

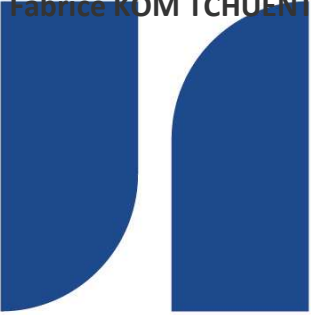


FINAFRIQUE RESEARCH

CARBON FINANCE, ECOLOGICAL POLICIES, AND AFRICA IN ALL THIS?



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SOMMARY

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FOREWORD

Climate change is one of the major challenges of our century. Controlling CO₂ emissions, in a context of rising industrial production, has become a necessity. Aware of the danger, the member countries of the United Nations Framework Convention on Climate Change have established an international treaty aimed at reducing greenhouse gas emissions: the Kyoto Protocol.

Adopted on 11 December 1997, it entered into force on 16 February 2005 and has been ratified to date by 183 countries, with the notable exception of the United States. Its main objective being the reduction between 2008 and 2012 of greenhouse gas emissions by 5% compared to 1990 for the 39 most industrialized countries that have joined. This protocol has woven the regulatory framework of the carbon market which is the main economic instrument for combating climate change.

The African continent, which contributes to less than 5% of global greenhouse gas emissions, is nevertheless the most economically vulnerable continent in the face of its consequences.

In light of this paradoxical situation, this article will examine the effectiveness of the requirements and economic instruments developed under the Kyoto Protocol (particularly the carbon market) in relation to the deterioration of Africa's main economic resources.



WHAT ARE GREENHOUSE GASES ?

Greenhouse gases are gases that trap infrared radiation emitted by the Earth's surface. The increase in their concentration in the Earth's atmosphere is causing global warming.

The main greenhouse gases emitted by human activity are :

- ▲ Water vapor,
- ▲ Carbone dioxyde (CO₂),
- ▲ Methane, nitrous oxide,
- ▲ Ozone.

HOW THE CARBON MARKET WORKS ?

To help countries and companies achieve their goals, an international greenhouse gas emissions trading system was established through the Kyoto Protocol.

The trading of these emission rights, trialed in Europe from 2005 to 2007, is based on the so-called system of « Cap Trade » :

EACH STATE HAS INDIVIDUAL REDUCTION TARGETS AND IMPOSES EMISSION QUOTAS ON ITS « POLLUTING » COMPAGNIES THAT MUST BE MET.

Those that exceed the threshold will be required to purchase rights in the market, and those who reduce their emissions by reviewing their industrial facilities will receive credits that they can resell. This is the carbon market. In Europe, the framework of the emissions trading system is called the « European Trading System » (ETS). This system operates on the basis of 'European allocation units', which correspond to one tonne of CO₂.

The penalty for a company that issues without having permits was €40/tC in the first phase, rising to €100 in the second phase, plus the obligation to buy permits to be in good standing.

Thus, according to the Kyoto Protocol, companies can buy credits by investing in CO₂ emission reduction projects in other countries, including developing countries. The aim is to promote investments in these emerging countries, where the costs of reducing emissions could be lower.

There are therefore two project mechanisms. First, the Clean Development Mechanism (CDM), through which companies in industrialized countries invest in technologies to reduce greenhouse gas emissions in developing countries: by capturing methane from landfills, with wind turbines, less polluting fuels, power plants. This mechanism stimulates foreign investment and contributes to technology transfer and sustainable development. As for the Joint Implementation (JI), it concerns industrial or forestry projects aimed at combating the greenhouse effect and launched particularly by Russia and the countries of central and eastern Europe. These projects also generate gas emission credits that can be used by investors.

On the other hand, there is a voluntary carbon market. This market, which operates outside the Kyoto Protocol, is a simplified adaptation of it.

In this voluntary market, individuals or organizations purchase “carbon credits” from projects that reduce greenhouse gas emissions or capture carbon. These “credits,” also known as carbon credits, are used to offset the emissions of the purchasers.



This system allows them to offset air travel, car trips, bus and coach journeys, and energy consumption at home or in the office.

In return, they invest in social and sustainable projects such as energy efficiency projects (improved stoves, solar cookers, green charcoal...), reforestation, waste valorization, methane reduction from landfills and wastewater treatment plants, and biogas generation.

A major center of activity for the voluntary exchange market is the Chicago Climate Exchange (CCX).

