

NATIONAL CLIMATE CHANGE ACTION PLAN



REPUBLIC OF KENYA

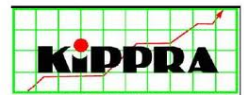
## Finance

### Section D: Carbon Trading Platform

August 2012

:vivideconomics

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## 1. Abbreviations

AFD	Agence Française de Développement (French Development Agency)
CBEEEX	China Beijing Environmental Exchange
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CI-DEV	Carbon Initiative for Development
COP	Conference of the Parties
CSR	Corporate social responsibility
DNA	Designated National Authority
EU	European Union
EU ETS	European Union emissions trading scheme
FONAM	El Fondo Nacional Del Ambiente-Peru (National Environmental Fund)
ICE	Intercontinental Exchange
ISO	International Organisation for Standardisation
KAM	Kenya Association of Manufacturers
KenGen	Kenya Electricity Generating Company
KenInvest	Kenya Investment Authority
LDC	Least developed country
MCX	Multilateral Commodity Exchange of India
MRV	Monitoring, reporting and verification
PDD	Project Design Document
PMR	Partnership for Market Readiness
PoA	Programme of Activities
PPP	Public private partnership
REDD	Reducing emissions from deforestation and forest degradation
SO <sub>2</sub>	Sulphur dioxide
tCO <sub>2</sub>	Tonne of carbon dioxide
UNEP	United Nations Environment Programme

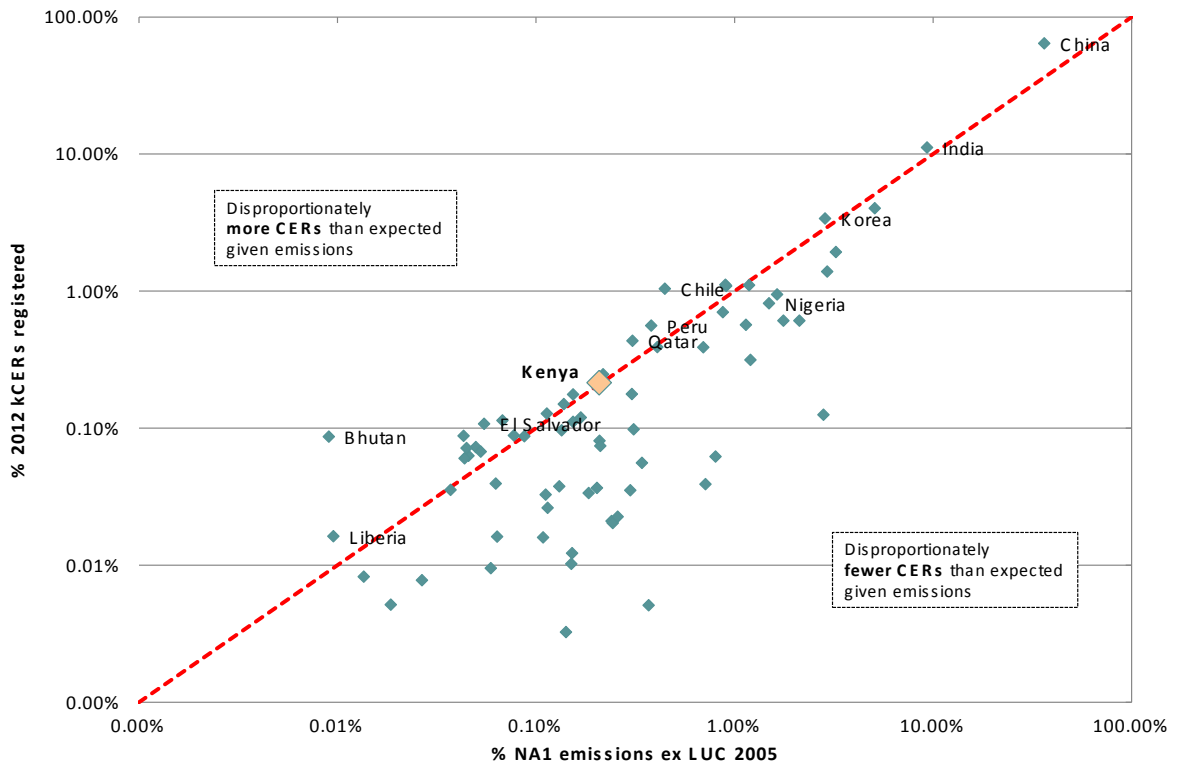
VCS Verified Carbon Standard

VCU Verified Carbon Unit

## 2. Introduction

This section outlines the possible design options for a Kenyan carbon trading platform and presents a set of recommended actions that might be taken forward in the design and implementation of Kenya’s National Policy on Carbon Investments and Emissions Trading. The aim of the carbon trading platform and other recommendations is to put Kenya in the best position to exploit future international carbon market activity and ancillary activities so as to support of financing of the mitigation elements of its Climate Change Action Plan. These recommendations are particularly focussed on how, through leveraging the carbon markets, Kenya may be able to attract private resources to support its low-carbon ambitions. It complements three other work streams also undertaken by the finance sub-component of the Climate Change Action Plan: the design options for a Kenyan financial mechanism (fund) which aims to position Kenya to maximise opportunities to obtain (predominantly) international *public* climate finance resources; recommendations concerning Kenya’s low carbon investment climate which will influence the likelihood and effectiveness of both public and private low-carbon/climate resilient investment in Kenya; and recommendations to improve the capacity of government institutions in Kenya to absorb, manage and spend climate finance, which shall influence the effectiveness of adaptation and mitigation activities undertaken by the public sector in Kenya.

**Figure D1 Kenya has generated as many credits as might be expected given its emissions**



Note: As of April 2012

Source UNFCCC, WRI CAIT v. 8.0 and Vivid Economics

**Traditionally, carbon markets have been a key way of incentivising private sector investment by international investors in mitigation activities in developing countries.** Carbon market activities are (predominantly) private sector projects where it can be demonstrated that the project resulted in a deviation from a business as usual level of emissions. The deviation in emissions can be crystallised as a ‘credit’ that can be sold to credit purchasers, mainly in developed countries. The sale from the revenue of these credits is intended to make a substantial contribution to the financial viability of the project. There are two broad categories of purchasers: compliance purchasers and voluntary purchasers.

**Compliance purchasers are those who purchase credits to fulfil their legal obligations regarding emission reductions.** A number of developed countries have committed to reducing their emissions under the Kyoto Protocol<sup>1</sup>. On occasion, some developed countries, most notably those in the European Union, have chosen to partially meet these obligations by imposing caps on the emissions from heavy industry and the power sector. In both cases (i.e. either countries or industrial emitters), arrangements exist that allow some or all of these emission reductions to be met through purchasing international credits rather than making the emission reductions themselves. This can reduce the costs of meeting emissions targets and promote sustainable development in the countries that receive payment for such credits.

**The Clean Development Mechanism has, to date, been the main mechanism for managing and regulating the process of generating international credits.** At present, the most important form of international credits are Certified Emission Reductions (CERs). CERs are credits generated from emission reduction projects in developing countries that are recognised as such (registered) by the Clean Development Mechanism (CDM). The Executive Board of the CDM, which sits within the UNFCCC, regulates the process and determines in particular whether or not the emission reductions resulting from a project in a developing country are genuinely ‘additional’ i.e. broadly speaking, would not have happened without the additional financial incentive provided by the sale of credits. Within each developing country, a key actor is the Designated National Authority (DNA) which must approve whether a project seeking registration is consistent with the sustainable development objectives of that country.

