

International Climate Change Regime and the Paris Agreement: Lessons from China and Strategies for Ensuring Sustainable Economic Development in Africa

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Abstract

Asian countries benefitted immensely from the Kyoto Protocol's flexibility mechanism such as the Clean Development Mechanism (CDM) and its potential to foster sustainable development. However, Africa did not benefit substantially from CDM. The CDM was specifically designed to achieve two purposes- to assist developed countries achieve their emission reduction commitments in a cost-effective manner and to foster sustainable development in developing countries. Several assessments by both the UNFCCC and other stakeholders, on the success of the CDM, indicates that although the CDM has proven effective in engaging East Asian countries in mitigation efforts, it has been less successful in engaging Africa. As a result of this disengagement, Africa accounts for only two percent of CERs generated. In comparison China, India and Brazil accounted for more than 70 per cent of the abatement from CDM projects by 2012. The Paris Agreement on Climate Change include mechanisms built in to assist developing countries to achieve sustainable economic development, poverty alleviation, capacity building, adaptation to climate change and to contribute their fair share to reducing GHGs. Taking a cue from the inability of African countries to fully tap into the sustainable development benefits of the CDM, and the lessons that can be learnt from East Asian Countries' effective engagement with the CDM, this paper aims to highlight how African countries can tap into the sustainable development opportunities in the Paris Agreement. The Nationally Determined Contribution (NDC) offers a tremendous opportunity for integrating climate issues into the broader macroeconomic policies and strategies of African countries; work towards achieving the sustainable development goals; and sustainable economic transformation.[1]

Keywords

Africa - China - Clean Development Mechanism - Paris Agreement - Sustainable Economic Development

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1. Introduction

It's over twenty years since the United Nations Framework Convention on Climate Change (UNFCCC) was signed at the 1992 Rio Earth Summit, when countries agreed to limit their emissions of greenhouse gases (GHGs). Years after this historic treaty was opened for signature, there have been far reaching changes in the understanding of,

response to, and governance of climate change. The latest report by the Intergovernmental Panel on Climate Change (IPCC) indicates that human induced climate change is already taking place, with significant negative effects on the environment and the earth systems.[2] In response to this phenomenal threat to humanity, there are increasing and sometimes expansive international, regional, and national policies and programmes, from governments, business and civil society.

For instance, many countries have developed comprehensive legislation on climate change. The UK was the first country, with its historic 2008 Climate Change Act.[3] The Act aims to set a target for the year 2050 for the reduction of targeted GHGs; establish a mechanism for carbon budgeting; establish a Committee on Climate Change; set statutory targets for emissions reduction; and to do other ancillary acts that will lead to the reduction of targeted GHGs. Other countries have followed the UK's footsteps.[4] Altogether, 99 countries, consisting of 33 developed and 66 developing countries, which represent around 93 per cent of global emissions, have national laws or policies directly related to climate change mitigation and adaptation.[5]

The foundation for the Paris Climate Change Agreement 2015 was laid during the 2011 Durban climate change rounds of negotiation in Durban, South Africa. The Durban Outcome is significant because it heralded a new climate change regime that finally culminated in the Paris Agreement. One of the key characteristics of the Paris Agreement is that it is applicable to all, both developed, emerging economies, developing and least developed countries, unlike the UNFCCC's Kyoto Protocol of 2005 which made a distinction amongst nations based on their capabilities and the international law principle of common but differentiated responsibilities.[6]

2. The Impacts Of Climate Change In Africa

The planet's climate has constantly been changing over geological time due to natural variability and external forcing. However, the current period of warming is occurring more rapidly than many past events. Scientists are concerned that the natural fluctuation, or variability, is being overtaken by a rapid human-induced warming that has serious implications for the stability of the planet's climate.[7] Although it is difficult for scientist to determine the scale of the potential impacts, it is certain that climate change will result in freshwater shortages, threaten food production, and increase the incidence of floods, storms, heat waves and droughts. This is because climate change is expected to increase the frequency of extreme weather events.[8] Scientists also agree that developing countries are likely to suffer more from the adverse impact of climate change than developed countries.[9] This is because they have less capacity to mitigate and adapt to its negative effects and are therefore most vulnerable, although they have contributed the least to the problem.[10]

The IPCC Report 2007 also estimates that of all the continents, Africa will be severely hit by the impacts of climate change, strengthened by Africa's weak capacity for adaptation and mitigation.[11] According to the IPCC Report, Africa is one of the most vulnerable continents to climate change and climate variability. Africa's major economic sectors are vulnerable to current climate sensitivity, with huge economic impacts, and this vulnerability is exacerbated by existing developmental challenges such as endemic poverty, complex governance and institutional dimensions, limited access to capital, including markets, infrastructure and technology, ecosystem degradation, and complex disasters and conflicts.[12] These in turn have contributed to Africa's weak adaptive capacity, increasing the continent's vulnerability to projected climate change.

