CHAPTER EIGHT

DEVELOPING AFRICA'S ABILITY TO WITHSTAND SHOCK: FINANCE AND CLIMATE CHANGE.

Sams Dine SY

1. Introduction

Despite the hypothetical threat of climate wars breaking out in Africa, the real uncertainty focuses on the financial aspect. Over the course of the next few years, new pressures on the global financial system are likely to arise, bringing Africa to the brink of chronic instability and threatening prospects for development.

It is expected that current levels of CO₂ emissions will translate into significant variations in temperature in Africa, amounting to 3-6 degrees. If this tendency persists, the entire continent risks economic and social breakdown. This threat could well impede the barely perceptible momentum that followed the Kyoto, Copenhagen and Cancun summits, despite the pledges made to set up a Green Fund for the climate (table 1).

It has not helped matters that the biggest carbon emitters, who are also the providers of public development aid have been hit by the gravest financial crisis since 1929, with its consequent bankruptcies and rescue plans that have done little to reduce unemployment levels. The frequency and intensity of climatic events, coupled with the vast amounts that could be absorbed in the fight against climate change, threaten to bring to a halt all of Africa's efforts to become a "lion in motion" (McKinsey 2010).

This chapter addresses the following fundamental question: how to develop Africa's ability to withstand extreme climatic shocks in a context of disruption to the global financial system? In response, this chapter evaluates the uncertainties, the stakes and the financial challenges of the war on climate change. From the key problem of sharing the burden between the biggest emitters and Africa, the chapter plots various possible financial scenarios. It subjects the vision put forward by COP to a critical examination, and reformulates it, in order to give priority to Africa's development. Finally, it provides a framework for intervention along with strategic options and the outline of an action plan that could support Africa in the ongoing financial negotiations.

The chapter also focuses on the means for reducing Africa's vulnerability to climate change, correcting the weaknesses in the carbon finance market and taking advantage of the opportunities offered by a remodeled financial system.

The chapter elaborates the actions which would permit Africa to integrate itself into the global carbon market. Finally the chapter examines the opportunities offered by geo-engineering and innovation and the means for sustaining the various projects and initiatives in these fields. The resilience of the entire

global economy is under threat, and it – and Africa – will find it increasingly difficult to withstand a new major disaster.

The following paragraph examines the prospects for financing climate change. The third proposes some strategic options as well as outlining a broad plan of action for Africa. Paragraph four makes recommendations and sets out the basic elements of a plan of action.

2. Prospects for financing the war on climate change in Africa and aspects of the war on climate change.

To examine the financial picture by 2050, one has to distinguish the most significant trends, uncertainties and climatic risks. For example, it will be possible to manage a rise in temperature of less than 2 degrees C by extending the insurance system, but anything above this will expose it to a generalized weakness extending beyond even the crises of 1929 and 2008.

Main trends in socio-economic factors

The African continent has been held back from a significant position in the world because it has been for millions of years a continent characterized by conditions of extreme dryness as well as extreme humidity.

Global GES emissions will continue to increase over the coming decades, even if the attempts to reduce these emissions are extended. If GES emissions persist at the current or greater rate, global warming will accelerate and profoundly change the climatic system.

Africa's contribution to these emissions will also continue to rise, even though they are insignificant compared to those of the big emitters. Current levels of global carbon dioxide emissions are only 4%, 60% of which are due to deforestation and soil degradation. It is expected that Africa's population growth rates will level with and surpass those of India and China around 2025 and that almost half the inhabitants of the continent will live in an urban environment, producing and consuming far more than in the 20th century.

