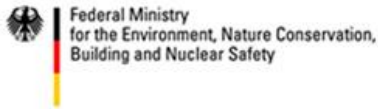


On behalf of



NAMA Facility

NAMA Support Project Outline 4thCall

To the Members of the NAMA Facility Board
NAMA Facility - Technical Support Unit (TSU)
E: contact@nama-facility.org

Project Title:	Nationally Appropriate Mitigation Actions (NAMA) for the Charcoal Sector in Kenya
Applicant:	United Nations Development Programme

The following documents and annexes are enclosed:

	General and Specific Information on the NAMA Support Project
	Annex 1: Letters of Endorsement of National Government and National Implementing Partners
	Annex 2: Logframe
	Annex 3: Information and references of the (non-governmental) applicant
	Annex 4: Detailed Project Preparation (DPP) concept
	Annex 5: Information and references of the NSO if different from applicant

Version4thCall(4July2016)

Submission Deadline: 31 October 2016, 12 pm (CEST/GMT+2)

All documents must be provided in English language. If necessary, please provide a translation.

List of abbreviations

BAU:	Business As Usual
BMUB:	German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
COG:	Council of Governors
DECC:	UK Department of Energy and Climate Change
DPP:	Detailed Preparation Phase
EC	European Commission
EFKM:	Danish Ministry of Energy, Utilities and Climate
FC:	Financial Cooperation
GHG:	Greenhouse gas
GID:	General Information Document
GIZ:	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
MCEB:	Danish Ministry of Climate, Energy and Building
MENR:	Ministry of Environment and Natural Resources
MFA	Danish Ministry of Foreign Affairs
KfW:	KfW Development Bank
KEFRI:	Kenya Forestry Research Institute
KFS:	Kenya Forestry Services
M&E:	Monitoring and Evaluation
NDC:	Intended Nationally Determined Contributions
NSO	Nama Support Organisation
NSP:	NAMA Support Project
ODA:	Official Development Assistance
TC:	Technical Cooperation
ToC:	Theory of Change
TSU:	Technical Support Unit
VAT:	Value Added Tax

1. General Information on the NAMA Support Project	
1.1 Project data	Project title <i>Nationally Appropriate Mitigation Actions (NAMA) for the Charcoal Sector in Kenya</i>
	Country of implementation <i>Kenya</i>
	Sector focus <input type="checkbox"/> Agriculture <input checked="" type="checkbox"/> Forestry <input checked="" type="checkbox"/> Land use <input type="checkbox"/> Transport <input checked="" type="checkbox"/> Energy Efficiency <input type="checkbox"/> Renewable energy <input type="checkbox"/> Waste/waste water <input type="checkbox"/> Other
	Duration of project implementation <i>60 months</i>
	Duration of detailed preparation (DPP) <i>15 months</i>
	NSP volume (EUR) Preparation (DPP): <i>201,000 EUR</i> Implementation: <i>13,400,000 EUR</i> Total: 13,601,000 EUR
	Publication <i>Are you willing to have your submission (country, sector) listed on the NAMA Facility website?</i> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Emission reduction credits NAMA Facility Funding is used directly for greenhouse gas mitigation and/or carbon sinks, which will contribute to generating emission allowances, emission credits, or any other type of CO2 compensation certificates: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, will the credits be permanently cancelled in an approved register: Yes <input type="checkbox"/> No <input type="checkbox"/>
1.2 National Ministry 1	Name of responsible national ministry <i>The Ministry of Environment and Natural Resources (MENR)</i>
	Department <i>The Climate Change Directorate</i>
	Postal Address <i>30126</i>
	Country <i>Kenya</i>
	Contact Person <i>Dr. Charles Mutai</i>
	Telephone <i>+254 722856452</i>
	Telefax <i>+254 20 2734722</i>
	Email <i>drcmutai@gmail.com;</i>
	Website <i>www.environment.go.ke</i>
Letter of Support <i>Please provide a letter of support for the NSP in annex 7. The letter should state the specific project title and include a reference to the entity submitting the application</i> <input checked="" type="checkbox"/> Official support letter attached	
1.3 National Ministry 2	Name of responsible national ministry
	Department
	Postal Address
	Country
	Contact Person
	Telephone
	Telefax
	Email
Website	

	Letter of Support ¹	<i>Please provide a letter of support for the NSP in annex 1. The letter should state the specific project title and include a reference to the qualified DOs selected to implement the project.</i> <input type="checkbox"/> Official support letter attached
1.4(Co-)Applicant	Name of institution	<i>United Nations Development Programme</i>
	Type of institution	International Organization
	Legal form	UN Entity
	Non-profit status	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	Department	Energy Environment and Climate Change Unit
	Postal Address	P.O. Box 30218 - 00100
	Country	Kenya
	Contact Person	Mr. David Githaiga
	Telephone	+254 723785123
	Email	David.githaiga@undp.org
	Website	www.ke.undp.org
Role in the project	<i>Team Leader, Energy Environment and Climate Change Unit</i>	
1.5 Main Implementing Partners		<i>Please name national implementing partner(s) (governmental or non-governmental), who will be responsible for the implementation of the NSP</i>
	Name of organisation	<i>Kenya Forestry Research Institute</i>
	Type of institution	Research Institution/State Corporation
	Country	<i>Kenya</i>
	Contact	Dr. Ben Chikamai
	Role	Implementing Partner
	Commitment	<input checked="" type="checkbox"/> Official support letter attached
	Name of organisation	<i>Council of Governors</i>
	Type of institution	State (Devolved Governments)
	Country	<i>Kenya</i>
	Contact	Ms. Jacqueline Mogeni, ceo@cog.go.ke;
Role	Facilitation Role	
Commitment	<input checked="" type="checkbox"/> Official support letter attached	
1.6 NAMA Support Organisation (NSo)		<i>For information - Please propose a NSO for the implementation of the NSP</i>
	Name of organisation	<i>United Nations Development Programme</i>
	Type of institution	International Organization
	County	<i>Kenya</i>
Contact	For contact details, please refer to 1.4 above.	

