

BLOG SERIES



# CLIMATE CHANGE in AFRICA

**A race against time**



AfDB at COP21 for a greener Africa



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## ABOUT US

We live in a complicated interconnected world, on a continent experiencing considerable economic, social and environmental challenges. Among the most significant of the environmental challenges is climate change. In Africa, climate change threatens to derail the significant development gains that have been made over the last decades; climate change also threatens future growth and development.

However, all hope is not lost. Our understanding of climate change improves every year; global governance of the challenge is converging, and countries are making significant efforts to mitigate greenhouse gas emissions and to adapt to a changing climate.

The goal of this blog is to draw attention to the threats and opportunities presented by climate change including issues related to governance of the global problem.

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# AfDB's role in Africa's evolving capacity in the UNFCCC Process

*It is widely acknowledged that while Africa is a minor contributor to global greenhouse gas emissions, it bears a disproportionate amount of the adverse effects of climate change impacts. Being the continent with the greatest vulnerability to climate change, and lowest adaptive capacity, has provided the impetus for Africa's commitment to chart a global response to climate change within the multilateral processes of the UN Framework Convention on Climate Change (UNFCCC).*

As one of the multilateral environment agreements (MEAs), the UNFCCC has created a platform for negotiations on the global governance and response to climate change. African countries are legitimate stakeholders capable of influencing negotiation outcomes that align with their interests and positions. The continent's capacity to play this proactive role has evolved considerably.

Gone are the days, when Africa was perceived as the most disorganized region at the UNFCCC meetings. Gone are the days, when ministers and delegations from African countries were ridiculed for lacking the capacity to understand and constructively engage in the negotiation processes. Gone are the days, when the interests and voices of African countries were divided and often conflicting by virtue of their alliances with other negotiation groups and coalitions such as the Group 77+China.

How did Africa get to effective regional collaboration? How did Africa build strong political leadership and clout at the UNFCCC negotiations? What platforms have been created to galvanize, mobilize and forge consensus on a common position?

To address some of these questions, it is important to discuss how Africa's capacity at the UNFCCC has evolved over recent years.

Concerns about African negotiator's limited capacity and how they were disorganized and pulled in different directions during UNFCCC meetings led to a coordinated institutional framework including the African Ministerial Conference on the Environment (AMCEN), African Group of Negotiators (AGN) and the Committee of African Heads of State on Climate Change (CAHOSCC).

AMCEN, created in 1985, assumed political leadership at ministerial level and provided the platform for advancing African countries' common position towards effective multilateral environmental agreements including the UNFCCC. At its biannual Conference Sessions, Special Sessions, and Bureau meetings great efforts are made to ensure that Africa speaks with one voice. In addition, CAHOSCC was established in 2009 to provide the highest level of political leadership for Africa's participation in the UNFCCC processes.

The African Group of Negotiators (AGN) is the key negotiating body and technical pillar for Africa. It frequently organizes preparatory meetings and provides technical inputs to support the development of Africa's common interests (namely AMCEN consensus papers). It therefore contributes to enhance Africa's voice ensuring that the continent's interests are captured in the outcomes of the UNFCCC.

With the political and technical leadership provided by CAHOSCC, AMCEN and the AGN, Africa now has the capacity to influence the negotiation process; for example the push for a balanced allocation of finance to adaptation and mitigation by the Green Climate Fund (GCF).



What role does the African Development Bank (AfDB) play in improving Africa's capacity in the UNFCCC arena? The AfDB continues to provide significant support to AMCEN, AGN, CAHOSCC and the African GCF board members, to help advance the interests of the region at UNFCCC meetings. For example, the AfDB spearheaded the development of a comprehensive work programme and provides technical and legal advisory services for the AGN. Furthermore, the Bank has supported platforms for discussions and preparations for COP meetings. The Bank also produces and disseminates scientific papers on key topical issues at the request of the AGN.

The AfDB played an instrumental role in the design of the Green Climate Fund, ensuring that African issues were reflected in the governing instrument; specifically a senior staff member worked with the UNFCCC for almost one year.

The AfDB continues to participate in COP meetings and has hosted technical and high level events to support Africa during UNFCCC meetings. For example, at COP17 in Durban, the AfDB led the establishment of the Africa Pavilion in coordination with other key regional institutions (African Union and UN Economic Commission for Africa), providing a platform to showcase African initiatives on climate change.

Overall, Africa has come a long way in the UNFCCC negotiation process. However, more can still be done to enhance the region's capacity to voice African interests. With Paris COP-21 looming, AfDB is committed to support African aspirations for a meaningful and successful global climate agreement and its implementation.



# The Last Mile to COP21: What does climate change science say about Africa?

*Scientific evidence has well established that the climate is indeed changing and it is human caused, despite any claims to the contrary. We can be confident that the basics of climate change are now well understood even though it must be acknowledged that some level of uncertainty remains.*

The Intergovernmental Panel on Climate Change (IPCC) has been responsible for compiling the scientific evidence on climate change since its formation in 1988. It has produced five Assessment Reports as well as a number of special reports on particular topics. The latest report, the 5th Assessment Report (AR5) was published in November 2014, its main assertion was that "...beyond reasonable doubt, the Earth's climate is warming".

For Africa, the consequence of a warming planet are dire. Statements from AR5-Africa include:

"Evidence of warming over land regions across Africa, consistent with anthropogenic climate change, has increased (high confidence).

"African ecosystems are already being affected by climate change, and future impacts are expected to be substantial (high confidence).

"Climate change will amplify existing stress on water availability in Africa (high confidence).

"Progress has been achieved on managing risks to food production from current climate variability and near-term climate change but these will not be sufficient to address long-term impacts of climate change (high confidence)."

The implications for Africa have been articulated in summary form in a recent publication (The IPCC's Fifth Assessment Report: what's in it for Africa) by the Climate Development Knowledge Network (CDKN, 2014).

