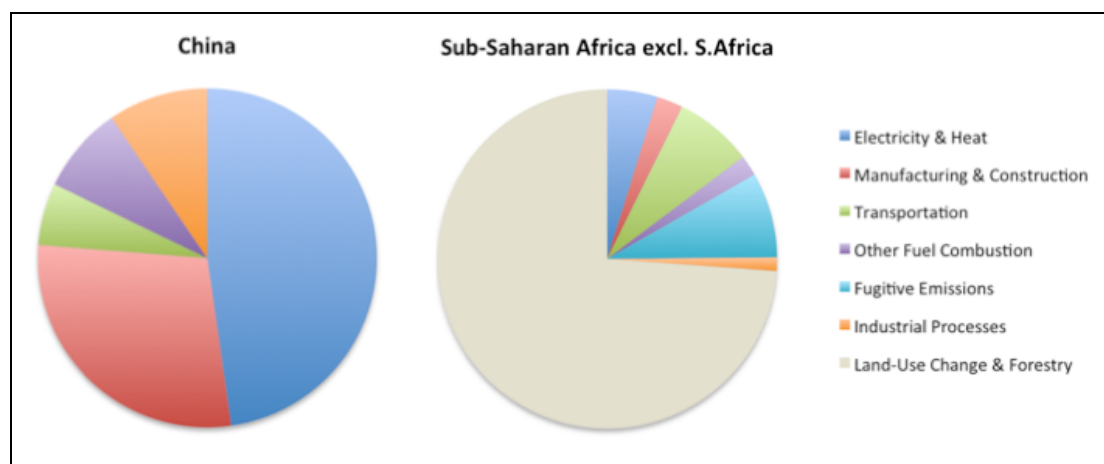


Figure 2: A percentage source comparison of the GHG emissions generated by China relative to sub-Saharan Africa excluding South Africa (MtCO₂e per year, 2005 data, CAIT 2012*)

*Climate Analysis Indicators Tool (CAIT) Version 9.0. (Washington, DC: World Resources Institute, 2012).

In contrast, 73% of the GHG emissions generated in Africa are through land use activities, particularly deforestation and the degradation of intact ecosystems (Figure 2). Yet, recognized land-use based climate change mitigation activities under the CDM are limited to afforestation and reforestation projects and exclude initiatives that reduce deforestation and degradation (REDD). In addition these projects are currently not eligible in the largest demand market, the EU ETS⁴. The current scope for CDM projects in Africa is therefore

⁴ At present the EU ETS takes up between 84 % and 97 % of the value of all carbon markets. EU ETS could theoretically take up to 97 % when taking into account the value of the secondary CDM market, which is driven mainly by the EU ETS.

limited to a small fraction of emission sources. That is the current position; however we are required to design a new market that will also take account of the growing energy emissions in Africa over time. We need to understand to what extent this market will have to balance Land Use, Land-Use Change and Forestry (LULUCF) type emissions and energy type emissions.

If the potential for CDM projects in Africa is to be significantly increased, the scope of recognized activities should be extended to include a broader range of forest, rangeland and agricultural activities, as well as growing energy and related emissions.

Another manner in which the nature of GHG emissions from Africa are different, is that they are currently characterized by many small sources of emissions that are geographically disparate. There are other larger and more concentrated emissions from land-use change, agriculture, agricultural processing, mining, minerals beneficiation, and power generation, but in the main, the source of emissions tend to be distributed across landscapes rather than concentrated at point sources. We need to understand how this may change over the next 30 years; but at least for a period of time this particular reality will prevail in the EG.

Under the conditions of small and disparate emissions from domestic livelihoods, small enterprise activities, deforestation and changing land-uses, high levels of monitoring, resulting in high transaction costs has made projects and programmes unfeasible under current carbon markets regulations. There have been notable exceptions such as efficient woody biomass and charcoal cook-stove projects and programmes in Zambia, Kenya, Malawi, Uganda and Nigeria, amongst others. It is interesting that these have thrived, and partly because the costs of the technology are low compared to the carbon income and that the stoves are locally manufactured, distributed and maintained – there is certainly a clue here for the kind of projects that Africa could build.

Energy infrastructure in Africa will be attended to as African economies grow, albeit from a low base. Bazilian et al. (2011)⁵, suggest that if Africa is to meet the goal of universal energy access by 2030, electricity generation capacity needs to grow at an annual rate of 13%; a near ten-fold increase in annual growth in generation capacity of 1.7% over the past two decades. Ethiopia alone is looking to quadruple its energy supply in the next decade alone. This indeed will have implications on global GHG emissions should it involve a high proportion of fossil fuels or carbon-intensive technologies. This conventional approach of using fossil fuels in meeting energy demand will likely exacerbate the already existing and devastating impacts of climate change in the continent in addition to the increased costs from centralized grid and networks expansion. Moreover, the increasing prices of fossil fuels are likely to worsen energy poverty across the region, particularly as this increases impacts on food prices.