Most scientists studying the potential impact of climate change have predicted that Africa is likely to experience higher temperatures, rising sea levels, changing rainfall

patterns and increased climate variability with consequential impacts on its population.[13] Food and Agriculture Organisation of the United Nations predict negative impacts of climate change on agricultural production and food security in large parts of sub-Saharan Africa, higher temperatures, the drying up of soils, increased pest and disease pressure, shifts in suitable areas for growing crops and livestock.[14] There is no gainsaying that these impacts will put pressures on limited resources and threaten the attainment of sustainable development. In Africa and other developing regions of the world, climate change is a threat to economic growth, long-term prosperity, as well as the survival of already vulnerable populations. Unlike Africa, other developing regions of the world were able to tap into the international response to climate change to improve their adaptation and mitigation capacities and reduce their vulnerabilities to the impact of climate change. Most countries in Asia, notably China and India were able to do this successfully, for example, through mitigation mechanisms in the UNFCCC's Kyoto Protocol.

3. Lessons For Africa From The Kyoto Protocol's Clean Development Mechanism

Asia benefited immensely from the Kyoto Protocol's flexibility mechanism, especially the Clean Development Mechanism (CDM), which was specifically designed to foster sustainable development, transfer clean technology, build capacity for adaptation and attract resources for mitigation. CDM projects can help local communities by providing opportunities for sustainable development. The benefits of the CDM arise from its promotion of sustainable development in the host country, inter alia, through increased investment flows that would finance clean technology and contribute to achievement of the host country's sustainable development goals. Such sustainable development goals include generation of clean energy, reduced local air pollution and improved air quality, job creation and increased economic activity, and transfer of clean technology and private/public sector capacity development.[15]

From the inception of the CDM and up to date, countries in Asia and Latin America, such as China and India, Indonesia, Thailand, Malaysia, Vietnam, Mexico, Chile, Colombia, Argentina and Brazil have continued to dominate and attract a large share of CDM projects. A 2012 report by the UNFCCC on the benefits of the CDM to host countries indicates that the sustainable development contributions claimed most frequently by host countries are stimulation to the local economy including job creation and poverty alleviation, reduction of pollution, and promotion of reliable and renewable energy.[16] Research has also shown that although the CDM has achieved sustainable development, the sustainable development achieved is not across board but is limited to certain

regions and continents.[17] The CDM has definitely promoted sustainable development in some countries in Asia and Latin America such as China, India, Brazil, and Mexico largely because these countries currently dominate the CDM project pipeline.[18] For example, there are currently 7,779 registered CDM projects.[19] China is currently hosting over 50% of the total CDM registered projects in the UNFCCC CDM project pipeline, India 29%, Brazil over 30%, and Mexico over 18%.[20] These countries have been successful in supplying over 80% of global certified emission reduction credits (CERs).[21] The dominance of these countries can be attributed to such factors such as strong institutional and regulatory framework for approval and implementation of CDM projects, capacity building and they have steered CDM investments towards projects that are aligned to their nationally defined sustainable development priorities and goals.

However, apart from South Africa,[22] African countries have failed to fully tap into the sustainable development potentials of the CDM. African countries have not been as successful as Asian and Latin American countries in attracting CDM projects. For example, Nigeria is currently hosting 7 CDM projects, Ghana is hosting 2, Kenya is hosting 9, and Morocco is hosting 3 out of the 7,987 registered projects in the CDM project pipeline. There are several African countries with no CDM projects since its inception in 2004. [23]