Causes of breakdown

"Global Trends," updated regularly by the National Intelligence Council or NIC (2008) and the European Commission (2009) awards a significant position to factors which could contribute to breakdown over the coming century. For this study we will concentrate on the factors relating to climate change, such as those analysed in the various reports of the GIEC¹

¹ Groupe d'Experts Intergouvernamental sur l'Evolution du Climat/Intergovernmental Group of Experts on the Evolution of the Climate

A rise in emissions of 500 parts per million (ppm) of carbon dioxide equivalent (CO2e) against 435 today, will bring about a warming that will have sudden and irreversible consequences. A warming of 0,2 degrees C per decade over the next twenty years will have dramatic consequences for Africa, which could expect to experience breakdown in various areas:

- From now until 2020, from 75 to 250 million people will suffer water shortages due to climatic change.
- In some countries rain-fed agricultural production could fall by 50% by 2020. It is anticipated that agricultural production and access to food will be severely affected in many countries, with dire consequences for food security and rates of malnutrition.
- Towards the end of the century the rise in sea level will affect highly populated low-lying areas. The costs of adjustment could represent 5-10% or more of GNP.
- According to different scenarios, arid and semi-arid areas will increase in size from the current 5 to 8% by 2080.

Box 1: some breakdown scenarios:

- The dominant economic model declines
- Persistent and substantial emittors and polluters are criminalized
- International rules and regulations are not respected
- Africa explodes
- Takeover by those with new ideologies (living planet, conservationists, protectors of biodiversity, proponents of zero growth, ecosophy or etocracy)
- Lack of consensus on the reality of climate change and loss of credibility of the GIEC.
- Attack on the big emitters and their enterprises
- Coup d'Etat in those countries that refuse to comply with with climate change regulations
- Contagion on the carbon market and crisis in carbon finance
- Global conflict over the control of resources
- Blitzkrieg in order to relocate industries based on climate science and appropriate technology
- Rivalry and race for raw materials and eco-innovations which compromises any financial agreement
- Generalised reduction and devaluation of the price of carbon, rendering pledges by the big emitters null and void
- Possible use of the climate as a weapon in climate wars
- Wave of climate migrants and refugees used as a weapon in poor countries (demographic and climate bomb)
- Natural and human parks emerging that alter the concept of development and humanity
- Radical technical innovations
- Energy transformation

- Individualisation of the carbon footprint and control by means of spies and carbon police
- China, India and Brazil become the leaders in eco-innovation ad threaten the USA and Europe
- Aid, subject to climatic conditions, becomes inaccessible and inoperative before being abandoned altogether
- Major climatic incident
- Failure of the global insurance industry following frequent disasters
- Rapid replacement of fossil fuels
- "Climate shocks" become commonplace.

The means by which the war on climate change is handled by the year 2050 depends on a complex chain of factors. Given the breadth of uncertainties about possible manifestations of these changes, there is not much sense in defining precisely the future functioning of the financial system which will bear the heavy burden of covering the damages, sustaining the transition towards a new model of moderate growth in carbon emissions, at the same time as adaptation, reduction and development. As scientific efforts intensify, so the images represented in climate change scenarios sharpen and resolve. Thus, in 2006 estimates of the annual increase in carbon dioxide emissions envisaged 2.5 parts per million (ppm) annually, at a level of 450 ppm. The most recent measurements suggest an acceleration in the rate, which will raise the temperature by 2 degrees C. The peak should be reached by 2020. Lack of action in this period would bring about an additional cost in terms of Gross Industrial Product of around 1 to 2%. At this point climate change has become swift, versatile and alarming.

The development and intensity of emissions dictate the terms of how to finance the war against climate change. To this underlying factor can be added others which will also affect the future of the global financial system:

- Globalisation, which tends to manifest itself in multiple ways, taking various forms (monetarism), extensive (global chain of industrial finance), inclusive (global) as well as exclusive (rich/poor divide);
- 2 Economic prospects in a context of emerging from crisis and growth factors;
- 3 Actions Africa must take in relation to the reduction of carbon emissions;
- 4 Global governance to oversee the utilization of funds and the measurement of emissions;
- 5 Development of the structure of the financial system allied to the amounts involved in the transfer of funds;
- 6 Needs of an African population which is set to surpass a billion in a world of 9 billion inhabitants.