However, there is also demand from governments, as well as companies in Japan, New Zealand, and from the voluntary market. Source: State and Trends of the Carbon Market 2011; World Bank, 2011.

⁵ Bazilian M., Nussbaumer P., Rogner H., Brew-Hammond A., Foster B., Pachauri S., Williams E., Howells M., Niyongabo P., Musaba L., Gallachóir B. O, Radka M., and Kammen D. M, 2011. Energy Access Scenarios to 2030 for the Power Sector in Sub-Saharan Africa. FEEM Working Paper, Nota di Lavoro – 68. 2011.

There are a number of reasons why Africa has not seen projects, these include, and are not limited to:

- Lack of CDM institutional support and promotion (a lot of effort has gone into installing Designated National Authority's (DNA's) but this has not increased the number of CDM projects).
- CDM has high transaction costs particularly for projects with multiple small emissions sources.
- CDM knowledge is low in Africa and few local CDM entrepreneurs exist.
- Financial institutions in Africa are under-developed and have little understanding of renewable energy or energy efficiency investments or derivatives (such as CERs).
- Investment in Africa is considered risky and carries high interest rates.
- There is limited leadership with respect to climate change in Africa – it is seen as an environmental issue rather than a developmental issue.
- Suppressed demand for energy and other services as a result of poverty, lack of infrastructure or natural resources has not been recognized until recently as a means of carbon accounting and operationalised as a real source of future avoided emissions.
- Standardised and other default baseline emissions levels are not yet in practice.
- Many African DNAs are not transparent and appear to gate-keep projects and programmes as well as CDM knowledge.
- The Designated Operation Entities (DoEs) who are tasked with validating and verifying the CDM projects have little contextual knowledge making the process onerous.
- The UNFCCC CDM process is not easy to engage with from a project developers perspective, the processes are not always transparent and the routes to follow not always apparent.

With regard to land use based activities, the realization of projects has to a certain extent been inhibited by the limited scope of recognized activities, but it has also been constrained by the nature of land use based emissions and associated risk and feasibility issues. These issues are easier to conceptualize if one compares land use based activities in Africa to an industrial alternative elsewhere.

The emission reduction activity in an industrial sector project is generally confined to a point source within an industrial plant. The emission reduction activity occurs through a well-defined engineering process where the technological and operational risks are relatively well known. The owner of the factory has considerable assets and is a registered company under constitutional law and therefore forms an adequate legal counterparty in the case of default. Overall, it is therefore relatively easy and inexpensive to identify, develop, monitor, audit, register and manage the project. Furthermore, a relatively large volume of emission reductions are achieved at relatively low cost and with limited risk making the project attractive to investors.

In comparison, deforestation, ecosystem degradation, and the combustion of wood-fuels occur over vast spatial areas that may be populated to a certain degree with various forms of land-use and governance systems. Deforestation in sub-Saharan Africa tends to be caused by the expansion of subsistence agriculture and charcoal production by a

considerable number of stakeholders rather than a single large logging concession operated by a sizable corporation. Projects are therefore potentially exposed to biophysical risk in the form of the effect of fire or drought as well as socio-economic risks due to alternative land-use options being adopted over time and exposure to the vagaries of governance at a local and national level. These attributes also lead to relatively high project identification, development, monitoring, auditing and management costs, especially for smaller scale projects where economies of scale are not realized. The relative risk and returns as well as limited acceptance by the CDM and compliance market has therefore resulted in the limited implementation of land-use based projects.

These issues however do not necessarily present a barrier to future implementation. The recently initiated UN-REDD and World Bank Forest Carbon Partnership Facility programs are addressing most of the risk and cost constraints through the implementation of national-scale planning, monitoring and legal capacity. What is still required is the establishment of reliable, compliance-market related revenues for long-term management of projects nested within the national scale framework. It is here where a reformed CDM or NMM could make a significant contribution to reducing Africa's present emissions whilst enhancing livelihoods.

In essence then, the CDM has largely failed in Africa, and is likely to be impracticable in the land use area. However the emissions trends in the EG are likely to be highly dynamic over time and this needs to be considered when designing new market mechanisms for Africa, and particularly for the EG.