Research suggest that there are prevailing factors that have influenced the number and the scope of CDM projects and CDM project investors to particular developing countries. Lack of institutional capacity in developing countries for the governance and implementation of CDM projects is a key factor. In addition, other factors include inadequate or non-existing legal and regulatory framework for climate change response and governance; the emission reduction potential; safe and conducive climate for investment; infrastructural deficit, especially availability of electricity and good road network and a corruption free government structure.[24] An assessment of Asian countries that have been successful in dominating the CDM project pipeline and CERs generated from CDM projects confirm that these countries have structured and effective national institution for the governance and implementation of CDM projects; fulfilled the institutional requirements of the CDM; engage more in capacity building in order to attract more CDM projects; and a clear vision for national sustainable development needs.[25]

3.1 China and Its Strategy for Attracting CDM Projects and Fostering Sustainable Development

China has a structured institutional and regulatory framework in response to climate change and for the governance and implementation of CDM projects. China's National

Climate Change Programme (CNCCP) outlines the guidelines, basic principles and specific objectives in addressing climate change, as well as policies and measures to mitigate and adapt to climate change in key areas.[26] The main law governing the approval process for CDM projects in China is the 'Measures for Operation and Management of Clean Development Mechanism Projects in China' (China CDM Measures), which sets out the rules, measures for CDM project implementation, and the national agencies responsible for CDM project activities in China.[27] The Chinese Government took time to build capacity internally, engage senior ministries to take an active role, and elaborate clear approval processes. One of the most powerful Chinese ministries, the National Development and Reform Commission (NDRC), was appointed chair of the Designated National Authority (DNA).[28]

The DNA of a country acts as the principal point of contact for the CDM within and outside that country.[29] It approves participation in CDM projects and, in addition, the DNAs of developing countries confirm that proposed CDM projects assist in achieving sustainable development. Therefore, the DNA has key functions in the CDM process, including to establish the approval procedure for CDM projects; confirm voluntary participation of project participants; confirm sustainable development contribution of projects in the developing host country; and issue Letters of Approval (LoAs) for the purposes of validation and registration of projects at the UNFCCC level.[30] In addition to its stated functions, host country DNAs also has the option of playing discretionary roles such as capacity building and promotional activities to attract CDM investment that promotes national sustainable development goals and vision.

To ensure that it attracts specific CDM projects that will enhance its defined sustainable development objectives and goals, China has defined its sustainable development priority areas as energy efficiency, renewable energies, and methane capture and utilisation, to act as a guide to CDM project developers and investors, and to steer proposed CDM projects towards those areas in order to promote its sustainable development objectives. Article 4 of China's CDM Measures states that "[t]he priority areas for CDM projects in China are energy efficiency improvement, development and utilization of new and renewable energy, and methane recovery and utilization." [31] In addition, Article 10 stipulates that proposed CDM projects should promote the transfer of environmentally sound technology to China.[32]

Furthermore, to ensure that it attracts CDM projects that align with its defined sustainable development priority areas, China established a discriminatory taxation scheme for different types of CDM projects. Article 24 of China's CDM Measures establishes a taxation scheme on the proceeds of Carbon credits from CDM projects. The

scheme is discretionary because the taxation rate levied on carbon credits earned from CDM projects varies according to the relevance of the project to China's defined priority areas.[33] The tax rate levied ranges from 2% for projects in pre-defined priority areas of energy efficiency, renewable energies and methane capture and utilisation, 30% for N₂O projects and as much as 65% for HFC and PFC projects.[34]

The difference in the tax levied on CDM projects reflects China's strategy to encourage the implementation of CDM projects that contribute most significantly to its sustainable development priorities.[35] The Chinese CDM policy rewards projects that contribute to its sustainable development priorities through lower taxes and tax breaks, and penalises those that do not, through higher taxes and levies. Note that although China hosts HFC and PFC[36] projects, it places a higher tax on their CER proceeds because they do not fall within its priority areas for sustainable development. The revenue generated by the government constitutes a special fund used to support sustainable development in China.[37] Interestingly, this obvious discrimination has not discouraged investors from investing in CDM projects in China. China is possibly the only CDM host country that has successfully screened CDM projects against its defined sustainable development priority areas and strategy.[38]

China's success with the Kyoto Protocol's CDM can also be attributed to other factors such as a strong institutional and regulatory framework for climate change, clear CDM project approval and monitoring process, capacity building through different donor-funded capacity building initiatives, mainstreaming climate change into national policies and programmes such as carbon intensity reduction goals. Ultimately, China's success and extraordinary embrace of the sustainable development benefits and opportunities afforded by the CDM has provided the country with valuable experience in climate change mitigation and adaptation strategies, allowing it to develop and test appropriate systems. Furthermore, China, and indeed Asia, is now well prepared for the next global challenge- fulfilling and implementing the Paris Agreement obligations under the Paris Agreement, and seizing opportunities for continued sustainable economic development.