Africa's task: financing for - despite all this - development

Africa's task is simply put: more than anything else, it needs to finance development. Initially, this means progressing from growth of the national budget to financing long-term investments. Any

interruption of this complex, laborious and vulnerable process will render the possibility of development impossible. This is the significance of the idea of development as "resilient," and which assumes a financial system capable of fulfilling this aim.

Challenges

Challenges are described in terms of threats and opportunities, and the ability to confront them.

First challenge

This is the threat posed by the disengagement of the biggest carbon emitters. Reasons for this are many, following in the wake of the global financial crisis. But the big carbon emitters are the main channel for mobilizing resources on the global financial markets.

Second challenge

The opportunity that the rapid development of carbon finance represents. Better organized, these markets could compensate for the poor development of stock markets, which are indispensable for attracting and retaining financial investments.

Third challenge

More perilous than the previous two, this is the financing of the investments of African enterprises as well as the financing of green innovations, clean tech and green business in geo-engineering in general. This challenge might represent either a threat or an opportunity.

Financial scenarios and implications

Outline of the scenarios

The financial system must be able to perform certain tasks that would normally lie outside its purview:

- Covering damage to goods and people;
- Financial assistance for the protection of the atmosphere against emissions and concentration of GES;
- Support for protecting plant life against radioactive forcing by protecting carbon wells and biodiversity;
- Support for green innovations and geo-engineering in order to "change the current weather patterns and reduce the temperature."

Table 1: key financial uncertainties and possible solutions

Possible	No 1	No 2	No 3	No 4
solutions				
Key questions				
What will be the	Approach from	Market-led	Local solutions.	Convergent
future global	various angles.	approach.	World subject to	approach.
context for	World moving	Intensive	exclusive type of	Extensive
sharing the	towards an	globalisation	globalisation	globalization
climatic burden?	inclusive			
	globalisation			
What will be the	Strong growth in	Slow growth	Intermediate	Weak growth
engine of growth	industrialized	held back by	growth	extended by
and economic	countries	developing		developing
dynamism?		countries		countries
What activities	Eco-innovative	Activities	Activities	Nature
will Africa	activities.	directed at the	designed to	conservation and
undertake with	Respect for	protection of the	mitigate	differentiated
regard to GES	universal goals	atmosphere but	damage.	emissions
emissions?	for emissions	unrestrained	Moderate levels	objectives
		emissions	of emissions	
			tolerated	
What	Massive public	Regional	Selective	Regular
mechanisms for	transfer against	financial	transfer	experiments
governance and	disasters in	governance and	organized	with
financial	heavily	autonomous	through	decentralized
oversight?	populated urban	responsibility	negotiations	finance
	areas			
How will people	Insurance cover	Insurance	Selective cover	Global coverage
be protected	against disasters	against disaster	among richer	
against	in heavily	of large areas	countries and	
disasters?	populated urban	with dispersed	peoples	
	areas	rural populations		

Table 2: framework for scenarios and possible solutions

Possible solution Key questions	S1	S2	\$3	S4
What will be the future global context for sharing the climatic burden?	Differentiated approach. World evolving towards inclusive globalisation	Market approach. World subject to intensive globalisation	Local solutions. World in grip of exclusive globalisation	Convergent approach. Extensive globalization
Economic dynamics and growth	Slow growth held back by developing countries	Strong growth led by the industrialized world	Intermediate growth	Weak growth held back by emerging countries
What activities will Africa undertake to reduce emissions?	Activities developed around a universal goal of realistic emissions	Humanitarian actions without regard for human or natural ecosystems	Actions designed to adapt to a life with a temperature rise of 3 degrees C and differing emissions targets	Activities around an ambitious target for emissions reduction
What mechanisms for governance and financial oversight?	Regional financial governance, autonomous and responsible	Global financial governance. Consensus around the architecture of the financial system	Global solution to climate financing. Global organization for development and protection of the environment	Local solutions. No consensus. System is not cooperative
What will be the size of the financial transfer to Africa?	Massive public transfer organized by states and IFIs. Renewable fund	Selective transfer organized through exchange of negotiable permissions. Multiplicity of funds	Private capital transferred "a la carte" with possibilities for ppp	Experiments with decentralized finance. Negative financial transfer