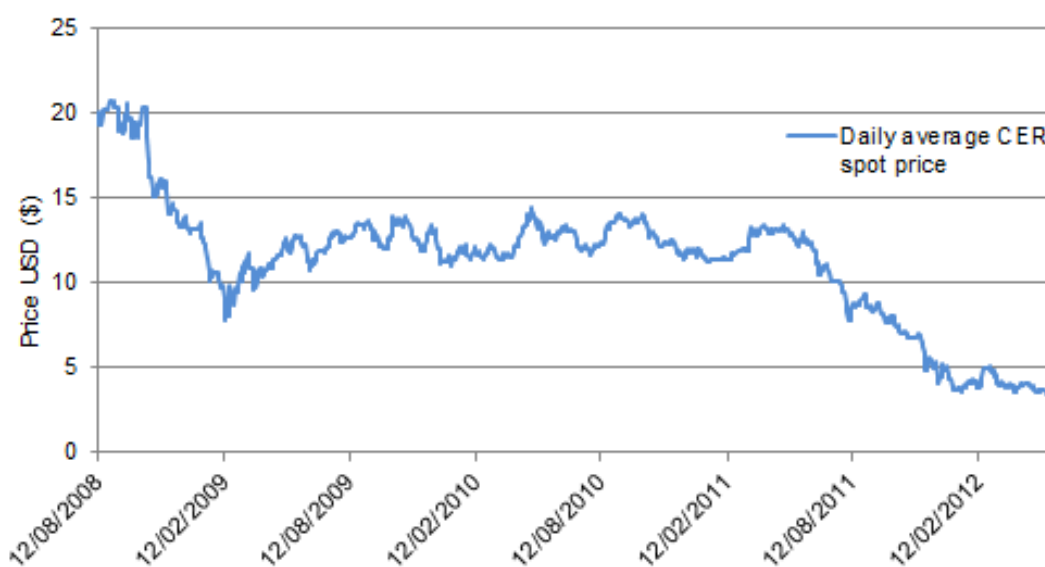
**Voluntary purchasers are those who purchase credits for reasons other than legal obligations i.e. corporate social responsibility (CSR).** Typically, but not always, project developers wishing to sell credits to voluntary purchasers do not seek registration with the CDM Executive Board due to the relatively high costs that this imposes. However, a number of voluntary standards exist e.g. the Gold Standard that assess and authenticate the emission reductions claimed by a particular project. Credits that have been approved by standards that are perceived as more rigorous typically generate higher prices than those approved by what are perceived as weaker standards i.e. higher quality credits generate a price premium.

**Kenya’s relative performance in the international carbon markets to date has, contrary to the opinion often expressed, been reasonably good.** In the Clean Development Mechanism, (CDM) market (compliance credits), as of April 2012, seven Kenyan projects had been registered by the CDM Executive Board. As shown in Figure D1, when account is taken of Kenya’s relatively low level of emissions, this performance looks relatively strong. In addition to the seven registered projects, there is one further project requesting registration and no fewer than 18 projects at validation. Consistent with this, Carbon Africa estimates that CDM may facilitate project financing of more than USD 1.5 billion in Kenya by 2020 with voluntary market activity additional to this. The voluntary carbon market is much smaller (though growing much faster) globally than the CDM, and voluntary market activity in Kenya has also been strong. For instance, Kenya was the first country to have a reducing emissions from deforestation and forest degradation (REDD)

project issue Verified Carbon Standard (VCS) Verified Carbon Unit (VCU) certificates (Kasigau corridor).

**However, future market conditions are likely to be much tougher.** As explained in more detail below, new Kenyan projects may be cut off from a principal source of demand for international offsets after 2012. Further, as shown below, the price of CERs has fallen significantly and most market forecasts also suggest that credit prices will remain close to the low levels seen today of around €3-4/tCO<sub>2</sub><sup>2</sup>. On the one hand, this makes maximising whatever opportunities are available and the design of appropriate institutions to achieve this even more important. On the other hand, it also means that Kenya should be cautious in investing too many resources in trying to access a source of climate finance that is likely to diminish (significantly) in the short to medium term.

**Figure D2 The price of CERs has fallen significantly in recent years**



Source BlueNext data

**This analysis and set of recommended actions is intended to support Kenya's National Policy on Carbon Investments and Emissions Trading.** The Ministry of Finance has developed a policy that is aimed at providing a national policy framework to guide and support carbon inflows and management, clean technologies, and carbon trading in the country so as to allow Kenya to become a competitive carbon finance destination. This policy statement has developed a number of laudable policy goals in terms of, for instance, developing a governance and institutional framework that maximizes the opportunities for carbon finance and emissions trading and facilitating the implementation of initiatives to reduce carbon emissions and generate carbon credits through the regulatory and voluntary markets. This section is intended to complement this policy, in particular by identifying a set of actions for the Technical Advisory Committee responsible for implementing this policy, to take forward in order to realise its objectives.



## Box D1 Key conclusions and proposed actions

The three key conclusions from our work are:

1. **Future carbon market conditions will be difficult.** The combination of an unfavourable demand/supply balance leading to low credit prices, and the intention of the European Union to exclude credits from Kenyan projects registered after 2013 from being eligible for compliance purposes under the European Union Emissions Trading Scheme (EU ETS), will both serve to make the environment challenging for carbon market project developers in the country. Kenya's future actions in relation to carbon market activity need to balance the fact that these conditions suggest government support is more urgent with the fact that they make it more difficult for that support to be effective.
2. **A primary trading platform is more appropriate to Kenya's needs than a secondary platform.** It is possible to distinguish 'primary' carbon trading platforms from 'secondary' carbon trading platforms. Primary platforms facilitate the origination of carbon credits, and their initial purchase from project developers; secondary platforms allow trading on a large scale to allow ultimate compliance purchasers and market intermediaries to purchase credits and manage their carbon price exposure. We find that a primary trading platform would be more appropriate for Kenya's needs in the current market environment.
3. **Within the primary platform options, a focus on enhancing the DNA and export promotion activities is desirable.** There are a number of different roles and activities that a primary carbon trading platform could perform. We identify three key options: making the Designated National Authority more efficient; an export promotion agency model where public resources are used to increase the supply of Kenyan credits and promote their sale in overseas markets; and a brokerage model where a new body is created which looks to bring together buyers and sellers of credits and works on a commission basis. Our analysis suggests that either or both of the first two are likely to be the most appropriate for Kenya.

The recommended actions include:

4. **Accelerate negotiations with the European Union regarding a bilateral deal in relation to EU ETS eligibility for credits from Kenyan projects registered after 2012.** Discussions might be held through a number of channels including direct discussions, through identifying potentially sympathetic European development partners and in conjunction with other affected African countries (possibly through the African Union).
5. **Advance discussions with Japan regarding its bilateral offset credit scheme (BOCS).** These discussions may wish to focus, in particular, on Kenya's ambitious geothermal plans which may be assisted by Japanese

technology, although care will be needed to avoid inappropriate and costly technology choices.

6. **Enhance the capacity of the DNA.** This could include a range of activities including, for instance, undertaking studies to create new methodologies; calculating and publicising baselines and emissions factors; and investigating the scope for sectoral crediting in Kenya.
7. **Seek external resources to support these DNA reform activities wherever possible.** Such sources might include UN Environment Programme (UNEP) Risoe, the African Carbon Support Programme of the African Development Bank and the World Bank's Carbon Initiative for Development and Partnership for Market Readiness.
8. **Determine the appropriate home to host a body that develops and promotes projects responsible for generating carbon credits, both in the compliance and voluntary markets.** There are a range of different activities that this body can perform including providing fora where credit buyers and project developers can meet, bringing together project developers and potential providers of capital (including the proposed climate fund) and providing technical assistance to project developers and financial institutions. As the activities that the body might undertake are modular, its size and ambition could adjust to available resources and only be scaled-up if found to be successful and market conditions permit. It is recommended that the unit start by focussing on activities that can support both voluntary and compliance market activity.