4. Highlights of the Paris Agreement[39]

The historic Paris Agreement was adopted on 12th December 2015 after two weeks of intensive negotiations involving 195 countries. The success of the Paris Agreement can be linked to its bottom up approach, different from the Kyoto Protocol which adopted a top-down approach. Basically the negotiations were focused on what each country, and region, whether developed, developing,

or least developed, is willing to contribute to what is required to stem catastrophic climate change in the future, such that we can restrict and keep warming under 2°C pre-industrial levels - the 2°C target. The Paris Agreement still retains the founding principle of the UNFCCC such as the international principle of sustainable development,[40] precautionary principle and the principle of common but differentiated responsibility (CBDR).[41] In addition, the Paris Agreement acknowledges and introduces new concepts that were not captured in the UNFCCC such as human rights obligations, climate justice, and the rights of women, vulnerable groups, and indigenous peoples. Thus the preamble acknowledges that "climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity".[42]

The key elements of the Paris Agreement includes the goal of holding global warming below 2° C.; a system of national pledges to reduce emissions referred to in the Paris Agreement as 'nationally determined contributions' (NDC);[43] the non-binding character of these contributions, the reliance on transparency rather than legal enforcement to promote accountability and effectiveness;[44] the shift away from the annex I and non-annex I differentiation in terms of emission reduction commitments towards a more flexible approach that encompasses all countries, whether developed or developing; the pledge to mobilise climate finance from public and private sources[45] and, perhaps most importantly, the bottom up approach of the agreement.

While the UNFCCC's ultimate objective is to ensure stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The Paris Agreement defines a global target for halting the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change. Thus the Paris Agreement adopts a more ambitious target for limiting global warming because it goes beyond the target of 2°C by mentioning an ambitious 1.5°C target as part of the concrete goal to stay well below 2 degrees. This global goal is to be achieved through the reduction in GHG emissions through national contributions.

NDCs are emission reduction commitments of countries after 2020. The commitments include changes across the entire sectors of a country's economy, or in specific sectors

such as energy, forestry. It could be through the implementation of emission reduction projects such as energy efficiency project, it could be policy oriented such as introduction and implementing carbon tax and so on. Thus, the commitments are made according to the different capabilities of Parties to the Paris Agreement. For instance, developing countries with advanced capabilities submitted their mitigation goals in the form of economy-wide goals, such as emission reduction targets below business as usual scenarios (BAU), reducing national GHG intensity, etc. Other developing countries expressed their mitigation goals as a collection of policies, programmes and specific mitigation activities. The agreement requires parties to provide the information necessary to ensure that their NDCs are clear and transparent, become progressively more ambitious over time, and to track progress in implementation. NDCs offer a tremendous opportunity for Africa countries to integrate climate issues into the broader macro-economic policies and strategies and foster sustainable economic transformation.

Article 6(4) establishes a ‘mechanism’ to contribute to the mitigation of greenhouse gas emissions and support sustainable development, which seems to be similar to the CDM.[46] It is established to contribute to the mitigation of GHGs and support sustainable development in the host country. Like the CDM, the objective of the ‘mechanism’ includes to promote the mitigation of GHGs and to promote sustainable development in the host country. Similar to the CDM, the ‘mechanism’ will incentivise and facilitate participation by public and private entities authorised by a Party to the Paris Agreement.[47] Emission reductions achieved can be used by either the host Party or the sponsoring Party to demonstrate achievement of the nationally determined contribution.[48] It should be noted that the term ‘Mitigation outcome’ is used in the Paris Agreement instead of ‘project’, which suggests that the scope of the new ‘mechanism’ could be broader than the project-based CDM, and could encompass elements such as the CDM Programme of Activity and certain types of sectoral crediting mechanisms and other bilateral instruments.