Table 3: Financial scenarios

Name	Financing of climate change	Insurance	Nature conservation	Financing protection of the atmosphere
Level	S1	S2	S3	S4
Global	Direct public finance for restraining carbon emissions, green innovations, recourse to radical solutions with climatic geo-engineering	Indirect public support for multi-risk insurance. Growth in private financial system and bank insurance	Financial compensation and valuation of natural capital. Growing role of ecological and humanitarian foundations	Support for concerted targeted activities. Increasing role for big international organizations
Africa	Africa is targeted through the financing of geo- engineering initiatives like CDR or SRM, coupled with programmes such as Desertec, REDD+	Africa is targeted through micro- insurance projects for the poor	Africa is targeted because of its soils, forests and bio-diversity, which are public goods to be conserved in exchange for projects and financial compensation	Africa is targeted as a potential big emitter, but with reduced economic ambitions

The sketch outlined above in table 3 is intended to stimulate reflection and suggest ways in which the various hypotheses regarding climate change financing can be combined. The main aim is to set out a clear vision of climate change and its financing, such as undoubtedly prevailed during and prior to the Copenhagen meeting, hopes for which were quickly dashed.

The options suggest that the war on climate change must conclude with the conservation of "living things," protection of the atmosphere against GES emissions, climate change through geoengineering and innovation or insurance against damage, such that the bank assurance system is not ruined. It would seem that the fate of peoples is no longer of great value, and events unfold as though the options are limited to a small range of activities. Populations who have not had the opportunity to develop at a reasonable pace must just wait until the temperature is brought under control. Yet there is no lack of big initiatives. Africa could at best lend its deserts, soils and skies, and obtain some profit therefrom. At worst, the people of Africa risk seeing the expropriation of their natural capital through a global system of proprietary rights. Some might receive compensation or alternative employment in return for stopping all exploitation of their natural resources (Stern 2010b).

Box 2. Scenario: innovation and geo-engineering

A key element of this scenario is the emergence of some form of inclusive globalization, which would enable developing countries to become a driving force for growth, albeit slowly. Progress towards an understanding of global stakes would facilitate the advent of a new climatic regime around a universally accepted agreement with a differentiated set of realistic emissions targets. The State would play a greater role, and would comply with the rules governing the agreement. Financial pledges would be followed by action. Investment in new technologies would give rise to a veritable boom. Large projects around appropriate energy would be undertaken in the sunny desert regions and in reforestation around the green "lungs" of the planet. Effects on growth and revenue may be slow, but clusters of "clean tech" would create regional zones attracting green investment.

However, the climate change indicators are turning red sooner than expected, because of the concentrated amounts of GES trapped in the atmosphere, despite significant efforts to restrict emissions. The available time has diminished, and more radical action has become necessary despite scientific and ethical concerns about them. In Africa, people must now live with rises in temperature greater than 6 degrees C while monitoring the occurrence and severity of climatic events before selecting the technologies to adopt.

Even before 2010, emissions abruptly passed the 500 ppm mark. The gap between the alarmists and those planning modest activities has created a rift in the midst of environmental summits. Costs of emissions reduction and adaptation have become exorbitant, and justify a recourse to the manipulation of the weather in order to reduce temperatures. To accommodate this, transport and energy systems will have to undergo a radical transformation despite dire warnings and possible mishaps. Such manipulation of the climate would only be possible with the restructuring of the entire global financial system, and the savings and investment therefrom will only bring a return in the very long term, that is, 50-100 years.