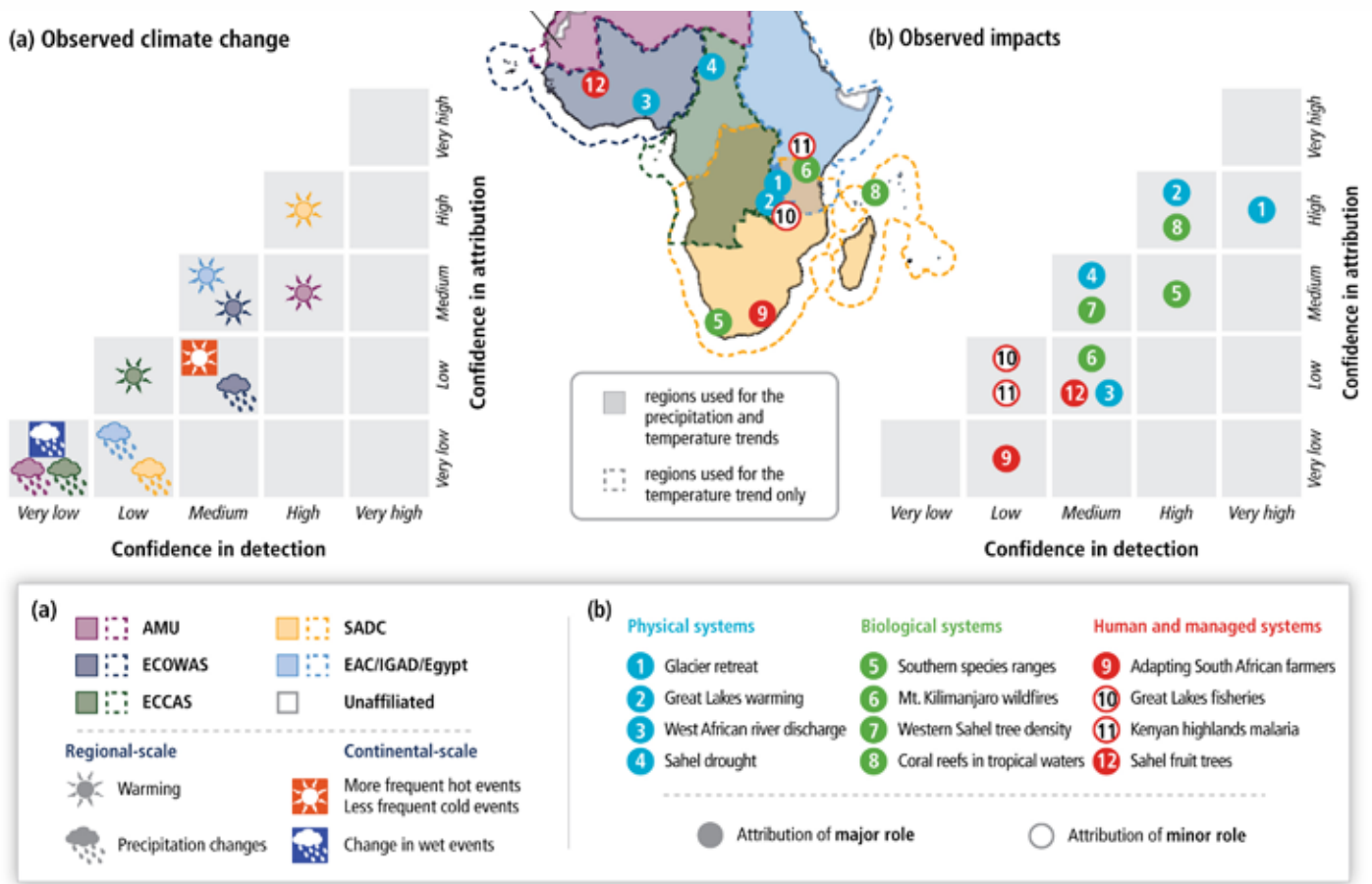


Figure 1. (CDKN, 2014)

In summary, a warmer planet will intensify climate variability and extreme events; rainfall events will be more intense, increasing the likelihood of flooding; droughts will be more frequent, increasing scarcity of water resources; there will be negative impacts on health and wellbeing; and economic losses will be significant. Suffice to say, in many cases the impact will be devastation, tragic loss of life and years lost to recovery and rebuilding of economies and societies.

Why should we care? Climate change is already being felt in different ways across Africa and it is being felt in all parts of Africa. The tragedy is that many countries do not have the wherewithal to deal with this dilemma. For many there are more pressing needs requiring attention such as the eradication of poverty, provision of basic infrastructure and services...needed to build successful societies.

However, African governments do recognize the urgency of building economies and societies resilient to the climate change problem. For this purpose, they require support from the international community to transition to low carbon and climate resilient development pathways. In nearly all spheres of development the technical knowhow exists. What is lacking for most African countries is enabling measures, among them the means of implementation: financing, capacity-building and transfer of technologies.

Understanding the climate change science is the starting point to identifying the options required to be specified in a successful global agreement on climate change. In the words of Jeffrey D. Sachs, Director of the Earth Institute:

“The climate science has given us the warning... it is our responsibility to take heed and to take action before disaster ensues”.



# Climate change mitigation: What's in for Africa?

*Climate change mitigation refers to efforts towards reducing and preventing the emission of greenhouse gases (GHG), with the view to limiting the magnitude of future global warming. The term may also include actions to remove GHGs from the atmosphere through, for instance, increasing the capacity of carbon sinks such as reforestation.*

The United Nations Framework Convention on Climate Change (UNFCCC) was established to cooperatively work to prevent dangerous anthropogenic interference with the climate system while coping with inevitable impacts of climate change. Mitigation efforts are implemented through various types of policies, strategies and initiatives with the aim of mitigating greenhouse gas (GHG) emissions. The most illustrative examples of these include the Kyoto Protocol's market mechanisms such as the Clean Development Mechanism (CDM), the mechanism for Reducing Emissions from Deforestation and Forest Degradation (REDD+), the Nationally Appropriate Mitigation Actions (NAMAs), and Intended Nationally-Determined Contributions (INDCs).

Among these mechanisms, some are connected to Africa and bear a great deal of importance to the continent. For instance, the international carbon market of the CDM (a flexible mechanism to the Kyoto Protocol) has meant additional finance, technology transfer and capacity building for Africa in the form of 242 CDM projects. Even though Africa accounts for a small portion (2.9%) of the total CDM pie of implemented projects (due to a set of reasons derived from the lack of institutional capacity, risky investment environment and general low abatement potential), they represent a good starting point as well as providing invaluable lessons on opportunities for mitigation through learning-by-doing.

It is a fact that the CDM has been unsatisfactory for Africa, but on the other hand this leaves a unique window of opportunity for the continent. There is a considerable untapped potential that could be explored if parties do agree to extend the CDM for the next global climate change agreement at COP21, especially now that the European Union Emissions Trading Scheme (EU ETS) – the biggest source of demand for Certified Emission Reductions (CERs) – has instituted a ban on CDM offset credits from projects in non-Least Developed Countries (LDCs) in that are registered post-2012 period. Indeed, the general perception is that the CDM will be prolonged if such an extension would mean increased participation on the part of LDCs. On the other hand, Africa is demonstrating interest in having the CDM featured in a future climate deal, as long as adequate reforms that will ensure more benefits for the continent are put in place. For CDM to work in Africa, there is a need to take into account Africa's mitigation specificities, including further consideration of GHG emissions-intensive sectors in Africa such agriculture, forestry and land use practices.

With regards to NAMAs, the term was first used in the Bali Action Plan (COP12 in 2007) and concluded in the 2013 negotiations at the Doha Conference (COP18). This initiative holds great importance for Africa too as it is expected to catalyse climate finance, technology transfer and capacity building from developed countries) to the developing and least developed countries. NAMAs are predicted to feature in the next global climate treaty as a stepping stone to support the most vulnerable in their efforts to mitigate emissions.

Yet in its infancy under the UNFCCC process, the REDD+ and more broadly the Land Use, Land Use Change and Forestry (LULUCF) provisions are perceived by the African Group of Negotiators (AGN) as holding a key role in achieving the UNFCCC's ultimate goal – a rise in average global temperature of no more than 2 degrees Celsius by 2100. Supporting this argument are several studies that point out that land use change (including deforestation and forest degradation) accounts for 17% to 29% of global GHG emissions.