5. Strategies For African Countries To Harness Sustainable Development Benefits Of The Paris Agreement

Although climate change will inevitably cause challenges to Africa’s growth, it also provides an opportunity for the continent to grow faster and cleaner and for Africa to develop her own capacity for industrialisation. Furthermore, Paris Agreement’s NDC provides a strong basis for sustainable economic growth. For instance, NDCs could be adopted by developing countries as their national sustainable development strategy, priority or plan. However, for Africa to seize the opportunities inherent

in the Paris Agreement for mitigation and adaptation to climate change and sustainable economic development, it has to address some of the challenges that militated against tangible gains during the Kyoto Protocol’s CDM era. Research identified that African countries were unable to tap into the sustainable development benefits that CDM investments and projects brings to host countries as a result of inter alia, lack of institutional capacity in developing countries for the governance and implementation of CDM projects, inadequate legal and regulatory framework; safe and conducive climate for investment. These challenges are in addition to the general developmental challenges confronting African nations such as issues of good governance and accountability, challenges in mainstreaming climate change into national policies and programmes; political stability and lack of political will.

The Paris Agreement presents another opportunity for African countries to achieve sustainable economic development, and to contribute to the global challenge on climate change through effective governance and implementation of their NDCs. A good NDC should be ambitious; result in transformation in carbon-intensive sectors and industries; transparent, so that stakeholders can track progress and ensure countries meet their stated goals; and equitable, so that each country does its fair share to address climate change. It is imperative for African countries to address the challenges identified in this paper in order to key into and harness the different mitigation, adaptation and financing mechanisms that have been created to foster sustainable economic development in the Paris Agreement. To that end, this article proffers the following recommendations:

- Establish a strong and adequate institutional and regulatory framework. This can be achieved through relevant climate laws and policies. Independent government agencies and relevant ministries should have key roles such that they can coordinate and drive the NDC implementation process amongst the relevant sectors of the economy. Furthermore, African countries should eradicate institutional barriers and rivalry amongst national agencies and improve coordination at the national level. The institutional framework must ensure that key agencies or ministries work together. For example, the inter-ministerial structure adopted in the UK Climate Change Act.

- ‘Unpack’ NDC across relevant sectors of the economy such as manufacturing, transportation, energy, agriculture, forestry etc. This can be achieved, for example, through ensuing harmonization between the NDC strategy on energy and the national renewable energy master plan. This will ensure synergies between NDCs and national development strategy.

- Match climate finance support needs to funding sources. This can be achieved through a climate finance framework that will enable developing countries identify required climate finance, identify financing sources, match support needs to funding sources, identify components of NDC implementation that requires funding as against those that require non-financial support.

- Assess capacity building needs across government agencies and co-ordinate response to identified needs amongst relevant ministries and agencies. Also relevant ministries and agencies should identify potential capacity needs. This will increase Africa's capacity to initiate and implement climate change policies and programmes and also to attract climate finance and investments.

- Identify mitigation potentials in key sectors of the economy. African countries should invest in research and data collation on issues such as in-country analysis of GHGs and the development of GHG inventories, an understanding of mitigation potentials in key sectors of the economy, and baseline study in order to determine GHG projections and implement mitigation strategies.

- It is important to define national sustainable development priorities and strategy. This will allow African countries align their sustainable development priority areas with climate finance. It is not enough to list sustainable development criteria and indicators on paper without relevant institutions and regulations to drive visions and goals.

- Establish clear links to the 2015 Sustainable Development Goals (SDG). This creates an unprecedented opportunity to set a clear path for development for the next generation. Action on climate change is essential in meeting development aims, including poverty eradication, health, education, food and energy security. The various agreements on climate change, including the Paris Agreement, and the SDGs should be seen as complementary, with opportunities for mutual benefit in areas such as low carbon development.

- Establish links between NDCs and existing domestic strategy and policy agenda. An NDC that is strongly linked with existing domestic strategy and policy agenda has a greater chance of promoting sustainable development and meeting national targets.

- Tracking sustainable development co-benefits of NDCs: The impact of an NDC would typically be multidimensional and will not be limited to emission reduction benefits. For example, monitoring, report, and verification (MRV) of NAMAs often covers direct emission reductions

as well as the co-benefits of sustainable development benefits such as environmental, social or economic benefits.

6. Conclusion

The Paris Agreement is only one of many steps on a long road to the ultimate objective of the climate change regime. The Agreement provides the mandate and framework for concerted action, the challenge now is to implement the agreement and transition towards a low carbon and climate resilient future at all levels. Ultimately, harnessing the developmental co-benefits in the Paris Agreement will require groundwork on the part of developing countries. For many developing countries, apart from domestic efforts discussed in the recommendations, the successful implementation of national contributions requires continued financial and other support from developed countries, to enhance national capacity and a successful transition.

References