African countries are aware of the extraordinary value of their forests and deserts as sites for geo-engineering projects. To this end, African integration would have to be organized geographically, around regional climatic clusters in the Sahara, Kalahari, Central Africa and CapeSyrte.

A common vision in response to the scenarios.

Is Africa's development financing embodied in the "long term concerted action" of the Framework Convention on Climate Change adopted at Cancun (COP 16). This common vision "envisages mitigation, adaptation, financing, establishment and transfer of technologies and capacity building undertaken in a balanced, integrated and global fashion." To realize this, long-term development must be included, coupled with firm financial support.

In effect, Africa would have to mobilize its internal budget so as to engage in the war on climate change as a priority, receiving financial compensation in exchange. This coincides with the principle according to which the biggest emitters may be historically responsible for climate change, but are not culpable. In this context, concerted action is required. These include mechanisms for embarking on large technological projects involving a multiplicity of actors and with moderate financial support. Such support is not meant to finance technical research as such. Nor should it affect the financing of development, which must not be subsumed into the war on climate change.

All participants would have to collect data on climate change and its socio-economic impact. This is fundamental for the analysis of existing conditions as well as initiating further activities. This is not the same as development aid, which is bound up with North-South geopolitics, and even less so with private funding. Africa will not take on the war against climate change at the risk of its further development, and this is at the heart of the disagreements at the Convention.

For Africa, the next imperative is to invite the different parties to the Framework Convention to participate in a re-evaluation of the Vision, with a view to alternative scenarios incorporating description, models and preventive measures.

But how can the continent, already at the mercy of extreme climatic events and dependant on external resources adopt such a stance? The following section examines some of the challenges and possible options.

Framework for financial negotiations and testing of scenarios

Unfavourable climatic conditions and climate change are the main obstacle in the way of Africa's development. The situations of desert and forested areas, as well as the north and the south differ, and there is a gap between energy- and non-energy-producing countries. There are differences between coastal, island and enclave countries. Although some countries are sufficiently integrated in the global economy to mobilize climate financing, most countries are dependent on public or private aid.

Hitherto, discussion has focused on the financial problems of adaptation, mitigation and the development of insurance and microinsurance products. The latter mostly insures against drought, flood and significant crop loss. Urban populations are also vulnerable because they are concentrated in mega-towns which have been built haphazardly and are subject to fire hazard. These conurbations have no insurance coverage. Populations in coastal regions are at risk from rises in the sea level. There are a few insurance schemes available for farmers, but these are generally inadequate. The following sections examine possible options for overcoming the main challenges.

Strategic options and paths to follow

These include initiatives, financial instruments, actors and financial impact. Africa's share of international investment is negligible, and will continue to be so if the continent fails to engage in the war on climate change. In effect the big emitters and the leaders of global finance and industry have already anticipated the effect of climate change on their productive systems and value chains. Private investment already represents more than 86% of total finance and investment in climate change (UNFCC 2007). OECD countries have embarked on a panoply of initiatives for green growth including production standards, consumption and the environment, energy efficiency, waste recycling methods and support for R and D and green technologies. The re-grouping around green growth threatens to distance them from developing countries, even more so as the latter are still on the defensive in this regard. The adoption of charters for the climate or social/environmental responsibility does not guarantee support for developing countries.

In order to maintain access to international finance, African countries must set out their priorities clearly. Growth, wealth creation and market development remain their best weapon against climate change. Two courses of action are open to them:

- Invest in the industrial and financial infrastructure necessary for the creation of bigger markets'
- Invest in new systems of production and innovation.