Created to reduce emissions from deforestation and forest degradation and enhance carbon sinks, REDD+ is a mechanism that has been under negotiation by the Parties to the UNFCCC since 2005. Receiving much attention in the Bali negotiations (COP 13) in 2007, the first major decision adopted covered approaches to stimulate actions and a call for demonstration activities. Consequently, in the following years, several initiatives and programmes were set up such as the UN-REDD Programme, the Forest Carbon Partnership Facility (FCPF) and the Forest Investment Program (FIP) that further build on the wider concept of REDD+ as a climate change mitigation solution.

Recently, at COP19 efforts to further develop the previously scarce and vague provisions for REDD+ under the UNFCCC were made. Negotiators achieved what was considered to be a positive outcome, with several actionable decisions, namely, “work programme on results-based finance; modalities for national forest monitoring systems; presenting information on safeguards; technical assessment of reference (emission) levels; modalities for measuring, reporting and verifying (MRV)” (UNFCCC, 2013).

Additionally, conceived during the most recent negotiation sessions (COP20) and stated in the ‘Lima Call for Climate Action’ text is the new INDCs’ initiative. This measure is perceived by the AGN as an integral part of the next UNFCCC negotiations as standing for the climate actions that parties intend to take under the future universal climate treaty.

However, for Africa it is not yet clear how this initiative applies given that it is mostly liaised to climate change mitigation measures. Under the UNFCCC, Africa is not expected to set out emission targets due to the principle of “Common But Differentiated Responsibility (CBDR)”. This is because historically Africa is the continent which has contributed the least to atmospheric pollution and which, currently, contributes the least to the global emissions (4%) (African Development Report, 2012).

What next?

Lima (COP20) was indeed a high-profile event on the path towards a new global agreement, but it fell short of expectations on progress ahead of COP21. Fortunately, it was not the last chance to lay the groundwork for a new deal in the future. Climate change is playing a key role in diverse international meetings from now until the end of COP21 in December 2015, the official deadline for a new agreement.



# Scaling up Adaptation in Africa

*Africa is highly vulnerable to the impacts of long term climate variability and extreme events. It is increasingly facing multiple stresses that will be magnified by climate change leading to a complex set of problems. Moreover, many countries have high levels of poverty, aggravated by land degradation and desertification especially in arid and semi-arid areas, resource-based conflicts, migration and rapid urbanization. Estimates suggest that one third of the population live in drought-prone areas (with 220 million exposed to drought annually).*

Warming projections (IPCC, 2007) under medium scenarios indicate that by the last two decades of this century, extensive areas of Africa will exceed 2°C relative to the mean annual temperature of the late 20th century. While under a high warming scenario, an increase of between 3°C and 6°C is expected by mid-century

The Impacts of climate change are being felt today (CDKN, 2014). Changes in water availability will have a severe impact on agriculture with severe social consequences as not only is agriculture in Sub-Saharan Africa predominately rain-fed (97%), 60% of the labour force is reliant on agricultural systems. Furthermore, sea level rise is anticipated to be higher than the global average, particularly along the Indian and the Atlantic coastline. The impacts on health (food insecurity, malnutrition, increased incidence of malaria) are also expected to be dire.

if African communities fail to cope with the consequences of a changing climate economic sectors and human activities will be tremendously challenged and in many cases overwhelmed by the magnitude of anticipated extreme weather events referred to above.

The IPCC (2013) has defined adaptation as:

“The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects”

However, evidence suggests that adaptation to climate change is more often discussed and planned than implemented on the ground. This is the case in Africa, where a plethora of guidance on how to develop adaptation policies and plans exists for policy makers, but there are a few case studies on actual implementation and even fewer on lessons learned. Many developing countries have developed National Adaptation Plans of Action (NAPA) and more recently National Adaptation Plans (NAPs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change, however few countries have secured means of implementation; an outcome also explained by the limited finance made available for adaptation initiatives.

To reduce the magnitude of the anticipated impacts and their repercussions on livelihoods, implementation of adaptation measures need to be enhanced and supported at several levels, from households to national and regional levels. Measures may include:

- The development of early-warning systems to anticipate the occurrence of extreme weather events such as floods, droughts or fires and prepare populations for the impacts;



- More efficient irrigation, improvement in water storage capacity, reforestation, more sustainable use of groundwater resources, exploration of seawater desalination, and rainwater capture and storage for a more sustainable and reliable access to water for human and agricultural purposes;
- Infrastructural protection policies/ measures at the city level that addresses the risk of extreme weather events such as seawalls, dykes, wave breakers and other coastal zone management alternatives, but also food storage and to a certain extent urban agriculture to ensure food security, and improve sanitation facilities through improved design and drainage technology so as to mitigate the risk of water derived diseases.

The resources available to support Africa's capacity to deal with the impacts and damage are far inferior to what is required. It has been estimated that roughly USD1-2 billion a year currently flows to Africa for adaptation; yet the estimated cost of Africa's adaptation will be between USD7-15 billion per year by 2030 (UNEP, 2015).

Thus, scaled-up international support for African countries is vital. The most positive development in this arena is commitment by the Green Climate Fund (GCF) to a 50/50 split in financing for adaptation and mitigation. Furthermore, at least 50% of the amount allocated for adaptation will be dedicated to support LDCs, SIDs and Africa countries (more on GCF). To date has secured approximately USD 10 billion.

The Bank supports development initiatives that enhance resilience and adaptation to climate change; In 2014 a total USD 756 million in climate finance was dedicated to adaptation activities (Joint MDB Report, 2014)



# Carbon markets under a 2020 climate agreement

## *Developing countries must claim their share of atmospheric space*

Looking back at the Kyoto Protocol (KP), we were amazingly naïve but we have learnt a huge amount in 15 years of working with carbon markets.

The KP created an environmental asset, the Assigned Amount Unit (AAU), and distributed it to Annex 1 nations (OECD countries and Economies in Transition) based on rudimentary negotiations. Non-Annex 1 nations believed they were getting off lightly because their status implied no responsibilities for emissions. Meanwhile some Annex 1 Governments monetized these assets. Over-issuance, exacerbated by the refusal of the US to ratify the KP, resulted in a glut and price collapse but not before Annex 1 consumers had been charged for the privilege of living in a Kyoto Protocol world and EU Governments had handed out billions of Euro's worth of sovereign assets to polluting industries.

Non-Annex 1 countries were offered the Clean Development Mechanism (CDM) which came with a relatively transparent, though not perfect, allocation system – CDM projects could create assets called Certified Emission Reductions (CERs) if they could meet criteria including an additionality test to confirm that the project activities would not have taken place without the KP.

Joint Implementation (JI) allowed projects to be undertaken between Annex 1 Parties but did not rely on an additionality test because emission reductions transferred between countries were matched by the transfer of AAUs in a zero sum transaction. Removing the requirement of the additionality test was consistent with the design of JI but suffered from two major problems – host Governments were allowed to apply their own “eligibility criteria” i.e. there was no specific requirement for a transparent process of allocating sovereign assets to private companies; and due to the surplus of AAUs in certain countries, host Governments did not particularly need to ensure projects were real or additional.

What have we learnt from the Kyoto Protocol and what does it mean for a market mechanism in a post 2020 climate regime?