A number of other recommendations that have been made elsewhere in the Kenyan Climate Change Action Plan would also help to advance carbon market activity in Kenya. For instance, as part of its obligations under the UNFCCC, Kenya will be required to submit a Biennial Update Report part of which will require an up-to-date Greenhouse Gas Inventory; a process that Subcomponent 6 on MRV are helping to facilitate. This inventory will help to demonstrate and monitor the emission reductions generated by carbon market projects in Kenya and will be particularly important in the event that sectoral crediting gains prominence. In addition Section B of this report recommends the creation of a National Climate Fund which could help in improving the access to capital for carbon market projects. Similarly, section E discusses the challenges of limited technical capacity among some Kenyan developers and recommends, in the short-term, the creation of a one-stop-shop at which information on what technical assistance programmes are available and, in the longer term, establishment of a business development services centre within a reputed Kenyan business-focused institution to provide technical, business and financial services assistance and consultancy, building on existing successful models in Kenya.

The remainder of this section is structured as follows:

- Chapter 3 outlines the key findings from the relevant background research undertaken by the team over the period September 2011 to February 2012;
- Chapter 4 introduces a distinction between a 'primary' and 'secondary' trading platform and recommends that Kenya focus its attention on a primary trading platform;
- Chapter 5 identifies a number of different roles for a primary trading platform and from this presents three 'archetypes' that Kenya might consider. Of these, it concludes that two of the archetypal options are likely to be more attractive than the third; and
- Chapter 6 sets out a list of recommended actions.

### 3. Key findings from background research

**Four pieces of background research have informed our thinking on the appropriate design for a Kenyan carbon trading platform.** These are:

- a review of the current state of carbon market activity within Kenya;
- a review of the current state of international carbon markets, and their likely future development;
- a case study review of some other countries that appear to have been particularly successful in accessing international carbon markets (China, India, Peru and Chile); and
- a review of other attempts to set up carbon trading platforms in non-Annex 1 countries.

The key findings from the first three of these research pieces are presented in this chapter. As the results of the fourth research task have strongly influenced the proposed design options for the platform, this is considered more fully in chapter 4 below. The detailed analysis is annexed to the report (as referenced in the relevant endnotes).

#### 3.1 International developments in the carbon markets<sup>3</sup>

**The global carbon market, especially for compliance credits, is threatened by a severe supply and demand imbalance, which could see prices remain low for the foreseeable future.** The uncertain future for the international negotiations, relatively low emissions targets for Annex 1 countries, and a recent acceleration of project development activity, coupled with greater efficiency of the CDM Executive Board, have led to a glut of credits in international offset markets. This will depress prices for the short to medium term – with price forecasts ranging from €2-€10/tCO<sub>2</sub> with greater risk on the downside - and makes the carbon market demanding for all but the most successful suppliers.

**Kenya's access to international carbon markets is further threatened by the future rules of the EU ETS.** Currently, the EU ETS intends not to accept Certified Emission Reduction certificates (CERs) registered after 2012 sourced from countries that are not classified as being a least developed country (LDC). The EU ETS accounts for a very substantial proportion of the demand for such certificates and, in turn, these certificates are far more numerous than voluntary certificates.

**The relevant European legislation however allows for countries to sign bilateral deals with the EU to overcome this constraint.** One important action that the Government of Kenya could take in relation to carbon market activity in Kenya is to seek to begin negotiations for a bilateral deal with the EU (possibly in conjunction with other affected African countries). Although there are no precedents for such negotiations at present, Kenya could take the lead among African countries in seeking a deal. There may be other non-LDC African countries with which Kenya could seek common cause.

**In addition, Kenya should identify and exploit particular market niches where it may remain relatively insulated from these impacts.** These might include selling

‘premium credits’, that is, those with substantial co-benefits, to European sovereigns who have announced they will sign-up to a second commitment period under the Kyoto Protocol; exploring, in relation to Kenya’s geothermal ambitions, the possibility of collaboration with Japan in its Bilateral Offset Credit Scheme; and supporting forestry/premium projects in the voluntary market. In the medium term, beyond 2015, Australia might become an additional source of demand of relevance to Kenyan projects while Kenya may also wish to prepare itself for the possible future inclusion of forestry projects within compliance markets<sup>4</sup>.

**Finally, Kenya should begin to investigate opportunities to engage in sectoral crediting and sectoral trading mechanisms, possibly through the World Bank’s Carbon Initiative for Development (CI-DEV) or Partnership for Market Readiness (PMR) programmes.** Part of the justification for the EU’s decision to ban credits from projects registered after 2012 is a desire to move the international carbon market architecture away from project-based crediting and towards sectoral mechanisms where mitigation actions are expressed and then monitored, reported and verified (MRV) at a sectoral level, which it is perceived will lead to greater mitigation actions in developing countries. This may be accompanied by a shift towards tougher baselines i.e. credits would only be awarded once a certain threshold of emission reductions had been achieved, implying that some costs would be borne by the host country. The Durban Platform (Conference of the Parties (COP) 17) *“defines a new market-based mechanism, operating under the guidance and authority of the Conference of the Parties to enhance the cost-effectiveness of, and to promote mitigation actions ... and, which, subject to conditions to be elaborated, may assist developed countries to meet part of their mitigation targets or commitments under the Convention.”* This ‘New Market Mechanism’ may also have a sectoral emphasis. Kenya should begin to explore how it could interact with these initiatives, that is, identify which sectors would be suitable for sectoral mechanisms and what MRV systems would be required. To facilitate these actions it could explore opportunities for engaging with one of two World Bank initiatives. The first is the Carbon Initiative for Development (CI-DEV) programme which is expected to launch later in 2012 and which will contain a Readiness Fund of around \$20m , part of which will be used to ‘improve programmatic approaches as a bridge towards new market mechanisms’<sup>5</sup>. The Financing Fund (\$50m) of this initiative may also be of interest to Kenyan project developers. The second programme, the PMR, ‘provides funding and technical assistance for the collective innovation and piloting of market-based instruments’. The first stage of this process would be to submit an Expression of Interest to the PMR to become an Implementing Country Participant. If successful, the country would receive a \$350,000 grant to formulate its Market Readiness Proposal. South Africa and Morocco are the only two African countries engaged with the PMR at present<sup>6</sup>.

### **3.2 Current carbon market activity in Kenya<sup>7</sup>**

**In terms of the CDM, following registration of the first CDM project in Kenya in September 2008, activity has now scaled up such that by April 2012 there were 7 registered projects, 1 requesting registration, 18 projects under review, and 29 CDM Programme of Activity projects with some activity in Kenya under request for review or validation.** By 2020, these projects may have delivered cumulative emissions savings in excess of 135 million tCO<sub>2</sub>e. More than USD 2.1 billion (~€ 1.7 billion at current exchange rates) is likely to have been invested in these projects. More details of the registered CDM projects in Kenya are provided in the Annex.

**The voluntary market is also vibrant in Kenya.** At present there are at least ten voluntary Gold Standard projects in operation, delivering emission reductions of more than 2 million tonnes per annum<sup>8</sup>, with a further five projects in the pipeline. Many of these are cookstove projects, improving household energy efficiency. The country also boasts seven forestry sector voluntary projects including the Rukinga REDD+ phase I, which is the first REDD+ project in the world to have issued VCU certificates. Kenya is the most successful African country (in volume terms) in tapping the forestry segment of the global voluntary carbon markets<sup>9</sup>. Further details on voluntary market projects in Kenya are provided in Annex A.

**A number of barriers relating to the CDM process hold back further carbon market activity in Kenya.** Three key barriers include:

1. **A lack of understanding of the CDM process and its requirements.** This leads certain project proponents to neglect the CDM potential or not consider carbon credits until it is too late. It also means that some projects enter the CDM pipeline without appreciating the rigour of the scrutiny to which their projects will be subject, leading to withdrawal of the project at a later date (after significant expense has been incurred).
2. **CDM development costs are relatively high.** For instance, even the Kenya Electricity Generating Company (KenGen) has not some pursued CDM projects due to the high costs involved with CDM project development, validation, registration, and so on (although KenGen has pursued other projects).
3. **Absence of information, that is, methodologies and/or baseline data.** In some sectors with good potential for emission reductions in Kenya (such as transport), there is an absence of existing methodologies that a project can apply to generate and monitor CERs. Similarly, for certain methodologies and project developers, up-to-date, objective and transparent data and information from reliable sources on baseline emissions (for example, on traditional biomass use) is not readily available. Related to this, the absence of national Greenhouse Gas inventory may also make it more difficult to demonstrate the extent to which projects are generating genuinely additional emission reductions.