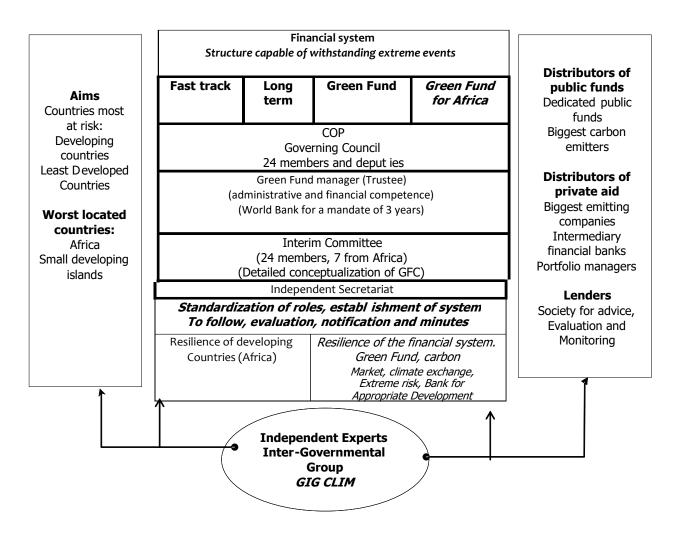
These activities have implications for regional integration and capacity development: negotiations around "Fast track" financing and the Green Fund for Climate have little prospect of contributing to the establishment of a Fund for Africa, as recommended in the Report of the High-Level Panel on Finance. This would be better placed elsewhere than in the UNFCC or the GIEC. A new body would derive inspiration from the experience of institutions such as the IBR, the IMF, the World Bank or the UNDP, as well as examples from financial markets, central banks and global investment funds.

Financial Instruments

Now that the Green Fund for the Climate has been officially established, it is important to look at the means for supplying Africa's financial requirements, since at present the Green Fund has no link to developing countries. A Global Fund for Africa would target investment that would transform African economies in a progressive and durable way.

Another organ should be added to the Green Fund, which would guarantee long-term investment. The establishment of an Inter-governmental group of independent experts is suggested, charged with coming up with concrete solutions for transforming the global budget. Composed of specialists in financial prospectives, this group would periodically evaluate the performance of the Global Investment Fund, and assist in correcting any weaknesses encountered.





The Global Investment Fund for the Climate (GIF-CLIM) should focus on the following areas as highlighted in table 4 and discussed further below:

Table 4: Agenda for	GIF-CLIM	discussions
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Structure of finance for development	Own funds/debt/public funds/private instruments/internal/external funds	
Mechanism for allocation of funds	Role of market	
Structure of ownership	Number of quota holders or title deeds to properties	

Governance/oversight of mobilization and utilization of funds	Key actors, linkages between actors, structure for collusion, control, evaluation, peer review, obligations, reporting
Global capacity for intervention	Different types of activity, financing of urgent requirements, extreme risks, flexibility, adaptability, resilience
Proactiveness	Modes of adapting to changing circumstances, identification of weaknesses or other distortions, notably collusion, concentrating of power, diverting of objectives

Actors

The structure of governance of the GFC reflects the relative strengths of the biggest and smallest emitters. It is a question of knowing how the system might act as a mediator and disperser of tensions which are likely to increase with the frequency of extreme events.

How fully Africa will be able to participate in such mechanisms will depend on the extent to which it can organize itself to contribute to the discussions before the guidelines become cast in stone. Preparation for the forthcoming Summit in Durban in December 2011 (COP 17) will assist here, while the great powers are concentrating on recovery from the world financial crisis. It should be possible to forge alliances with other developing countries as well as those leaders of global finance and business who have an interest in the full participation of Africa in the war on climate change.

Carbon Finance

Financial impact

Africa's integration into the global carbon market would give rise to a massive influx of appropriate technology and capital, notably for agriculture and forestry, the largest emitters of greenhouse gases. "Fast track" financial initiatives would find their way to Africa, home to most of the least developed countries, as well as various island states.