- 1) The process of declaring and submitting Intended Nationally Determined Contributions (INDCs) with a view to turning these into some form of legally binding commitments will create an environmental commodity in the form of a sovereign right to emit a tonne of CO<sub>2</sub>e. Governments are now negotiating how much of the available atmospheric space they are demanding for their development. In a classic fight over a truly global common property resource, every Government should demand as much as possible even in the knowledge that doing so destroys the climate. Only through a process of negotiation can targets then be reduced so that we use only the remaining 2°C atmospheric space. Those hard-won emission rights are valuable assets. Countries can either consume them by burning fossil fuels and emitting non-CO<sub>2</sub> GHGs or, if the Parties agree, they can sell them. But this time around, citizens should be aware of the value that is being created and they must hold their Governments accountable for those assets.

- 2) No Government will burden its economy with a significant cost of carbon unless its competitors do the same thing. This calls for converging levels of ambition and a means of equalizing the costs- which can be achieved through an international market.



3) For participating nations that have an agreed commitment, and report on their annual emissions, the JI model is the appropriate mechanism to use as a market. Emission rights which are exported from the country must be added to the national inventory and those imported, deducted. It is not necessary for any international body to oversee the allocation of sovereign assets to third parties (i.e. there is no need for a CDM-style registration and issuance process) BUT host countries must transparently account for their actions to their constituencies.

4) For participating countries that do not make commitments, an enhanced CDM style project mechanism can be used but there are three drawbacks – a) additionality and baselines will always be criticized by some, making the mechanism risky for investors; b) such a mechanism stops these countries from participating in the monetization of their emissions and hence it denies them a powerful tool for domestic policies; and c) if we are still using emission reductions to offset emissions by 2050, then we have failed: Offsetting re-locates emissions and helps some entities achieve targets, but emissions still take place.

5) Finally, this all only works if there is a high level of ambition. Countries which end up with excess emission rights by any other means than the implementation of clearly defined GHG emission reducing policies, need to follow an agreed procedure to readjust their commitments. Excess allowances and over-allocation undermined the KP and have continued to dog numerous national emission trading mechanisms. Alternatives, which warrant further exploration, include:

- a. Rating carbon assets, recognizing that units arising from countries with lower levels of ambition are simply worth less (in environmental and hence financial terms); and
- b. Moving rapidly to an auction mechanism where countries buy what they need and the revenues are recycled to finance low and zero carbon development.

Developing countries must realize that the INDC process is leading to the commoditization of the remaining 2°C atmospheric space. This space is finite. It is a valuable asset, without which countries will be forced onto alternative development pathways. For many developing countries, a once in a lifetime opportunity exists to negotiate their rights to a fossil fueled development pathway and then sell those rights to finance a renewable energy pathway.



# How to create a carbon market in seven steps

*Under a post 2020 climate regime, all countries will have the opportunity (obligation?) to develop and implement effective policies and measures to help meet their climate change commitments. Carbon markets have had a chequered history but their time could be approaching. Here are seven steps to create a carbon market which can be implemented approximately sequentially over a timescale of 5 to 15 years:*

*Step 0: Remove all subsidies for fossil fuels.*

Easier said than done but some countries have recently succeeded and with oil prices at such low levels and renewable technologies still getting cheaper, there may never be a better time.

**Step 1:** Implement GHG monitoring and reporting legislation for all entities which emit more than 10,000 tonnes of CO<sub>2</sub> per annum.

This may be implemented through primary legislation or existing environmental pollution controls but either way it should be hosted by a senior Ministry such as Finance or Planning because in due course, inter-ministerial committees will be required and line Ministries often lack the convening power. Legislation should include monitoring and reporting protocols for captured sectors (plenty of examples already exist) through which data should be collected over a three year period in parallel with a training and capacity building program. The government should also provide some financial support for entities who install suitable metering equipment. Then start an audit program with penalties for poor reporting in order to ramp up the quality of data.

**Step 2:** Implement a modest tax on greenhouse gas emissions.

Keep it simple, with as few exceptions as possible. Use audited data to determine the costs to industry. Resist lobbying efforts by industries and buy the public's support by redistributing the collected tax revenues to popular programs such as education and health. The tax will have a disproportionate impact upon poorer segments of society who spend a greater proportion of their income on energy and some industries which are heavily reliant upon fossil fuels. Use some of the revenues to support these groups. The tax will also discourage emitting industries from over-reporting their emissions. If the economy includes industries which compete in international markets, assess how many of these markets are also implementing emission taxes or ETS and decide whether or not, or for how long, to provide support to such industries. For example, they may pay a lower rate of tax for a period of time.

**Step 3:** Create a Ministerial level Climate Change Committee (CCC) chaired by a very senior member of Government.

The CCC is responsible for the overall development and implementation of the carbon market including the progression of key legislation through parliament. The CCC will appoint an advisory committee comprising stakeholders from captured industries, academia, civil society etc. The Advisory Committee will advise the CCC on overall targets and on the allocation of emissions to the traded and non-traded sectors on a rolling 5 year basis – giving sufficient certainty as to the supply of emission allowances but also having sufficient flexibility to respond to macro-economic trends. All accounts dealing with emission allowances must be transparently reported to Parliament.



**Step 4:** Construct a domestic emission reduction mechanism by which industries or gases which are not captured under the tax or the proposed ETS can implement emission reduction projects and sell certified emission reductions to tax payers who can use the units to reduce their tax burden. This expands the scope of the tax to non-captured industries and gases and also starts to build emission verification and trading infrastructure and capacity.

**Step 5:** Institute Phase 1 of an Emission Trading Scheme (ETS): Migrate taxed entities

A Designated Authority implements the ETS legislation under the oversight of the CCC. During the first phase, captured entities buy emission rights at the same rate as the tax, or even at a slight discount – minimizing resistance to the transition. Emission rights can be traded and emission reductions from eligible projects are fungible. To minimize the risk of future distortions, emission rights should not be bankable into the second phase.

**Step 6:** Institute Phase 2 of the ETS: Move from outright emission rights purchase to auctions.

At the outset of Phase 2, auction enough allowances to ensure that the cost of compliance remains comparable with the cost of compliance under Phase 1. Banking and carry-over of units purchased at auction into subsequent phases is permitted but, the CCC will have the authority to set a negative interest rate on banked units to discourage entities from excessive speculation. Units which are not sold at auction will be retired. When there are insufficient units, the CCC will authorize an entity to enter either the domestic or international market to purchase additional emission rights and will then auction these to incumbents with the expectation that the auction revenues will cover the cost of purchase. In this way, the CCC may ensure that the cap is not breached but at the same time, the economy is not constrained.

**Step 7:** Merge the ETS with trading partners whose ETS have similar integrity by allowing captured entities to participate in each other's auctions.

Merging helps harmonize prices and provides flexibility to captured entities but avoid any kind of connection to ETS where free or cheaply purchased allowances can be imported – this results in a transfer of wealth and a rapid loss of confidence in, and political support for the mechanism.

Why should any country do this?

Such markets can work because these lessons have been learned through implementation of the UK ETS, Kyoto Protocol, EU ETS, and drafting of the Australian Carbon Pricing Legislation (which was never implemented, yet). The major problem for all ETS to date has been over-supply of allowances in the early stages. This design minimizes the chances of over-allocation, as long as the CCC holds its nerve and transparently resists pressure from lobbyists.

Why do it?