**These challenges are compounded by three broader challenges relating to project development:**

1. **Difficulties in accessing capital, especially for early stage risk capital.** As discussed more fully in the work on the Kenyan low-carbon investment climate, a number of factors combine to restrict the availability of capital to low-carbon sectors. Early stage project development capital is particularly scarce as many local entrepreneurs lack sufficient resources and foreign early stage investors may have unrealistic expectations of what can be accomplished within a certain timeframe.
2. **Lack of project development experience/expertise within Kenya.** This relates, for instance, to the technical and financial requirements associated with launching operations, entering relevant sectors, developing projects, or securing financing.

- 3. Political and institutional barriers and risks.** The key concern relates to the uncertainty of regulatory process in some sectors and the likelihood that this can be affected by political regime changes.

### **3.3 Lessons from other countries<sup>10</sup>**

**We have reviewed the experience of four countries that have been disproportionately successful, relative to their emissions profiles, in attracting carbon market activity: China, India, Peru and Chile.** This research reveals a number of common themes across some or all of these countries that help to explain their success.

**Carbon markets have been most successful in countries where there is a coherent policy of using the CDM to support low-carbon technologies and, where necessary, the role of the carbon markets within a suite of other policies is identified.** For instance, some argue that China's success in the CDM is partly explained by making the CDM one component of a coherent policy towards renewables, including feed-in tariffs; the same is arguably true of India.

**Efficient Designated National Authorities can help to streamline the CDM process.** Specific actions/behaviours associated with efficient DNAs include allowing online submission of projects for approval; being transparent and predictable regarding the conditions in which such approval will be granted in the form of a Letter of Approval (LoA) which might be achieved through publishing an explicit list of criteria required for receipt of an LoA; publishing generic data for the most important methodologies, that is, emissions factors; and announcement of DNA meetings through a variety of media. Achieving international accreditation (ISO standards), as Peru's DNA has, sends a credible signal about the commitment to streamlining the CDM process.

**Countries that have embraced international consultants and project developers have tended to be more successful in carbon markets.** A common theme underlying the successes of China, Chile and Peru has been a willingness to use the experience and knowledge of foreign companies and investors both for project development and management.

**Government (backed) agencies can play an important role in supporting carbon market activity.** In Chile and Peru, economic development and export promotion organisations have been explicitly responsible for encouraging carbon market investment in the country, which they have achieved, for instance, through promoting participation in commercial missions and international events.

**The broader investment climate and strength of the finance sector is crucial to carbon market activity.** Much of the success of China, India, Chile and Peru is a result of their broadly supportive investment climate and the relative ease of accessing seed/development capital.

#### 4. Primary versus secondary trading platforms<sup>11</sup>

**At a high level, it is possible to distinguish between a ‘primary’ trading platform and a ‘secondary’ trading platform.** Primary platforms facilitate the initial purchase of carbon credits directly from project developers. When a platform is used for this purpose, the specific characteristics of the projects that generate credits are of great importance. By contrast, secondary platforms allow for secondary and subsequent trading of those credits. The aim of a secondary platform is to create a liquid market that allows ultimate compliance purchasers and market intermediaries to purchase credits and manage their carbon price exposure. On these platforms, carbon credits may be thought of as a ‘commodity’ product, and there are large volumes of trades in standardised, well-known products, and associated financial products such as derivatives. Examples of such secondary platforms include BlueNext, the IntercontinentalExchange (ICE) and the European Energy Exchange.

**There are two key challenges associated with creating a secondary trading platform in Kenya:**

- it will be difficult for the platform to gain sufficient market share;
- any market share that Kenya is able to secure will be of a market that is in decline.

**The likely lack of liquidity will mean that market participants on both the ‘buy’ and ‘sell’ side of any carbon credit transaction are likely to prefer to continue to execute trades on existing platforms based close to where ultimate compliance purchasers, who account for the vast majority of trades, are located.** Exchange platforms are more attractive to users; the greater the number of other users: this makes it more likely that they will be able to find someone to take the other ‘side’ of a trade. This means that it is difficult for new exchanges to capture market share as potential users are unwilling to leave an existing, liquid platform in favour of a new one. This challenge is compounded by the growth of ancillary services, that is, legal services, at the same location as the exchange itself such that a ‘cluster’ of related activities is formed. The benefits that each organisation gets from being located close to others involved in similar activities can make it difficult for new locations to challenge the status quo. To date, such clusters have all developed close to the location of ultimate compliance purchasers. The challenges of establishing its own cluster is even greater in Kenya as it is located in a similar time zone to one of these existing clusters (London) and so offers little comparative advantage to those wishing to be able to trade on a 24 hour basis.

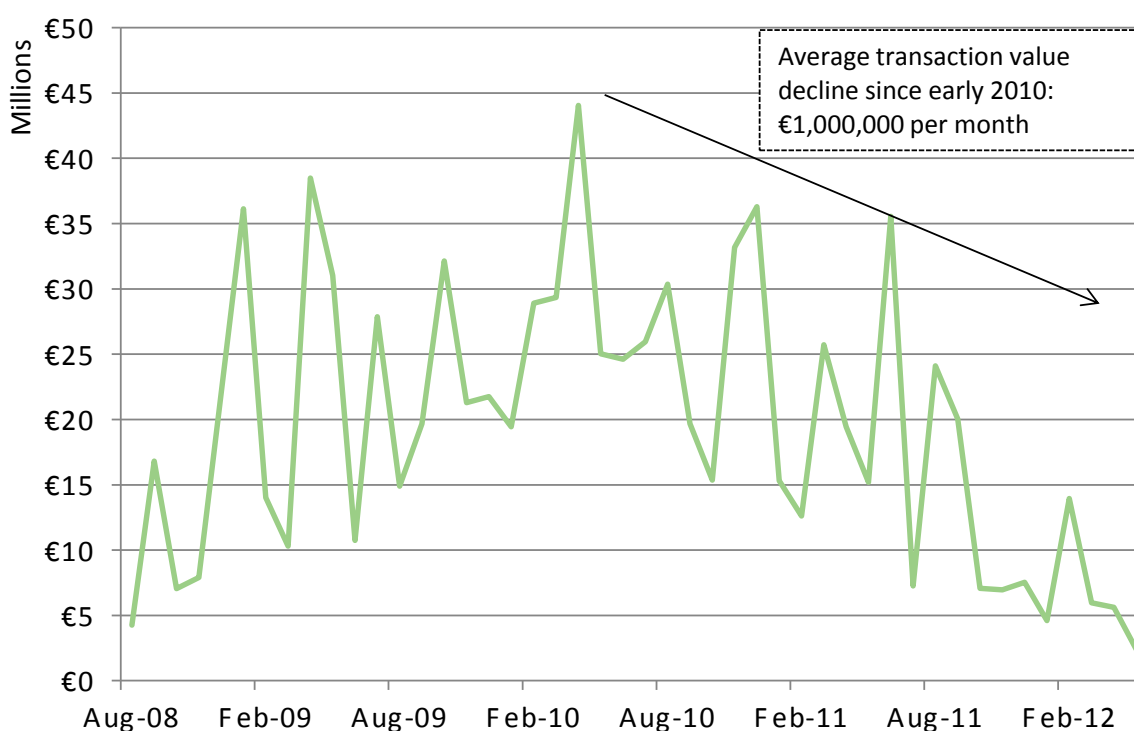
**The experience of China and India illustrate the challenges associated with creating a new cluster and establishing carbon trading platforms away from the key centres of demand for credits, that is, Europe.** In India, both the Multilateral Commodity Exchange of India (MCX) and the National Commodities and Derivatives Exchange offer the possibility to trade in carbon (futures). However, there have been no reported trades in carbon on either platform since 2009. Likewise, the trading platforms in China (Shanghai Environment and Energy Exchange, China Beijing Environmental Exchange, and the Tianjin Climate Exchange) have largely been focussed around pollutant allowance trading, that is, SO<sub>2</sub>, voluntary emissions reduction trading and providing asset transaction services for environmental protection opportunities. Market participants report that they only expect to see an increased volume of carbon trading activity on these activities as and when a domestic compliance market is established in China. Similarly, Singapore also



moved away from trying to generate a secondary trading platform for carbon credits due to a lack of success.