Support for innovation and geo-engineering - securing finance for African pioneer entrepreneurs

Inducements for African entrepreneurs in the fields of geo-engineering and green technology can be provided by the State.

There exists an entire body of literature on projects for Africa, and these can spark off ideas for "clean tech" and "green business" as well as geo-engineering projects. If temperatures can be brought down,

then the time-frame for adapting to climate change can be extended. To this end, new ways of managing the sun's rays and eliminating carbon dioxide should be explored.

Deserts and oceans are the starting point for initiatives to cool the planet. Initiatives would be selected according to cost, speed of results and risks involved. Regional clusters would assist the implementation and diffusion of results.

Initiatives might cover the following areas:

- Tree planting, which should be more extensive than current Green Belt projects. In order to be effective, this should enlarge the "lungs" of Africa as far as Lake Chad, the Nile and the Kalahari Desert.
- Cover at least a third of the Sahara and the Kalahari with reflective polyethylene and aluminium material.
- Put to use air and ocean spaces.

These initiatives would include all the main regions and economic communities of Africa. In order to justify such projects they should be independent of others such as Desertec, and should have significant results, such as increased employment, and revenue.

Financial instruments

The global cost of the war on climate change has been adjusted to more than 12% of global GDP which is over US\$40,000 billion per year over the course of the 21st century. No country will be willing to sacrifice this amount of money for an uncertain outcome.

On the other hand, an investment of US\$ 30,000 billion per year over the same period would be sufficient for establishing radical geo-engineering initiatives, capable of managing temperatures to 2100. Others have arrived at smaller figures. Thus the Royal Society, founded on the work of Stern, estimates that the cost of managing solar radiation should not go beyond US\$1 billion. Elimination of carbon dioxide would cost more – according to the price of carbon – about US\$100 per tonne, equivalent to \$27 per tonne of CO2.

Actors

The proposed use of DTS, undertaken and modified by the IMF, would impel the mobilization of finance and engage the interest of pension funds and risk capital. Sovereign funds as well as the banks of the bigger emerging countries would also be invited to underwrite climate initiatives. Outside of Africa, the initiatives could be supported by the major research centres for the weather, climate, space and the oceans. Other countries of the South, including India, China, Brazil and the Gulf States should also become involved.

Finally, this will provide Africa with the opportunity to reinforce regional integration on an unprecedented scale. Figure 2 depicts the value chain for globalized carbon finance and the associated dominant players.

Figure 2. : The value chain globalized carbon finance and dominant players

Public and Private Investors	Financial Fund Managers/ Services	Carbon Funds	Providers of Appropriate Technologies
Public investors acting on behalf of governments of industrialised countries that foresee problems in attaining the objectives of Kyoto and seek to cover their excess emissions by purchasing carbon credits. Public investors who seek to promote projects in countries that wish to develop projects under Appropriate Development Mechanisms. Private investors, generally from enterprises in the industrial, energy and financial sectors, which are held back by having to reduce their carbon footprint or reducing their emissions quotas.	Large investment banks and Financial Associations which are intervening increasingly in carbon finance with the objective of obtaining profit from it. They are not much interested in financing new projects. Some of them manage carbon funds. The World Bank intervenes at the planning stage, with a view to arousing the interest of investors and intermediaries and private banks.	These are the very core of carbon finance, taking the form of project as well as credit funding. They may be public, private or a mixture of the two, and have different objectives and structures. Their legal structure separates those owning from those managing funds, and an investment committee intervenes more or less directly in the management of projects, according to the nature of the funds, sometimes through collateral structures dedicated to Special Purpose Vehicle Funds, or SPV. Their activities revolve around the primary market covering operations in a direct line with the project cycle and secondary market where transactions and credit management are carried out. New structures such as hedge funds are beginning to emerge, taking charge of operations on a grand scale and highly speculative trading.	Enterprises, governments or international organizations, humanitarian institutions tha participate directly in GES reduction by means of projects, appropriate technology or the purchase of quotas. Project owners and other buyers act according to the Mechanism for Appropria Development and its Joint Working Committee, in orde to carry out transactions wit Emissions Reduction Units. Holders who are not signatories to the Kyoto Protocol intervene according to Emissions Reduction Unit Bonds. BRIC and the EU are strongly represented among holders and purchasers.