- a) Governments have a responsibility to manage a country's resources on behalf of its citizens. Clean air and a stable climate are part of those resources. Not regulating activities that negatively impact upon these resources is increasingly being recognized as a dereliction of duty. Just like today we regulate some sectors of the economy for the creation of solid or liquid waste, so too should we regulate GHG emissions. Emission trading is simply the most cost effective way of implementing that regulation.
- b) Creating an emission trading scheme creates assets which add financial value and liquidity to economies. If the captured sector emits 100 million tonnes of GHG per annum and these are auctioned at USD 10 per tonne, the ETS adds USD 1 billion per year to the economy which can be used as collateral to drive investment and innovation in low carbon technologies, building a sustainable green economy and increasing energy security.

Following what I hope will be a successful meeting in Paris in December, dozens of developing countries should start to plan for the implementation of step 0 and Development Banks such as the African Development Bank should be on stand-by to assist them!





# Intended Nationally Determined Contributions (INDCs): Potential Implications for Africa

*In light of the urgency to limit the increase in global average temperature below 2 degrees Celsius, the international community are negotiating a new and binding climate change agreement. While the exact form and scope of the new agreement is still open to negotiation, developed and developing countries were invited to prepare their 'Intended Nationally Determined Contributions' (INDCs) for the post-2020 period. INDCs are the pledges countries are invited to put forward to express what they plan to do about climate change, forming the basis for the negotiations leading up to the Paris Agreement in December 2015. In terms of scope, INDCs are expected to include, among other elements, an economy-wide emission reduction target which defines country mitigation goals; and a set of policies and actions which measure and quantify emissions reduction impacts. Although INDCs are becoming the major building block of the proposed agreement, it remains unclear how climate change adaptation which is Africa's priority will be considered alongside mitigation, and what the implications for Africa will be.*

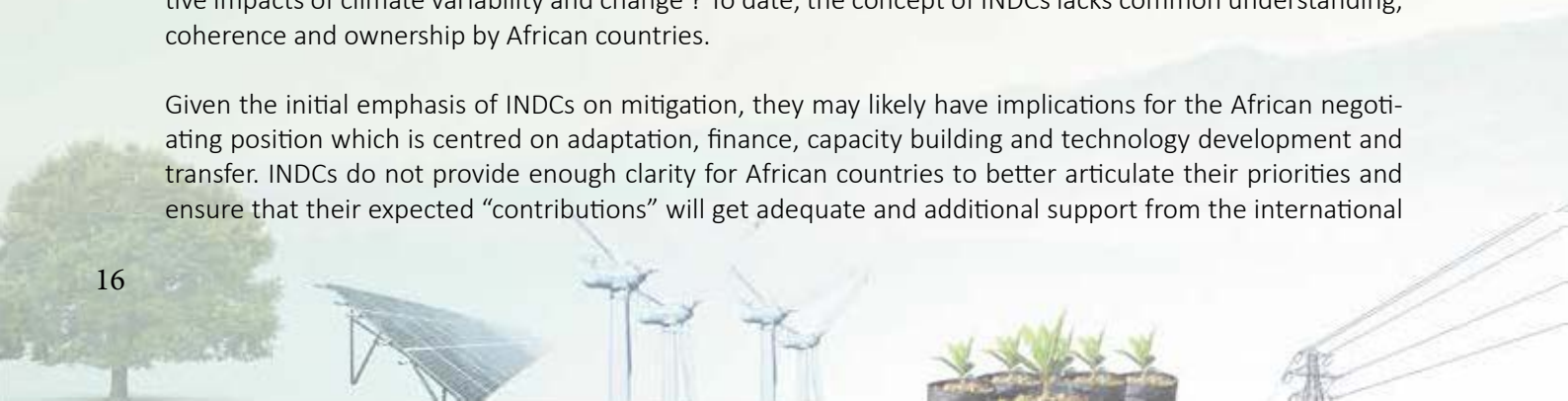
The process of designing INDCs as national commitments to combat climate change was decided at COP 19 in Warsaw in 2013. This decision was reiterated at COP 20, in Lima in December 2014 when parties decided that INDCs should represent a progression beyond current mitigation efforts, including long-term emission reduction targets. Initially defined as national goals/targets for implementing climate action, with a focus on countries' commitments to undertake mitigation actions, INDCs are expected to be ambitious, transparent and equitable, leading to transformation in carbon-intensive sectors and industry. They have since been re-defined to also accommodate the integration of climate change into national priorities, such as sustainable development and poverty reduction.

It is therefore important that INDCs be prepared well and communicated in a way that demonstrates that both domestic and international stakeholders can contribute to global efforts to combat climate change. One important aspect of INDCs is to track progress, taking into account the different levels of country economic development and the diversity of models and methodologies to monitor, report and verify progress. Ultimately, it is essential to ensure that global ambition articulated through the INDCs is adequate to achieve the international target of limiting the global average temperature increase below 2°C.

## **Potential implications of INDCs for Africa?**

Although INDCs will form the key input to the proposed negotiating text leading up to the new agreement, there is a general impression that most African countries are unprepared to make commitments and define priorities. Moreover, there is a limited understanding on what INDCs would look like in the African context, and on the basic and key elements to be included. A major concern for Africa is about the rationale and relevance for individual African countries to make binding commitments to reduce GHG emissions, in the context of the principle of "common but differentiated responsibilities". For instance, what does the notion of "contributions" mean for Africa? What are the implications of 'contributions' for African governments are expected to make when they have limited capabilities to meet basic development needs and address negative impacts of climate variability and change? To date, the concept of INDCs lacks common understanding, coherence and ownership by African countries.

Given the initial emphasis of INDCs on mitigation, they may likely have implications for the African negotiating position which is centred on adaptation, finance, capacity building and technology development and transfer. INDCs do not provide enough clarity for African countries to better articulate their priorities and ensure that their expected "contributions" will get adequate and additional support from the international





community. The current confusion around INDCs does not help, making INDCs unclear, complex and less relevant. INDCs are obviously a result of a compromise between the notion of “commitments” used by developed countries and the concept of “nationally appropriate mitigation actions” (NAMAs) promoted by developing countries.

Many developing countries including in Africa are presently preparing to implement Nationally Appropriate Mitigation Actions (NAMA) as part of their national efforts to address climate change. It is still not clear how these NAMAs are going to fit into the INDCs.

Without substantial support to African countries, it would be impossible for them to achieve goals and targets outlined in the INDCs. Clear alignment of INDCs with existing national initiatives such as NAMAs, National Adaptation Programmes of Action (NAPAs) and the National Adaptation Plans (NAPs) is a must, if African countries are to be involved in the adoption of a new agreement in Paris. As country pledges and national goals, INDCs need to take into account national priorities, circumstances and capabilities of individual African countries.

### **The place of adaptation in INDCs**

Climate change adaptation is part of the collective responsibility of the global community to address climate change, particularly in the vulnerable regions like Africa. Adaptation is not only an issue for Least Developed Countries (LDCs). Every country, be it developed or least developed is concerned about adaptation. Therefore, the support to adaptation must be clearly set out in the INDCs. Without this support, it becomes extremely difficult for African countries to be part of the global response to climate change. Addressing adaptation in the context of African countries is an urgent development issue. And, this should be a part of the new agreement, as far as Africa is concerned. However, including adaptation in the INDCs raises some questions related to the difficulty to make binding commitments for adaptation as compared to mitigation. Finally, INDCs should make it clear that adaptation cannot be a substitute for mitigation. Adaptation needs to be seriously considered into INDCs and the new agreement in December in Paris.