Let's take as an example the annual meeting of the African Development Bank held in Dakar from May 13 to 14, 2009, which was certified carbon neutral by the NGO Atmosfair, a pioneer in carbon compensation processes

Prenons pour exemple l'assemblée annuelle de la Banque Africaine de Développement tenue à Dakar, du 13 au 14 mai 2009 qui a été certifiée neutre en carbone par l'ONG Atmosfair, pionnière dans les processus de compensation carbone.

Indeed, CO₂ emissions from participants' air and local transportation, the planning and management of their accommodation and meeting venues, and all other conference-related services were offset by a \$125,000 investment in development projects for the use and promotion of sustainable energy in Africa.

WHAT ARE THE MAIN IMPACTS OF CLIMATE CHANGE ON AFRICAN CONTINENT?

Africa is one of the continents most exposed to climate variability and change because of its geophysical and socio-economic characteristics.

Indeed, Africans' main livelihoods are agriculture, livestock farming, fishing, tourism, and natural resources. They are therefore particularly vulnerable to food insecurity, malnutrition, limited access to water, and significant drops in income (economic losses could represent up to 14% of GDP). The poorest will be the most affected.

Average temperatures are increasing, changes in the quantities and regularity of precipitation, droughts and growing floods imply soil degradation and therefore a decrease in agricultural yield and access to drinking water. The disappearance of natural resources significantly reduces the quality of life of Africans.

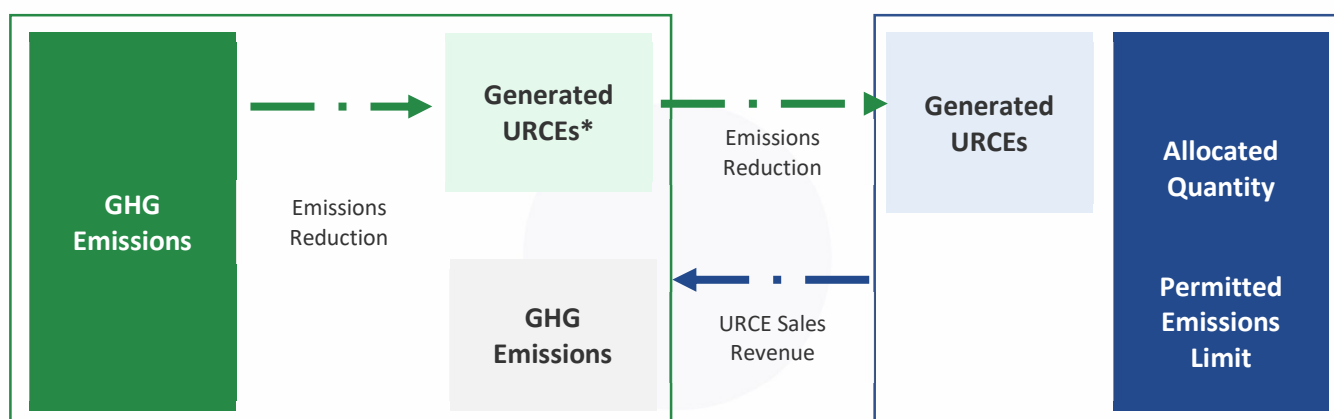
Tourism, often dependent on nature, will also be affected. Nearly 30% of the wildlife in sub-Saharan national parks are at risk of extinction in the next 10 years, according to experts from the IPCC (Intergovernmental Panel on Climate Change).

And let's not forget, nearly half of Africans live in extreme poverty, and among them, most live in rural areas, where their main source of income is essentially defined by agriculture and livestock farming.

FACED OF THIS ECONOMIC CATASTROPHE, WHAT ARE THE CONTRIBUTIONS OF ENVIRONMENTAL POLICIES ON AFRICA?

The Kyoto Protocol provides for clean development mechanisms, which are to help developing countries achieve their sustainable development goals by promoting environmentally beneficial investments, through the intermediary of governments or private entities in industrialized countries. By setting up these projects, the latter obtain in return carbon credits which they receive in the form of "certified emission reductions" or CERs, which they can use to meet their own quantified emission limitation commitments.

Principle of the Clean Development Mechanism



* URCEs : A Certified Emission Reduction Unit equivalent to one ton of CO2 equivalent reduced, avoided or sequestered.

Source : Guide for the development of CDM projects in Algeria

The consequences of these well thought-out mechanisms should provide Africa with benefits in terms of sustainable development such as reductions in air and water pollution through reduced use of fossil fuels, particularly coal, improving water availability, reducing soil erosion and better protecting biodiversity.

On the social level, many projects would create new employment opportunities in the targeted regions and promote local energy independence.