**The second challenge faced by any secondary trading platform in Kenya is that there appears to be a market-wide decline in trading activity.** This reflects an uncertainty about the role of CDM and carbon markets more generally after 2012 as well as that there is likely to be over supply in the EU (the key market for international offsets) in this period. This latter phenomenon has depressed credit prices, as shown in Figure D2, and makes managing carbon price exposure relatively less important for credit purchasers. Figure D3 below shows that the value of trades on BlueNext has fallen by around €1m per month since early 2010 and that in May 2012 the value of trading was lower than in any month since August 2008.

**Figure D3 The value of CER trading activity on BlueNext has been declining since the start of 2010**



Source: BlueNext and Vivid Economics

**Other platforms have been insulated from this decline in activity by offering opportunities to trade in related commodities; this may not be possible in Kenya.** For instance, most European carbon trading platforms also offer opportunities to trade in coal, oil and electricity. The structure of these markets in Kenya does not allow any Kenyan carbon trading platform to also offer trading opportunities in most of these related commodities.

**For these reasons, we conclude that a primary trading platform is more aligned with Kenya's needs.** The next chapter identifies in more detail what this primary trading platform might do.

## 5. What should a primary trading platform do?

### 5.1 What roles might a primary trading platform perform?

Based on a review of similar initiatives in other non-Annex 1 countries, we identify four broad roles that a primary trading platform might perform:

- *Increase awareness about the opportunities provided by carbon markets* – in this role, the carbon trading platform is a source of information about carbon market activity but does not directly engage in specific projects and/or commercial negotiations between parties.
- *Facilitating interactions between project developers and credit purchasers* – in this role, the carbon trading platform is not just a passive provider of information about the carbon market but actively engages to promote Kenyan carbon market opportunities both generally and, possibly in relation to specific projects, with carbon credit purchasers.
- *Match project developers with other capital providers* – in this role, the carbon trading platform undertakes similar ‘promotional’ activities as above but as well as (or instead of) targeting credit purchasers, it targets providers of capital.
- *Facilitate voluntary domestic/regional trading* – in this role, the carbon trading platform begins activities that promote domestic carbon trading within Kenya/East Africa.

Within each of these four broad roles, there are a number of different activities that could be undertaken. This is shown in the table below, along with existing examples of institutions that are performing these different roles.

**Table D1** There are different roles and different activities to meet each role that the carbon trading platform could perform

	Roles of a primary trading platform			
	Increase awareness of carbon markets	Facilitate interactions between project developers and credit purchasers	Facilitate interactions between project developers and capital providers	Facilitate domestic/regional carbon market activity
Activities associated with each role	Increase awareness of carbon markets	Facilitate interactions between project developers and credit purchasers	Facilitate interactions between project developers and capital providers	Facilitate domestic/regional carbon market activity
	Publish information about methodologies, emissions factors etc.  <b>Example:</b> efficient DNAs i.e. China	Organise conferences and opportunities for project developers to pitch their ideas  <b>Example:</b> FONAM, Pro Chile	Organise conferences and opportunities for project developers to pitch their ideas  <b>Example:</b> World Economic Forum	Selling domestic offsets to Kenyan/international purchasers  <b>Example:</b> Santiago Climate Exchange,

			events in Kenya	Chile
	Create portal/website to provide information about carbon market activity  <b>Example:</b> <a href="http://finanzascarbo.no.org/">http://finanzascarbo.no.org/</a>	Create an explicit platform where information about prospective projects are advertised  <b>Example:</b> CDM Bazaar, BlueNext/CBEEEX database	Create an explicit platform where information about prospective projects are advertised  <b>Example:</b> Shanghai Environment and Energy Exchange	Providing accreditation to firms or projects  <b>Example:</b> Santiago Climate Exchange, Chile; Panda Standard (CBEEEX/BlueNext) for domestic Chinese land-use projects
		Provide technical assistance for project developers to develop business plans for projects  <b>Example:</b> Regional Technical Assistance Programme (AFD) hosted by KAM	Act as a marketing contractor for (aggregated) projects requiring capital  <b>Example:</b> No examples found	
		Push for reforms to regulatory environment to encourage carbon market activity  <b>Example:</b> FONAM, ProChile		
		Act as a marketing contractor for (aggregated) projects requiring credit purchaser  <b>Example:</b> No examples found		

Source: Vivid Economics

## 5.2 Three archetypes for a primary carbon trading platform in Kenya

The table above highlights that there is a wide range of activities that could be undertaken by a primary carbon trading platform in Kenya. To focus discussion on the different options available we have identified three ‘archetype’ models:

- an ‘enhanced DNA’ model;
- an ‘export-promotion agency’; and
- a ‘broker’ model.

**It should be stressed that these different design options are neither exclusive nor exhaustive:** different elements of the three different models might be combined in some circumstances. However, by setting out these different models and illustrating options that are internally coherent, we aim to help identify the key issues that need to be addressed when moving forward.

### **5.2.1 Enhanced Designated National Authority (DNA) model**

**Under this model, no new institution would be created; rather additional resources would be provided to the existing Kenyan DNA to perform its role even more effectively.** Market participants suggest that the existing DNA, the National Environment Management Authority, is already performing its roles well. However, with additional resources, it might, for instance, undertake studies to develop baselines, (new) methodologies and emissions factors which it then widely publicises, as well as publishing transparent guidelines/criteria which would systematically inform when Letters of Approval would be issued. These are key lessons that emerge from the success of the carbon markets in China. There are a variety of other reforms and processes that the DNA could implement to carry out its role effectively including allowing online submission of projects for approval, enhanced publication of DNA meetings and greater transparency of approved project design documents (PDDs)<sup>12</sup>, including listing those stakeholders consulted. Following the example of the Peruvian DNA, the Kenyan DNA might seek ISO accreditation to signal to project developers the procedures it would follow when applications are made and the efficiency with which it would deal with applications. Although the DNA is a necessary requirement for the CDM, some of these improvements, especially publication of data and methodologies, would also benefit voluntary market activity.

**The DNA could also become the Kenyan counterpart for learning about the possibility of sectoral approaches in Kenya.** As discussed above, there is a move within the international negotiations to look to move away from project based crediting mechanisms towards sectoral crediting mechanisms which may also be accompanied by a shift by which not all emission reductions achieved by an initiative are necessarily credited. The relatively low levels of industrialisation in Kenya mean that this trend may create challenges for Kenya as there may be fewer sectors with sufficiently high emissions to attract the interest of international credit buyers. Nonetheless, the DNA could begin to explore the implications for this trend in a Kenyan context, that is, which sectors may be appropriate for sectoral crediting, how baselines might be defined and what MRV might be required.

**The DNA may also wish to engage in Kenya's elaboration of its National REDD+ Strategy.** It is not yet clear if or when there will be large scale (compliance-market) demand for REDD+ credits. However, given this possibility may emerge, the DNA should be involved in helping to develop a clear set of procedures and rules for carrying out carbon credit generating activities once the national REDD+ Strategy is in place.

**A key aspect of this model is that the DNA would maintain its adjudicatory/regulatory role: any additional activities it undertook would not compromise this.** The DNA has an important regulatory function in determining whether a project will assist the host country in achieving its sustainable development goals. It is important that there is no (perceived or real) conflict of interest associated with the DNA

performing these roles. Therefore, under this model the institution would not seek to 'promote' carbon market activity in Kenya (either in general terms, or in relation to specific projects), it would simply undertake its regulatory duties as efficiently and effectively as possible so as to facilitate the activity of others. The DNA would not have any customers or clients.