As a major supporter of the African Group of Negotiators (AGN) and the African common position on climate change, the African Development Bank recognises the importance of INDCs as a potential avenue to long-term sustainable development in the context of a changing climate. For a continent where poverty eradication is still a major focus, attention should continue to be drawn to the crucial realities of the socio-economic context of African countries and their capabilities to contribute and commit to international efforts on climate change. The endeavour will be challenging, the international community has an important role to support African countries and this must be explicitly reflected in the new agreement.



# Why INDCs can be a firm foundation for a climate deal

Like them or loath them, don't under-estimate the significance of INDCs!

You may be forgiven for thinking that Intended Nationally Determined Contributions or INDCs are just another UNFCCC requirement to add to a long list of reports and official submissions on the UNFCCC website which consume resources in hard-pressed Finance, Planning and Environment Ministries.

In fact, whether or not Parties make any significant progress at CoP21 in Paris in December, the mitigation element of INDCs could become the roadmap for public and private sector funded development and for this reason, it is vitally important that all nations take their INDCs seriously and build in, inter alia, realistic emission projections.

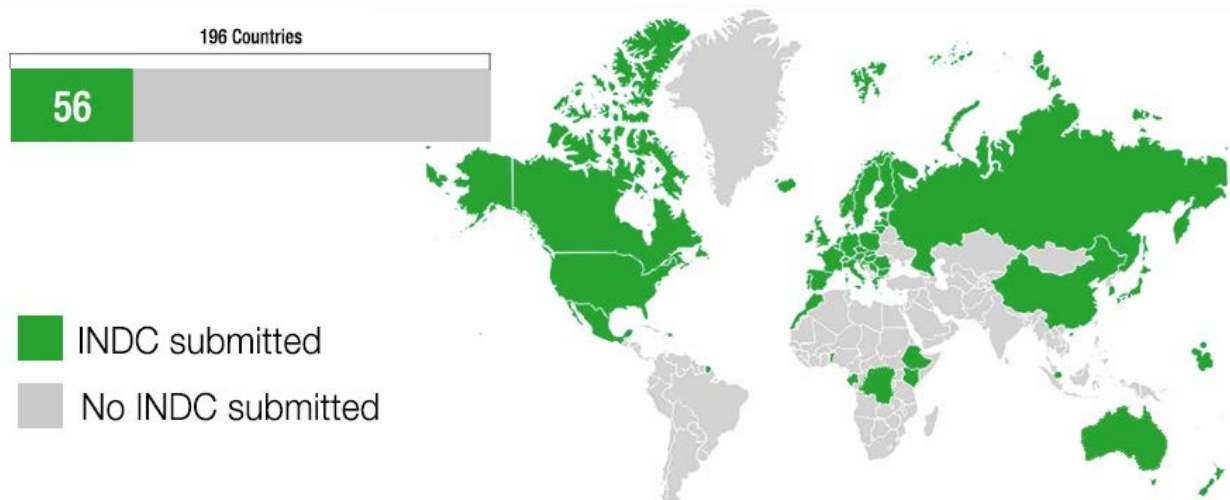
Any financing institution specializing in large scale infrastructure these days will face tough questions around the financing of fossil fueled energy infrastructure and with an increasing number of funds divesting from fossil fuel, the costs of capital will be going up. All very well for wealthy investors who want now to secure their future, but what about developing countries who have access to fossil fuel reserves, believe that they have a right to use such reserves and remain skeptical of the advertised costs and benefits of renewable energy?

Thanks to the advent of the INDCs, and with progress in Paris increasingly likely as more Parties submit their INDCs, the decision of when to invest in fossil fuel is about to get easier. Question number one on the latest due diligence questionnaire should read "Is the project included in the INDC?" If the answer is "Yes" and the INDC is part of a negotiated agreement on a post-2020 climate regime, then it means that the country has successfully laid claim to the atmospheric space required to dispose of the GHG emissions associated with the operation of the technology in question – in simple terms, it's in the country's GHG budget. If the project is not included in the INDC then funding it potentially undermines the international climate agreement.

What are INDCs?

In conceptual terms, the mitigation element of INDCs are an "air-grab" in which the last of the global commons is being divided amongst 196 nations. At stake is a share of the remaining 2°C atmospheric space in which to dispose of GHG emissions. Developed countries argue they need a big share because they have existing infrastructure which they cannot afford to shut down overnight whilst developing countries can leapfrog conventional technologies and go green. Developing countries argue that they have the right the use cheap, reliable and available fossil fuels to power their development, why should they be saddled with renewables?

In practical terms, INDCs incorporate bottom up commitments from all nations towards the agreed objective of limiting average surface temperature increase to 2°C. They are voluntary in nature but will become binding in the event of successful agreement in, or after Paris. All nations were requested to submit an INDC before the end of March 2015 with an absolute deadline of end October 2015. The UNFCCC Secretariat will consolidate the submissions in time for CoP21 in Paris but there is, as yet, no formal agreement to "add up" the commitments and compare them against the global target; and there is no formal review process. Unfortunately, adding commitments up is complicated by the fact that they can be expressed in a number of different units – like after a long journey when your plug doesn't fit and you don't have an adaptor, only worse.



To date (20 August, 2015), there have been 29 submissions from 56 countries (EU combines 28 countries in 1 submission).

#### Highlights?

Top of my list for effort and ambition is Ethiopia. Consistent with their Climate Resilient Green Growth Strategy and Growth and Transformation Plans, Ethiopia has already declared that their baseline is renewable energy and that with sufficient support, they will reduce their emissions by 64% compared to business as usual in 2030 and actually reducing their total emissions from 150 million tonnes per annum today to 145 million tonnes per annum in 2030. With a population of 90 million today and growing, this will make their annual emissions around 1.1 tonnes per person.

#### How might financial institutions use INDCs in the future?

INDCs should present some form of a development roadmap and GHG emission budget for major sectors of the economy from now to 2030. If CoP21 in Paris produces a climate agreement, those budgets will become binding and every funder will need to ask the question “Is this project part of your INDC?” Even if Paris fails to reach an agreement, funders may elect to refer to INDCs as an indicator of “acceptable” investments.

- Public and private sector funds will want to ensure their infrastructure plans are consistent with submitted INDCs;
- In the event that a post 2020 agreement makes provision for a market based mechanism under which carbon assets (e.g. allowances to emit or emission reductions) can be transferred between Parties (perhaps like the Kyoto flexibility mechanism “Joint Implementation”), or via internal carbon pricing, projects which reduce emissions below the INDC could potentially access new sources of finance;
- The publication of INDCs will inevitably lead to the creation of ambition indices and ranking of countries by the level of their contribution to the global target. The implication is that countries which make greater commitments to the global target will potentially receive more attention from climate finance providers.