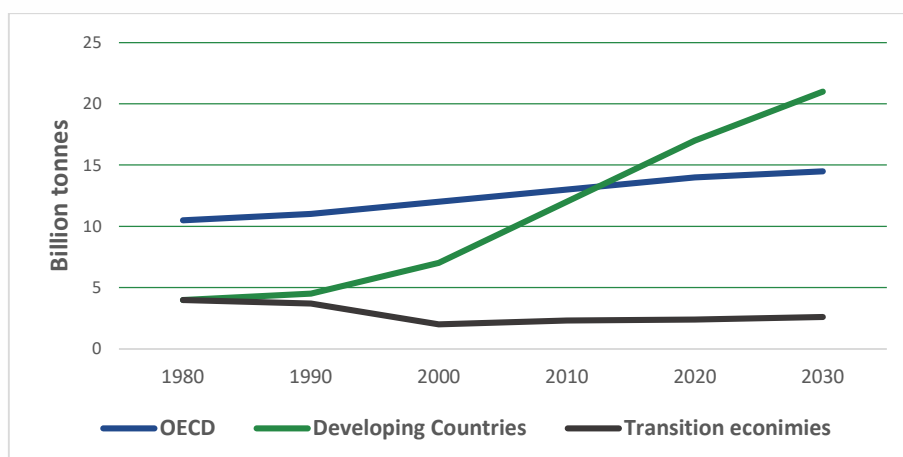
However, a report by the World Bank that highlights a strong potential for project development under the Clean Development Mechanism (CDM) in Africa (study released at the first Pan-African Carbon Forum in Dakar, Senegal) specifies nevertheless that Africa's share represents a minimal fraction of the developed projects. Indeed, today it is around 2.4% or 120 projects out of a total of 4,900 submitted projects, knowing that 90% of these projects in Africa are limited to Egypt and South Africa (country which, paradoxically, is responsible for 50% of greenhouse gas emissions on the continent). Most of the investments being made in projects in India, China and Brazil.

Although in the last two years we have witnessed the birth of financial organizations whose objective is to promote projects eligible for clean development mechanisms such as the African Biofuels and Renewable Energy Fund (FABER) and the Moroccan Carbon Capital Fund, which is the first French-speaking African fund specifically dedicated to carbon finance in Morocco, Africa, which hoped to benefit from the small amount of its emissions to attract capital for the Clean Development Mechanism, is nevertheless the victim of a lack of interest. This lack of interest is explained, according to the experts, by the generally unfavourable conditions for investment that prevail in Africa, notably the shortage of efficient financial and commercial organizations and the continent's insufficient administrative and management resources.

AFRICA, « NON-POLLUTER-PAYER » ?

Isn't that a bit easy as an excuse? Africa, which is home to 13.8% of the world's population and consumes only 2.3% of the fossil energy used each year worldwide, is the continent most impacted by climate variability. However, in terms of the financial and infrastructural benefits of global environmental policies, it is the least well off on the pretext that the business climate is not conducive to it. We prefer to buy carbon credits by investing in emerging countries, particularly in Asia, to ensure a better Return/Risk mix.

Emissions of CO2 linked to energy by country group.



Source : World Energy Outlook 2006

The objectives of the Kyoto agreements, which were to establish a punitive «polluter pays» system, are defined in Africa as a system of « Non-polluter-Payer ».

WHY NOT REVIEW THE CARBON CREDIT PRICING POLICY WITHIN THE FRAMEWORK OF CLEAN DEVELOPMENT MECHANISMS TO FURTHER GUIDE ENERGY-CONSUMING COMPANIES' INVESTMENTS TOWARDS AFRICA?

It would be imperative to review the system for purchasing carbon credits regarding clean development mechanisms. Because it is absolutely not logical that it be the same price for one tonne of carbon depending on whether it is an investment project in China or an investment project in Senegal. Because obviously, as is currently the case, there is a total imbalance in the distribution of social and sustainable investments in developing countries.

The prices of carbon credits vary depending on the type of clean development mechanism projects, their progress and the corresponding risk.

For example, at the end of August 2007 the prices of carbon credits were as follows:

- ▲ 5 à 6 € for medium risk projets in the future,
- ▲ 7 à 10 € for low risk projets in the future,
- ▲ 9 à 13 € for registered projets,
- ▲ 15 à 16 € for the carbon credits issues.

This methodology is interesting but we need to go further.