**This model would be largely met by resources from the public sector, probably shared between domestic and international resources.** Any ongoing additional costs, that is, additional staff costs, from enhancing the resources of the DNA are likely to have to be sourced from Kenyan taxpayers. However, international public resources are likely to be available to aid specific capacity building efforts. In particular, the Government of Kenya may wish to open discussions with both UNEP Risoe and the African Carbon Support Programme of the African Development Bank, both of which provide technical support to DNAs. With respect to sectoral approaches, the Government of Kenya may wish to engage with the World Bank's Partnership for Market Readiness programme which is already exploring these issues in a range of countries including South Africa, Morocco, Chile and Brazil. The Readiness Fund of the Climate Initiative for Development (CI-DEV) fund may be able to offer support to Kenya on a range of issues and has informally indicated a particular interest in Kenya.

**Although it appears only a modest reform, correctly executed, it could help overcome a number of the barriers to carbon market activity identified above.** For instance, it would help address the lack of understanding of the CDM process and its requirements as well as the absence of information about certain methodologies. Moreover, it would have the advantage of doing this at reasonably low-cost. This latter point may be a particular advantage given the expected decline of Kenyan carbon market activity after 2012. Moreover, although it appears a modest reform, the review of the experience of other countries, especially China, indicates that making the DNA as efficient as possible has been an important determinant in successfully exploiting carbon market opportunities.

**The changes under this model would be consistent with the National Policy on Carbon Investments and Emissions Trading.** The National Policy identifies developing the capacity of the DNA as a strategic intervention to be pursued as part of implementing a governance and institutional framework that maximizes the opportunities for carbon finance and emissions trading in the various sectors.

**There are a number of barriers to carbon market activity in Kenya that this approach would fail to address.** In particular, its relatively narrow focus on improving CDM-related institutions means that it would not directly address some of the barriers that inhibit development of the underlying investment opportunity,, that is, lack of access to capital or limited project development expertise. Further, although there would be some spillover benefits to voluntary market activity and the opportunities provided by sectoral crediting, its focus on an institution required largely for project-based crediting in the compliance market may not be appropriate given the expectation that this aspect of the carbon market will decline in importance in Kenya after 2012.

### 5.2.2 ‘Export promotion agency’ model

**This model would involve an agency explicitly tasked with developing and marketing Kenyan carbon market projects and their associated credits.** This could involve a range of different activities depending on the barriers most severely restricting development of Kenyan projects at any point in time, but, building on the examples cited in Table D1 might include:

- providing information, potentially through an online forum, on carbon market experts, that is, CDM and voluntary standard consultants and carbon footprinting services<sup>13</sup>, as well as information on national and international policy developments<sup>14</sup>;
- providing information on technologies relevant to carbon market activities, where it could work closely with Kenya’s emerging Climate Innovation Centre;
- following the successful examples of FONAM and Pro Chile, organising conferences and other opportunities for project developers to pitch their ideas to credit purchasers and/or explicitly taking on a contractual responsibility to market credits to overseas purchasers (this role may be particularly attractive to smaller scale project developers, including those involved in Programmes of Activity (PoA), where the agency could aggregate credits from a number of projects/activities, for whom the fixed costs of marketing projects may be prohibitive);
- acting as a ‘climate finance’ centre to bring together project developers and potential providers of capital – this might involve creating opportunities where project developers could directly pitch their projects to capital providers, as well as indirectly promoting information flows between developers and capital providers. The platform could also provide an early ‘screen’ for project developers helping them to understand the likely expectations of finance providers in terms of business plans and so on;
- creating a permanent ‘match-making’ platform where sellers can post projects for buyers to bid or transact (this could cover compliance and voluntary projects);
- providing (and coordinating the provision by others of) technical assistance for project developers to develop business plans for projects and to financial institutions to increase their knowledge and willingness to provide finance; and
- pushing for reforms of the regulatory environment to encourage carbon market activity.

**An agency performing these roles would be consistent with a number of the interventions proposed in the National Policy on Carbon Investments and Emissions Trading.** For instance, the policy identifies the establishment<sup>15</sup> of a body independent of the DNA to help identify and promote project opportunities, as well as facilitate participation of relevant sectors in both mandatory and voluntary markets as a key intervention. It also discusses fostering the development of a national forum for participating in the carbon trading market through stakeholder awareness creation and capacity building, and marketing projects to investors both nationally and internationally, both of which could be undertaken by an institution with the remit envisaged above.

**The institution would have no adjudicatory/regulatory responsibilities:** it would be an advocate for Kenyan project developers, and would act in the interest of this

constituency. The role that FONAM and ProChile played in the development of carbon market activity in Peru and Chile respectively are examples of this model.

**The body would have a broad remit to cover CDM-related activity as well as voluntary credits including REDD+ projects.** This would provide it with flexibility to respond to the expected change in the portfolio of these different project types for post-2012 projects.

**The Ministry of Finance, as the lead implementing agency for the Policy on Carbon Investments and Emissions Trading, will need to determine the appropriate institutional home for the body; regardless of the home, the platform could be implemented/managed in one of two ways.** The Government of Kenya will wish to determine the appropriate home for this body which might be either directly within the Ministry of Finance, or a unit within KenInvest or elsewhere. In any event, there would be two implementation options:

- in the first option, the public sector would be responsible for managing and providing these services or
- more innovatively, a service contract could be tendered to a private sector contractor (determined through a competitive tender) to provide these services. Some or all of the resources paid to the contractor could be made on a 'results-basis', that is, upon successfully meeting various pre-defined criteria.

**In either event, the costs of the organisation would need to be largely met through public resources.** It would be difficult to charge for (many of) the services provided by the agency due to their public good aspects, that is, once provided to one project developer, all project developers would benefit. Its costs would need to be largely met through public resources. The only exception to this might be when providing specific tailored advice to project developers on, for instance, business plan development or charging to attend a conference. However, in these cases, there may be concerns that charging for the services would inhibit access for the project developers with the greatest need.

**Development partners may be reluctant to provide significant resources to support the Government of Kenya with (at least some aspects of) this initiative.** This is due to a concern that some/all of the activity generated by the agency may be at the expense of less activity in other countries, or that organizing this may be deemed optimal at a regional or sub-regional level. As such, international public resources are likely to be most forthcoming in the event that the agency engaged in activity that overcame barriers impeding carbon market activity across the region, that is, if the export promotion agency, followed the example of finanzascarbon.org in developing a website to promote information sharing about carbon market activity across East Africa.

**The institution would have close links to, but be separate from, the proposed climate fund.** As stated above, one of the key roles for the agency would be to provide information about potential capital providers and broker relationships between project developers and capital providers. One of these capital providers will hopefully be the climate fund that has also been designed as part of the Climate Change Action Plan. As such, the two bodies would have a close working relationship. However, in order to avoid potential conflicts of interest, it is proposed that the two be kept institutionally separate: the fund will

need to make decisions on funding across a wide range of different projects and activities. It would be much more difficult for the fund to act impartially when making these decisions if it was also involved in promoting some of the potential activities.

**The advantage of this model is that it would have the flexibility to deal with a number of the barriers to carbon market development in Kenya.** It would not need to be restricted to dealing with challenges associated only with the CDM process, which it could tackle through pressing for reforms, but can also look at a broader set of constraints holding back carbon market activity in Kenya. For instance, it could help tackle the limited project development experience in Kenya by offering technical assistance, or address the lack of capital for carbon market projects by organising events to bring together carbon project developers and capital providers. Activities could be tailored to support both compliance and voluntary market activity.

**The main disadvantage of this model is likely to be the cost associated with its development, especially as this may need to be borne largely by the Kenyan taxpayer, and in the context of the decline in opportunities for Kenyan carbon market activity.** This could be accommodated by tailoring the scale of the organisation's initiatives in the early years to gauge its effectiveness.