The Way Forward

COP17 in 2011 presented an opportunity for the development of a NMM, this will provide an opportunity to correct past imperfections in the CDM and consider how a new mechanism can be designed to enhance implementation in the EG in Africa. A new market based mechanism that would attract interest and investment in Africa would need to elevate sustainable development whilst achieving carbon accounting that is globally more equitable and considers future avoided emissions by technically estimating current levels of suppressed demand and sufficient service levels. In addition, such a mechanism will need to be simple and cost effective to drive financing towards a low-carbon development technology leapfrog that will broaden modern energy service access, whilst dealing with LULUCF and avoided deforestation. Mechanisms should incentivize the implementation of LEDS programmes and over time the conversion into legally binding emissions planning in the larger countries in the EG. The introduction of Climate Finance within a project/programme/sectoral intervention in support of an improved enabling environment that also reduces market barriers for the new mechanism, could complement the generation of tradable credits. Care should be taken in this matter as many of the barriers could be considered to be broad and endemic to African economies and their governance.

The experience in developing approaches to CDM, provides some insight into the attributes of a NMM that achieves the following:

- Sustainable development benefits that can be appraised and deepened through good process.
- Operationalising suppressed demand in carbon accounting.

- Achieving scale (sectors, multiple countries/regions)..
- Reducing transaction and management costs..
- Leveraging the agreed loan option for project development within LDCs..
- Reducing perceived investment risk..
- Assisting DNAs to promote the NMM by publishing national standardized baselines..
- Simplifying additionality, monitoring and reporting⁶.

In addition to the above a new mechanism could consider whether it is feasible to include city level, national, regional, bi- and multi-lateral cap and trade systems and methods to achieve a degree of quality or at best, fungibility between these markets. A NMM could consider the possibility of rolling JI, Emissions Trading, CDM, REDD, Afforestation and Reforestation and other Land-Use Mechanism and Nationally Appropriate Mitigation Actions (NAMAs) into a single mechanism, with centralized and/or decentralized regulation and the shifting delineations between Annex 1 and non-Annex 1. It will be essential to take the best of what has been learnt rather than re-inventing the wheel in its entirety.

About SouthSouthNorth (SSN)

SouthSouthNorth (SSN) supports the transition towards climate compatible economies and societies in developing countries. We facilitate this through collaborative and stakeholder-driven country processes as well as local-level action that address climate change and promote equitable access to sustainable development. In all our work, we aim to find cutting-edge, evidence-based and locally tailored solutions to climate and development challenges; in partnership with leading organizations and individuals. We capture and share lessons as they emerge, to contribute to global knowledge on achieving climate compatible development in practice. SSN is a non-profit organisation operating from Cape Town, South Africa.

SSN Projects is a non-governmental organization, which acts as the implementing agency for the SSN Trust by managing the programmes and projects. The SSN Trust is the distribution system for the funds received. The Trust has two Managing Trustees, a lawyer and an accountant, who are based in South Africa and four Technical Trustees who are based in Sierra Leone, Brazil, Bangladesh and Indonesia.

SSN offers its services in considering the design of a new mechanism as described above, suitable particularly to African conditions and future realities. Consideration will also be given to the short, medium and long term, as well as to transition realities.

SSN launched into the CDM in the late 1990s using sustainable development (SD) as the entry point. SSN in collaboration with Helio International has developed tools for SD appraisal and monitoring of projects that rate projects and provide minimum thresholds for projects to be considered as contributing to SD. This approach is predominantly qualitative but does apply some quantitative indices. It was the starting point for the Gold Standard Foundation's SD assessments and monitoring that was applied to projects and has fetched a premium in the carbon markets. This is due to the recognition that this approach does advance SD. SSN has also been in the forefront of developing the good process in achieving

⁶ Each of these will be elaborated in a detailed upon request in an expansion of this concept.

SD – named “development facilitation” and “technology receptivity”, the idea and experience has been to build on the articulated need for a process to achieve informed choice, hence ownership and through this SD. In addition to bottom–up approaches, the “good process” development facilitation approach has been used at high levels in South Africa to establish long-term mitigation scenarios through driving stakeholder involvement and ownership of emissions reduction goals. The process used in South Africa, referred to as Long Term Mitigation Scenarios (LTMS), is now being tailored and applied in Argentina, Brazil, Chile, Colombia, and Peru. SSN has hence accumulated experience in mechanisms as well as LEDS approaches.

SSN works in a partnership model with institutions in other developing and developed countries: its work on CDM paired SSN with institutions in Bangladesh, Indonesia, Tanzania, Mozambique and Brazil. Its many other projects have all worked in this collaborative way, and have included world-leading partners in the field of carbon markets, mitigation planning and adaptation to the impacts of Climate Change.

On accounting for suppressed demand SSN has been at the forefront of developing the concept, the typologies and treatments and applying it in CDM projects and programmes, and lobbying its leverage. This work has culminated in an UNFCCC recognized standard that is yet to be operationalised.

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