Financial impact

A "last ditch" Plan B, initiated and carried out by Africa itself will have an impact on the financial system, as well as on growth rates. It will form an African basis for the transformation of the financial system. An analysis of the risks involved should be undertaken.

3. Recommendations and elements of a Plan of Action for Africa

Short term

In the short term, the African contribution to the Transition Committee in charge of conceptualizing the Green Fund for the climate must ensure that this is adopted. The African component (7 members) must rely on high-level expertise so as to be able to influence the work of the Committee. It should put forward suggestions for the institutional arrangements of the financial system, in particular:

- Setting up three funds: fast-track, green fund for Africa and long-term finance;
- Pledges must be respected
- If the operations are financially secure, this will provide an effective cushion against unforeseen shocks

The African component's position should reflect that of their governments, the private sector and civil society. This position should be discussed prior to COP 17 in Durban. A Task Force on Climate Finance should be deployed with immediate effect, which will support the African component in the early meetings of the Transition Committee.

The following activities should be initiated with immediate effect:

- Put in place a Task Force on Climate Finance in support of the Transition Committee;
- Prepare a document that reflects Africa's new vision for climate finance, based on an exhaustive evaluation of the requirements and the available resources, particularly the desert and forest areas, as well as urban areas and the islands;
- Finalise a proposal for a Green Fund for Africa and an intergovernmental group of independent experts on climate finance;
- Clarify the objectives and strategy for developing the ability to withstand extreme shocks in time for the Durban Summit of 2011;
- Sensitise the African countries working on the 5th report of the GIEC about the importance of the socio-economic and financial aspects of the forthcoming undertaking.

A "Fast Track" financial system will be established in 2011-12, and should contribute to Africa's capacity to withstand shocks. This period will also be crucial for testing the vision for development.

Critical mass should be arrived at following intense activity from proposal to evaluation as well as a conceptualization of financial and political programmes that reconcile development with the war on climate change. The following activities should be undertaken in the short term:

- Select from among the continental and regional African institutions one with the competency to respond to the need for capacity development;

- Conduct workshops for development and resilience against shocks for performance evaluation, preferably at a continental but at least at a regional level;
- Conduct workshops on project conceptualization in carbon, clean tech, green business and geo-engineering. Agriculture, energy, forestry and industry should be the focus;
- Conduct training workshops on conceptualization and management of climate funds, including hedge funds and disaster funds;
- Push forward the process of financial capacity development in banks and insurance companies in Africa;
- Draw up a multi-disciplinary development programme for resilience in order to support postgraduate research and training, including the establishment of Chairs in at least two African regions; this programme would incorporate scientific, socio-economic and financial aspects of the struggle against climate change;
- Evaluate the impact of "fast-track" finance on Africa's ability to withstand shocks;
- Re-evaluate the prospects for climate finance in the medium and long term.

Medium term

The medium term covers the period 2012-2020, during which the GFC should become effective to Africa's benefit. African institutions are responsible for making the best use of this fund.

During this period, arrangements should be made for:

- financing capacity for prevention and management of crises (nutrition, energy, sanitary, social) and extreme risks (climatic, natural, technological, political, human);
- finance growth and investment, convergence of economic and social progress and a transition to a new endogenous and durable progress;
- finance the struggle against inequality, regional disparity and poverty through access to public infrastructure (energy, transport, communication, new information technology) and basic social services (education, health, water, employment, housing, mobility, social security, insurance) (ODM);
- contribute to the production and the protection of public goods (fight against pandemics, climate change, protection of biodiversity, technological research and development).

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