#### In summary

INDCs are expected to form the basis of a post-2020 climate agreement and they also present a snapshot of every country’s planned development pathway. Countries preparing INDCs should take these submissions very seriously and understand that they are negotiating their development “budget” that will give them space to emit GHG emissions from fossil fuels and hence, their energy mix. Financial institutions should likewise consider the INDC’s with great care. Infrastructure projects that are consistent with the INDC are “in the budget”. And you all know what happens when your project is not in the budget.





# In Africa, adapted development can lead to inclusion and green growth

If Africa stood still, it would need to adapt. But Africa is not standing still. Africa is poised on the cusp of development.

Positive GDPs over multiple years across the continent with bright spots in North, East, West and Southern quarters of the continent show that development is spreading. Initiatives to promote energy such as the New Energy Deal for Africa recently launched here in the African Development Bank, the Africa Renewable Energy Initiative, Sustainable Energy 4 All (SE4ALL) and SEFA and CTF under the Climate Investment Funds are just some of the large scale initiatives promoting various forms of energy across Africa and the recent ECOWAS renewable energy competition hosted by the AfDB showed that there is no shortage of small scale and innovative initiatives being promoted by hungry entrepreneurs.

The problem with our current approach to adaptation is that it tends to assume that everything else remains constant whilst we retrofit the existing infrastructure. Hence, farmers need to change to grow crops which are more resistant to drought, we need safety nets for rural communities and vulnerable households, we need to build climate resilient infrastructure, sea defenses and so on. Not to say that we don't need those things, but at the same time, Africa's population is growing from a little over 1 billion today to 2 billion by 2050. Simply adapting the things we have will not do. What are we building for the coming generations? Is it going to be adapted by design or by retrofit?

The first item we need to address is energy supply. Energy drives development – and no doubt, Africa needs loads of it. The energy assets we build today will still be operating in 2050 and by then, every nation must have made deep reductions in emissions as we aim for a zero emission global economy by the third quarter – and just to be clear, this is gross zero emission, not net zero. There will not be any offsets unless someone develops a technology that cost / energy efficiently extracts CO2 from the atmosphere or carbon capture and sequestration becomes spectacularly successful. Planting trees will help but we also need land for food and solar energy. In other words, we either build adapted energy assets (i.e. renewable) now or we build fossil fuel assets and then try to find ways to mitigate their emissions in the future or adapt to life with them. Building renewable energy assets is Africa's biggest adaptation challenge and at the same time, it is Africa's biggest opportunity.

The second item we need to massively adapt is education, awareness and the role of the media in building young people's expectations. The fact is, that without some truly amazing breakthrough technologies, the youth of today cannot expect to live a lifestyle like we do today; they cannot expect to emulate their role models. Whilst the airline industry for instance is rapidly expanding, the need to cut emissions will soon become a real restraint. Biofuel supply chains are challenging and there is a very big difference between Solar Impulse and commercial airlines. Until we have widespread (renewable sourced) electric or clean hydrogen vehicles, transport is going to get harder. It will get harder to produce and transport commodities such as glass, cement and steel. Red meat, wasted food, air conditioning / central heating, tumble drying clothes are things we will have to have less of. Waste in general needs to be eliminated as we move to a circular economy. If we are to achieve our climate targets, life in 2050 is going to have to be very different from today and we need to educate our children to that effect otherwise our children are going to be ill-prepared for the world we are creating for them and they are going to be pretty annoyed with us as a result.



Similarly, if we carry on educating our economists, leaders and law makers in the same ways, they will still be struggling over a climate agreement in 2050, unless they've all just given up. The media can also play a huge role in this respect by recognizing just how effectively they can influence trends, fashions and expectations.

Adaptation is a major component of the UNFCCC and sits alongside mitigation, technology transfer and climate finance. Restricting the official definition of adaptation to “adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts” seriously limits the usefulness of this concept. Adaptation needs to be expanded to have a forward looking aspect which encompasses “Adapted Development” whereby countries adapt their development pathways to grow in manner which is consistent with the broader sustainable development objectives of the 21st century and which include green and inclusive growth, climate resilient growth and most importantly, low and ultimately zero carbon growth.

Energy and education are possibly the two areas where we most need a paradigm shift in our approach. Renewable energy systems are already adapted to our future needs. Educated and aware citizens are capable of understanding why we need to adapt our lives and at the same time, they are capable of developing their own adaptive strategies.



# Climate Finance

## Are we barking up the wrong tree?

The \$100 billion of new and additional finance in the run-up to CoP21 is an important sign of commitment from developed countries. In fact, many developing countries see it as the single most important issue for the Paris COP. However, while it's a significant sum, there is a danger that if we focus too much on it, we'll miss the real event.

The real event is the shift from a world of them and us, from the Annex 1 / Non-Annex 1 division to a world where all Parties have binding responsibilities. In particular, this is reflected in the concept of Intended Nationally Determined Contributions (INDC), a bottom up mechanism for defining commitments. The significance of this fact is that developing countries can no longer sit back and do nothing. Instead, they are expected to implement policies and measures to reduce their emissions. This changes everything. This is the paradigm shift.

Pre-2020 we can talk about climate finance, because in a divided world there is such a thing as "non-climate finance". But post-2020, there can only be climate finance. If countries are to meet their commitments, they cannot deploy non-climate finance, and development banks and donors most definitely cannot lend or donate to any program or project that runs contrary to a country's efforts to achieve its commitments – to do so would undermine whatever international climate change agreement comes out of Paris. A responsible Government can only build a coal-fired power plant if it is included within the numbers that underlie their INDC or, if trading exists, if it has the money to buy additional emission rights. Similarly, a responsible development bank, donor or investor can only finance that plant if it is satisfied that these conditions have been met.

And we need to start thinking and acting in this way immediately after Paris because the investments which we approve now will be built by 2020 and will still be operating by 2050, when global emissions need to about 80% below current levels.

The fact is, developing and developed countries alike need substantial amounts of money to move onto and maintain a clean development pathway, and whether it's presented as climate finance or compensation for loss and damage is not really the point.

Instead, the international support communities need to focus on working with governments to build capacity to develop and implement policies and measures that create an environment which enables investors to finance low and zero carbon technologies without undue technical, financial and political risks. And the Governments who manage their economies and environments (i.e. their sovereign assets) on behalf of their constituencies, need to work with these communities to ensure that enabling environments are created. This is a win-win situation, whereby suitable investment conditions will generate income leading to improved quality of life while reducing the risks of catastrophic climate change.

Putting a price on greenhouse gas emissions either through taxation or the implementation of emission trading schemes at a domestic and later a regional level, or a combination of both, will help achieve these objective and promote climate finance. Other policies and measures which should be rapidly deployed include the removal of fossil fuel subsidies; strengthening the role of the private sector in power generation and distribution; promotion of / legislation in favour of energy efficient technologies; in preparation for future policies, monitoring and reporting of greenhouse gas emissions; and, perhaps most importantly, much greater education and awareness raising among young people because in 2040 and 2050, it is today's children who will need to take the decisions that will move us to a zero carbon world, and their peers who will need to understand the issues sufficiently to vote for them. If they have the same level of awareness as voters today, and if they expect to live the same lifestyle as their parents and role models, then there isn't much hope for staying below the 2°C target. Yes, the \$100 billion is important; but more important are coordinated efforts to create environments which encourage and enable private sector investment in the technologies we need to deploy.