### **5.2.3 Broker model**

**In the third model, the carbon trading platform would explicitly act as a broker between project developers and credit purchasers.** Either a new institution would be formed or an existing organisation would be adapted that would have a commercial mandate to bring together these parties and would take a share of the proceeds of any deals that were agreed. It would aim to provide this service through whatever routes it considered most likely to lead to the conclusion of deals but this might include organising events that brought together purchasers and project developers, establishing networks with credit purchasers in Annex 1 countries and providing technical advice to specific projects. At different times, it might have either Kenyan project developers or ultimate compliance purchasers (or their agents) as clients.

**This model would be most effective at a regional or even continental scale.** The current scale of carbon market activity in Kenya is relatively modest in the global context. In order to provide a compelling commercial proposition for credit purchasers, the activity would need to offer credits from a range of different projects, generating different levels of credits per annum with differing characteristics (that is, in terms of co-benefits, or sector), and potentially with differing project costs. This diversity would be best achieved if the projects could be sourced from a wider geographic region such as East Africa or even Sub-Saharan Africa.

**This model could be at least part-funded by private capital.** Given the commercial incentives that such an institution would have, there would be scope for some private capital to be attracted to support its operations. However, the very fact that there is not an organisation explicitly and exclusively performing this role at present suggests that there may also be a need for some public support. Innovative public-private partnership (PPP) models could be explored.



**The main advantage of this model is that it would create strong commercial incentives to overcome some of the barriers to greater carbon market activity in Kenya and beyond.** For example, the model would provide a commercial incentive to look to ways to overcome the high transaction costs of gaining accreditation under the CDM (or indeed under other standards), that is, through aggregation as discussed above. Likewise, if providing technical assistance to project developers would result a greater number of higher quality projects being put forward to credit purchasers then such an institution would undertake these activities.

**The key disadvantage of this model is that it risks replicating (crowding-out) the role of (private-sector) organisations that already exist, and hence wasting Kenyan taxpayer resources.** A review of the UNEP Risoe database suggests that there are around fifteen specialised carbon credit consultancies and similar companies associated with Kenyan projects in the CDM pipeline<sup>16</sup>. This suggests that there is a thriving private sector business in these activities. A government-sponsored organisation undertaking a similar role would face a trade-off: on the one hand, it would face pressure to be commercially successful; on the other hand, the more commercially successful it became, the less it would be offering a service that notably differed from existing brokers or which focussed on addressing the barriers that these other brokers were not able to. The more it leaned towards the latter, the greater the risk that it could displace some of the private sector players whose involvement in Kenya may already be threatened by the likely decline in carbon market activity in Kenya after 2012.

**Overall, given the risks that such a model would replicate existing activities already adequately provided without taxpayer support, our initial view is that such a model is less compelling than the other two alternatives.**



address?	requirements Lack of information about baselines etc. High transaction costs, uncertainty in processing carbon market transactions	both within Kenya and internationally	rational to address
What barriers would it not address?	Barriers outside the carbon market i.e. access to capital, project development capacity	Would only be able to lobby for regulatory changes at the DNA	The more it made decisions on purely commercial basis, the less likely it would be able to address existing barriers that existing commercial providers already face
Overall assessment	Reasonably low cost way of obtaining benefits Relative focus on compliance market activity may be inappropriate post 2012	Higher cost solution but could provide greater flexibility to deal with post 2012 carbon market context	Risk of crowding out private sector activity makes it unattractive

## 6. Summary of Actions/Next steps

The proposed actions that follow from this analysis can be divided into two broad categories: those related to improving the overall market conditions for Kenyan projects and those related to the design and implementation of the carbon trading platform.

In terms of the former, we recommend that:

1. **Kenya accelerate negotiations with the European Union regarding a bilateral deal in relation to EU ETS eligibility for credits from Kenyan projects registered after 2012.** Discussions might be held through a number of channels including direct discussions, through identifying potentially sympathetic European development partners and in conjunction with other affected African countries (possibly through the African Union). These discussions could identify both some of the on-going development challenges faced by Kenya, as well as the success that Kenya has had from carbon markets to date and how the associated build-up of expertise could be lost which would be to the detriment of both Kenya itself and the Least Developed Countries elsewhere in the East Africa region.
2. **Kenya advance discussions with the Japanese regarding its bilateral offset credit scheme.** These discussions may wish to focus in particular on Kenya's ambitious geothermal plans which may be assisted by Japanese technology. Almost 50% of the geothermal units ordered globally since 2000 have come from Japanese manufacturers. However, Kenya will need to be careful to avoid inappropriate – and ultimately costly – technology choices.
3. **Kenya begin to market its carbon to other potential sources of demand.** This might include European sovereigns (to whom the EU ETS rules do not apply) as well as Australia who may be interested in Kenyan credits when its carbon pricing mechanism becomes a trading scheme in 2015. This can be achieved through discussions with relevant embassy representatives as well as targeted presentations and exhibitions at carbon trade fairs such as the Carbon Expo.

In terms of the latter, we recommend that:

1. **Kenya enhance the capacity of its DNA through a range of activities.** **These might** include, for instance, undertaking studies to create new methodologies; calculating and publicising baselines and emissions factors; publishing approved PDDs and the stakeholders consulted; updating its website to inform stakeholders about relevant carbon market developments and allowing for project documents to be uploaded online; obtaining ISO accreditation; and developing expertise in sectoral crediting opportunities. Of these, the likely priorities should be those activities that can either support voluntary market activity as well (such as developing new methodologies, publishing emissions factors) or which offer the prospect of overcoming the barrier created by the change in the EU ETS rules, that is, identifying sectoral crediting opportunities.
2. **Kenya seeks external resources to support these activities wherever possible.** Opportunities might include UNEP Risoe and the African Carbon Support Programme of the African Development Bank in relation to general DNA capacity building and the Partnership for Market Readiness in relation to sectoral crediting.
3. **The Ministry of Finance determine the appropriate home to host a unit that develops and promotes projects responsible for generating carbon credits, both in the compliance and voluntary markets.** There are a range of

different activities that this body can perform including providing fora where credit buyers and project developers can meet, bringing together project developers and potential providers of capital (including the proposed climate fund) and providing technical assistance to project developers and financial institutions. As the activities that the body might undertake are modular, its size and ambition could adjust to available resources and only be scaled-up if found to be successful and market conditions permit. It is recommended that the unit start by focussing on activities that can support both voluntary and compliance market activity.

4. **The Government of Kenya determine whether the implementation of this unit might be undertaken by the private sector and gauge market demand for a contract of this sort.**

**Finally, a number of other recommendations that have been made elsewhere in the Kenyan Climate Change Action Plan would also help to advance carbon market activity in Kenya.**

A number of other recommendations that have been made elsewhere in the Kenyan Climate Change Action Plan would also help to advance carbon market activity in Kenya. For instance, as part of its obligations under the UNFCCC, Kenya will be required to submit a Biennial Update Report part of which will require an up-to-date Greenhouse Gas Inventory; a process that Subcomponent 6 on MRV are helping to facilitate. This inventory will help to demonstrate and monitor the emission reductions generated by carbon market projects in Kenya and will be particularly important in the event that sectoral crediting gains prominence. In addition Section B of this report recommends the creation of a National Climate Fund which could help in improving the access to capital for carbon market projects. Similarly, section E discusses the challenges of limited technical capacity among some Kenyan developers and recommends, in the short-term, the creation of a one-stop-shop at which information on what technical assistance programmes are available and, in the longer term, establishment of a business development services centre within a reputed Kenyan business-focused institution to provide technical, business and financial services assistance and consultancy, building on existing successful models in Kenya.