Since the effective price of carbon is defined on the market by a classic balance between supply and demand, and knowing that the goal would be to find solutions to attract more energy-intensive investors to Africa, why not assign a discount (price reduction) on carbon credits related to investments in Africa. Discount adjusted according to the risk aversion of investors depending on the country and which would be set as a percentage of the equilibrium price defined by the market.



Thus, more investment would go to Africa and would notably allow for the development of the significant renewable energy resources that Africa possesses (solar, wind, and hydro) and thus gradually address the energy deficit it suffers from.

HOW TO RAISE AWARENESS AMONG AFRICANS ABOUT SUSTAINABLE DEVELOPMENT AND FURTHER ENCOURAGE LOCAL INVESTORS TO PARTICIPATE IN THE CARBON MARKET?

The volume of trading on the carbon market in 2009 amounted to nearly 150 billion dollars. Moreover, a global market of around 565 billion dollars is anticipated by 2020. These exchanges primarily take place on two stock exchanges: Bluenext (a subsidiary of NYSE-Euronext) and the European Climate Exchange in London (ECX).

Thus, foreign companies are riding this market in Africa, as exemplified by Carbon2green, which has made it its mission to carry out, in developing countries, activities certified as Clean Development Mechanism projects, which entitle it to carbon credits. This initiative allows it to profit from the profitability of the projects it develops on one hand and from the resale of the carbon credits it has obtained on the other hand.

Example of projects: Rural electrification in the Democratic Republic of Congo and Mali, methane recovery and valorization at Lake Kivu in the western part of the DRC, and hydroelectricity production in three sub-Saharan African countries.

Theoretically, many African banks suffer from excess liquidity due to caution, lack of investment opportunities, and yet, Canadian companies like Carbon2Green find real investment niches.

One might logically wonder if local investors in Africa are blind, lack experience in sustainable development, or simply lack the will.

It would be very difficult for African governments to commit today to setting up training and awareness-raising structures for all civil society actors on the principles and practices of sustainable development, because it will be said, there are many priority infrastructure projects.

One solution would therefore be that out of all the carbon credits related to clean development mechanism projects in an African country, the latter receives a share that will be used to finance the training and awareness of its citizens on sustainable development. On the other hand, African governments should encourage economic operators to learn about carbon finance. This will allow African investing banks to address their overliquidity by carrying out numerous profitable local projects that, in addition, will create jobs and significantly improve the living conditions of Africans.

A SPECIAL CLEARING HOUSE TO AVOID SPECULATIVE DEVIATION ON CARBON CREDITS?

Another idea would be that the amounts deducted from the sale of carbon credits obtained by local investors be partially reinvested in local development projects if their investments in the associated clean development mechanism project had been significantly profitable. In other words, it involves setting up a sort of clearinghouse, which, depending on the profitability of the clean development mechanism project invested in by the bank or financial institution, will commit the latter to return a portion of the funds obtained from the sale of carbon credits associated with said project. Funds that will be used to finance other local projects completely independent of clean development mechanisms. This device will help avoid entrenching a system of speculation on carbon credits as is currently the case in Europe via financial institutions such as Barclays, Goldman Sachs and many others that are buying companies specializing in carbon credit trading or companies approved by the UN for managing clean development mechanism projects.



WHAT CONTRIBUTION FROM THE GLOBAL ENVIRONMENT FACILITY FOR AFRICA?

Another important lever for financing global environmental policies is the Global Environment Facility (GEF). The GEF was established in 1991 and works in partnership with international institutions, non-governmental organizations, and private sector partners who are fighting global environmental problems. It also supports sustainable development initiatives. Today, the GEF is the world's largest funder for projects aimed at improving the environment.

In late 2008, Yvo de BOER, then executive secretary of the United Nations Framework Convention on Climate Change, stated that the total value of projects in Africa funded by the GEF was \$378 million, while the value of projects worldwide was 2,4 Billion dollars. That is 15% of global funding on the most vulnerable continent.

The main objective of this article was to propose solutions that would allow Africa to fully benefit from the main opportunities offered by the Kyoto agreements through the carbon market.

The African situation in the face of climate change can be defined to the extent of the following three terms:

- ▲ **Responsabilities** : less than 5% worldwide,
- ▲ **Economic impacts** : higher compared to those of other continents,
- ▲ **Compensation** : lower compared to those of other continents.

This great paradox is completely incomprehensible. After numerous requests for reparations from African leaders, one of the decisions of the Copenhagen conference was the promise to devote \$100 billion per year in aid to developing countries starting in 2020 and to examine innovative financing methods to achieve this goal.

WE CAN ONLY HOPE THAT AFRICA WILL NOT BE MARGINALIZED ONCE AGAIN



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