# Differentiating between developed and developing commitments risks the 2°C target

On November 15, 2015, Bloomberg reported from the G20 meeting that “The BRICS nations [Brazil, Russia, India, China, South Africa] called for a greater focus on emissions pledges to be “differentiated” based upon national circumstances”, suggesting they favor industrialized nations doing more to limit emissions than developing ones. “The Paris agreement should be fair, balanced, durable and comprehensive, reflecting the principles of equity and common but differentiated responsibilities and respective capabilities, in light of different national circumstances,” the BRICS said.

CoP21 is the time for greater ambition, not less. Leaving the concept of differentiation between developed and developing countries behind opens the doors for full participation by all countries; we have already seen over 160 countries submit their INDCs. The INDCs themselves are voluntary and leave countries plenty of room to set their own levels of ambition. CoP21 offers the opportunity, via INDCs, to start to plot a pathway to a low carbon future and formally announce to the world that this is what needs to be funded. Weaker commitments are not going to move the needle. Developing countries need to make stronger commitments and then seek the help from developed economies to design and implement policies and measures that can really make a difference. Key to these is creating enabling environments, where private sector investors feel comfortable taking on technical risks whilst donors and multilateral development banks work with governments to tackle institutional barriers and policy-based risks.

How do we know this? The concept of differentiation was part and parcel of the Kyoto Protocol (KP). In those negotiations, developing countries were always clear that they would not take on any binding commitments -- and it was this built-in differentiation that in fact doomed the KP to failure. The US Congress flatly refused to ratify the KP if their competitors did not have binding commitments. Non-Annex 1 countries got what they thought they wanted and the KP limped on largely supported by the European Union (EU).

One – nil to the developing countries, or so you’d think.

But in fact the EU and the Economies in Transition (EIT), notably Ukraine, Belarus and Russia were the main winners from the KP. EIT won because they successfully sold a significant number of Assigned Amount Units via the mechanism of Joint Implementation. The EU countries were major winners because they succeeded in creating billions of Euros worth of EU Allowances which boosted the balance sheets of (polluting) companies and enabled (some of) them to borrow money to build low carbon infrastructure. Others used the cash to see them through the hard times of the 2008 crash. Either way, the EU successfully used the top-down targets imposed by the KP to create and manage a commodity that generated wealth for their economy. Through the introduction of emission legislation, developed economies became more energy efficient; some have successfully decoupled economic growth from GHG emissions growth; they spend less on importing energy or have freed up more energy to export; they are more energy secure. They have created employment and improved their environments. Whilst the EU ETS and other ETS have not been without their challenges, these economies are 10 years into a steep learning curve and are now seriously focused on deep emission cuts by 2050.





What did developing countries get? Most got to carry on business as usual and some benefitted from the CDM. Some economies grew but their emissions also increased and they locked in more dirty technology, in many cases becoming increasingly reliant on imported fossil fuels. Some continued to degrade their environments and missed out on opportunities to develop manufacturing industries and create employment. Some developing countries, and some with historically small emissions, have made good progress in adopting green growth and low carbon policies and these are now reflected in ambitious INDCs. These countries have grasped the opportunity and must now benefit from support from developed nations.

Formalizing an “easier” route for developing countries not only risks the success of the new agreement but also weakens the chances of any commitments being sufficiently strong to drive effective policies and measures in developing countries. Without a demanding international commitment, short term politics will be unable to create policies and measures which enable this new commodity to be monetized to finance new technology. Without a demanding commitment, developing economies will spend another five years procrastinating.

“The best way to start reducing your emissions is to start reducing your emissions.”

Differentiation takes us back to the bad old days of them and us. We got past this in Durban. The world cannot afford to have a slow lane and countries that drive in the slow lane will miss out on the benefits which EU and others have been enjoying since 2008.



# Africa also starts paying for nature's services

In the face of an environmental crisis in Africa and elsewhere, one thing is clear: nature provides man with an abundance of essential services which must be preserved.

Take for example the case of tropical forests. Frequently referred to as the “lungs of the planet,” they regulate the climate by storing carbon while sheltering half of the global land biodiversity and protecting local water resources. The economic value of these so-called “environmental” services is gradually becoming understood and new instruments are being put in place to ensure their supply.

In Tanzania, in the East Usambara Mountains, the local water utility company for the city of Tanga (300,000 inhabitants) deemed it cost-effective to invest in conservation of the drainage basin which provides its water supply. It finances support to the communities upstream of the catchment for the latter to implement soil conservation measures- reforestation, terrace farming, agro-forestry- that help stem erosion as well as improve agricultural production.

## Financial Incentives

The Tanga-Uwasa company in effect understood that deforestation and the unsustainable farming practices of these communities were behind the problems of sedimentation and nutrient overload in the water it was using. Erosion had reduced the storage capacity of its main reservoir by 25% and the annual water treatment costs had doubled between 2005 and 2010 to more than EUR 200,000. The company, therefore, decided to invest an equivalent amount between 2013 and 2016 to finance soil conservation measures.

While lagging slightly behind other regions of the world, particularly that of Central America, such “win-win” scenarios are increasing in Africa. Since 2008, outside Amboseli National Park in Kenya, at the foot of Mount Kilimanjaro, Maasai land owners have been receiving annual payments (about EUR 12 per hectare) to maintain land usage and practices compatible with the movement of elephants toward the neighbouring protected area of Chyulu Hills.

These payments are funded by the government, development agencies and a tourist operator upon which these activities depend. Elsewhere on the continent, rural populations receive financial incentives from carbon markets to preserve the forest or to plant trees, as has been the case since 2003 in Uganda through the “Trees for Global Benefits” programme run by the NGO Ecotrust.

## Land Conflicts

These innovative initiatives, known as “Payment for Environmental Services” (PES), build on a contractual logic. Their attractiveness lies in their capacity to mobilise new sources of financing for conservation, benefit the local populations and improve the cost-effectiveness of conservation actions. The latter objective is linked to the principle of payment for results: rather than financing activities which aim to obtain results, it seems more profitable to pay directly and conditionally for achieved results. For the aforementioned three reasons, PES development in Africa seems promising.

However, to take full advantage of such innovative initiatives, African countries must implement suitable institutional frameworks. Land tenure clarification is a major challenge while exclusive land rights are rare (given that the government is often presumed to be the legal land owner) and land conflicts are numerous.

It is also necessary to build the organisational capacity of local populations and to establish the needed legal, institutional and fiscal mechanisms to generate new sources of financing for nature conservation. Climate finance, which is central to international negotiations expected to culminate in a global climate agreement in Paris by the end of the year, is particularly relevant. PES could allow for better access to these funds which would then be channelled to the local populations.

### **The Need for Environmental Laws**

There is also a need to be realistic with respect to the potential of PES. Establishing such initiatives is costly and takes time. Ignoring them creates exposure to a certain number of risks: increase in land conflicts, land grabbing by the local elite and creation of perverse incentives (putting an end to objective conservation).

Lastly, PES is far from being the most suitable solution for all environmental problems. Strengthening the enforcement of environmental legislation in Africa remains a priority in order to limit illegal logging, for instance, or the ivory trafficking which reached record levels in recent years and has decimated the elephant and rhino populations of the continent.

The PES publication is available on African Development Bank website.

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