## Section Annex – carbon market projects in Kenya

**Table D3 CDM projects in Kenya**

CDM ID	Name	Type	Registration date	Owner	Annual ERs	Carbon buyer
1368	“35 MW Bagasse Based Cogeneration Project” by Mumias Sugar Company Limited (MSCL)	Biomass energy	2 Sep 2008	IPP	129,591	Japan Carbon Finance (Japan)
4740	Olkaria III Phase 2 Geothermal Expansion Project in Kenya	Geothermal	4 Mar 2010	IPP	177,600	n/a
2448	Olkaria II Geothermal Expansion Project	Geothermal	4 Dec 2010	Govt	149,632	World Bank
6404	Lake Turkana 310 MW Wind Power Project	Wind	28 Feb 2011	IPP	736,615	n/a
5123	Aberdare Range/ Mt. Kenya Small Scale Reforestation Initiative - Kamae-Kipipiri Small Scale A/R Project	Reforestation	11 Jun 2011	NGO	8,542	World Bank Biocarbon Fund
3140	Aberdare Range / Mt. Kenya Small Scale Reforestation Initiative Kirimara-Kithithina Small Scale A/R Project	Reforestation	5 October 2011	NGO	8,809	World Bank Biocarbon Fund
5023	Redevelopment of Tana Hydro Power Station Project	Hydro	11 October 2011	KenGen	25,680	World Bank Community Development Carbon Find

Source: Carbon Africa and UNEP RISOE CDM Pipeline

**Table D3 Voluntary projects using Gold Standard in Kenya**

Name	Type	Annual VERs	Status	Location
Energy Efficient Cook Stoves for Siaya Communities, Kenya	Energy Efficiency – Domestic	45,154	Registered	Nyanza
Aberdares Improved Cook Stoves	Energy Efficiency – Domestic	70,000	Registered	Central Province
Sustainable Deployment of the LifeStraw Family in rural Kenya	Energy Efficiency – Domestic	2,073,328	Issued	Western Province
Kisumu Improved Cook Stoves	Energy Efficiency – Domestic	30,149	Registered	Nyanza

Shimba Hills Improved Cook Stoves	Energy Efficiency – Domestic	41,944	Registered	N/A
Likoni Improved Cook Stove Project	Energy Efficiency – Domestic	4,924	Registered	N/A
Shimoni Improved Cook Stoves	Energy Efficiency – Domestic	4,922	Registered	Shimoni
Kakuma Sustainable Energy Solutions	Other	2,000	Listed	Turkana
Paradigm Healthy Cookstove and Water Treatment Project	Energy Efficiency – Domestic	244,019	Issued	All
Meru Improved Cook Stoves	Energy Efficiency – Domestic	75,000	Listed	N/A
Msambweni Improved Cook Stoves	Energy Efficiency – Domestic	75,000	Listed	N/A
West Kisumu Improved Cook Stoves	Energy Efficiency – Domestic	75,000	Validated	N/A
Hydraid Water Filtration in Kenya	Energy Efficiency – Domestic	10,000	Listed	Nyanza
Gachiki Community Small Hydro, Kenya	Small, Low-Impact Hydro	1,968	Registered	Central Province
Stoves for Life: Energy Efficient Cook Stoves Project in Kakamega, Kenya	Energy Efficiency – Domestic	38,600	Registered	Western Province
Aqua Clara Water Filtration Program in Kenya	Energy Efficiency – Domestic	30,000	Listed	All

Source: Climate Care

Notes: While every effort has been made in acquiring this information, it may not be fully comprehensive.

**Table D4 Voluntary Carbon Standard projects in Kenya**

Name	Type	Annual VERs
OLKARIA III PHASE 2 GEOTHERMAL EXPANSION PROJECT IN KENYA	1. Energy (renewable/non-renewable)	244,798
The Kasigau Corridor REDD Project - Phase II The Community Ranches	14. Agriculture, Forestry, Land Use	1,614,959
The Kasigau Corridor REDD Project – Phase I Rukinga Sanctuary	14. Agriculture, Forestry, Land Use	251,432
TIST Program in Kenya, VCS 001	14. Agriculture, Forestry, Land Use	14,701
TIST Program in Kenya, VCS 002	14. Agriculture, Forestry, Land Use	13,663

TIST Program in Kenya, VCS 003	14. Agriculture, Forestry, Land Use	14,482
TIST Program in Kenya, VCS 004	14. Agriculture, Forestry, Land Use	13,790



## **Acknowledgements**

We are indebted to a number of individuals and institutions with whom we have consulted as part of this work.

- Bank of America Merrill Lynch
- Bloomberg
- Bluenext
- Carbon Africa
- cdc Climat
- Climate Bridge
- Climate Care
- Climate Change Capital
- Climate Network Africa
- European Investment Bank
- Global Canopy Programme
- Globe
- Inter-American Development Bank
- Idea Carbon
- International Emissions Trading Association
- Japan International Cooperation Agency
- National Environment Management Authority
- Planet B Ventures
- Santiago Carbon Exchange (SCX)
- Standard Bank
- Transparency International
- UK Foreign and Commonwealth Office
- United Nations Development Programme

In addition, the expertise and insights provided by the Finance Team's Thematic Working Group has been invaluable in guiding the research.

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<sup>1</sup> The Kyoto Protocol committed most developed countries to reducing their emission reductions by, collectively, 5.2 per cent on 1990 levels by 2012. At the 17<sup>th</sup> meeting of the Conference of the Parties (COP17) the European Union and a number of other industrialised countries agreed to a second commitment period under the Kyoto Protocol whereby they will accept legally binding emission reductions in the period between 2013 and either 2017 or 2020.

<sup>2</sup> CDC Climat Research (2012) Will there still be a market price for CERs and ERUs in two years time? Climate Brief: focus on the economics of climate change, Number 13, May.

<sup>3</sup> These findings draw upon Vivid Economics (2011) 'Developments in international carbon markets: implications for Kenya's carbon finance policy, November, Annex E to this report.

<sup>4</sup> Conventionally, credits generated from forestry projects, or more generally from projects associated with reduced emissions from deforestation and forest degradation (REDD+) have not been eligible in compliance markets for a number of reasons, including fears about the lack of permanence. However, a number of new and emerging carbon markets, such as California, have announced the intention to accept REDD+ credits in their schemes, and there is increasing interest in the possibility of making credits from REDD+ projects more broadly acceptable in compliance markets.

<sup>5</sup> Carbon Initiative for Development (2012) Leveraging the Carbon Market for Low-Income Countries: the Carbon Initiative for Development. Available at: [http://wbcarbonfinance.org/docs/CI-Dev\\_Consultation\\_Note\\_Feb2012.pdf](http://wbcarbonfinance.org/docs/CI-Dev_Consultation_Note_Feb2012.pdf)

<sup>6</sup> We understand that at present the World Bank resources for this programme have been fully depleted but that there are examples where donors have met the costs for countries to engage in this initiative.

<sup>7</sup> These findings draw upon Carbon Africa (2011) Analysis of the carbon market landscape in Kenya, November, Annex D to this report.

<sup>8</sup> This aggregate figure is dominated by the Sustainable Deployment of the LifeStraw Family in rural Kenya project which alone is generating more than 2 million credits per annum. The remaining projects all generate between 2,000 and 40,000 credits per annum.

<sup>9</sup> Ecosystem Marketplace (2011) State of the Forest Carbon Markets 2011: From Canopy to Currency.

<sup>10</sup> This analysis is based upon Vivid Economics (2011) 'National CDM Governance: existing practice and lessons for Kenya' December, Annex G to this report.

<sup>11</sup> This analysis is based upon Vivid Economics (2011) Carbon trading practices: International experiences and lessons for Kenya, December, Annex H to this report.

<sup>12</sup> Project design documents describe in detail the project including quantifying the emission reductions it is expected to achieve.

<sup>13</sup> There is a link to such a facility on the current DNA website but it does not appear to be functional.

<sup>14</sup> The <http://finanzascarbono.org/> website is an example from which Kenya might draw.

<sup>15</sup> It may be possible that a new institution would not be needed to perform these roles; as noted below, the Ministry of Finance will need to determine the appropriate home for such a body.

<sup>16</sup> This excludes multilateral organisations such as the World Bank as well as companies who are unilaterally developing CDM projects without the use of consultants, for example, Mumias Sugar Company.