2. Project Concept

2.1. Executive summary

[max. 400words]

Kenya, with a population of about 45 million, relies on wood fuel for 70% of its energy supply. Charcoal is an important source of cooking energy, providing all or part of cooking heat for about 82% of urban and 34% of rural households in Kenya. About 2.4 million tons of charcoal was consumed in 2000 and its demand is increasing with population growth and urbanization. **Identification of viable efficiency options for the charcoal sector is desperately needed, as the combination of unsustainable harvesting of trees for charcoal production, increased charcoal consumption and the use of inefficient traditional kilns, form the key threats to forest resources in Kenya.** The need for sector transformation is reflected in its INDC by including “enhancement of energy and resource efficiency across the different sectors” and “make progress towards achieving a tree cover of at least 10% of the land area of Kenya” as part of its priorities. In addition, Kenya has put in place policies and regulations that would have resulted in conservation and sustainability of its forests. However, the lack of enforcement, along with the lack of incentives for efficient production of charcoal, impedes the country’s transition to low carbon development.

The overarching goal of this NAMA Support Project (NSP) is to trigger Kenya’s low-carbon development by minimizing the impact of the current charcoal value chain, while targeting the causes of deforestation and improving the energy security. **The NSP will target areas around the two main cities of Nairobi and Mombasa, but will have far reaching impacts in all major charcoal producing counties in Kenya. These goals will be achieved through three parallel activities, Activity 1: Establishment of an interest rate subsidy fund to support the sustainable supply of biomass for charcoal production and the implementation of efficient charcoal production technologies; Activity 2: Establishment of a charcoal certification and labelling scheme; and Activity 3: Capacity Building.**

The funding support for the implementation of the NSP will allow the market for sustainably sourced and efficiently produced charcoal to develop and mature. Once established, the market can continue to operate on a low carbon path even after the end of the support from the NAMA Facility. The greenhouse gas (GHG) mitigation potential of the NSP amounts to a total of 14.94 MtCO₂e for the first 5 years of its implementation with support. After which, the project is expected to continue reducing 4.98 MtCO₂e emissions per year.

2.2 Project rationale

[max. 300 words]

Charcoal is a key bioenergy resource in Kenya. It forms a major source of household energy -for both - urban and rural people, providing 82% and 34% of household energy respectively. It is a relatively cheap source of cooking energy produced nationally. The sector provides employment and income to almost one million Kenyans. The charcoal industry is growing, thus creating opportunities and a source of income generation to many people, especially local women. However, because demand outstrips supply, increased charcoal consumption leads to **unsustainable harvesting of trees and deforestation** that has led to destruction and depletion of forest resources, and **inefficient production using traditional kilns**. This is particularly devastating to indigenous tree forests, straddling most of the community trust lands, gazetted forest reserves in a majority of rural counties that supply urban centres with charcoal. These form a major threat to the environment and contribute to the increase of GHG emissions.

The NSP aims to address these issues by ensuring sustainable biomass supply for charcoal production and implementing efficient technologies for its production. This is done through intervention measures that involve policy and regulation, incentives, and capacity building and awareness creation, which will ultimately result in the transformative change of the sector to a low carbon development path.

The NSP will involve a vast range of stakeholders including government entities responsible for regulation development and enforcement, various stakeholders

	<p>involved in charcoal research and development, stakeholders directly involved in the charcoal value chain, as well as end users. The project will also target counties that are important as emerging institutions that are involved in policy formulation and project implementation. The civil society will play a crucial role throughout the implementation of the NAMA, being the charcoal as its main cooking energy in the country.</p>
<p>2.3 Project concept [max. 2000 words]</p>	<p>The proposed NSP will implement a set of measures for sustainable forest management and biomass production and the transition to energy efficient technologies for charcoal production. Additionally, sustainability of the system and the transition to a low carbon value chain will be assured by the introduction of certification and labelling system. The NSP will cover areas that supply Kenya’s major cities (Nairobi and Mombasa) with charcoal. Through the support by the NAMA Facility of an interest rate subsidy fund under Activity 1 below, the NSP will allow sustainable biomass supply and efficient charcoal production. This scale will further allow for the continuous operation and replenishment of the interest rate subsidy fund even after the end of the NAMA Facility support and assist the financing of nationwide sustainable charcoal value chain in Kenya.</p> <p>INTERVENTIONS TO BE FINANCED</p> <p>The NSP will finance the following activities:</p> <ul style="list-style-type: none"> • Establishment of an interest rate subsidy fund to support the financing of the activities under the NSP and the NAMA • Design and implementation of a charcoal certification and labelling system • Capacity development for government entities and other stakeholders <p>Activity 1: Establishment of an interest rate subsidy fund to support the financing of the activities under the NSP and the NAMA</p> <p>Despite the fact that there are successful pilots producing sustainable charcoal in Kenya, there have been no mechanisms to allow their replication and spread across the country beyond the occasional donor support or initiatives by local NGOs. The proposed mechanism allows addressing the existing financial barriers by creating, through the NAMA Facility support, an interest rate subsidy fund within the Kenya Commercial Bank, which already has experience with innovative projects and working with donor entities.</p> <p>The interest rate subsidy fund will have the size of 7 million EUR and will target the elements of the value chain that are not the common financing assets and face higher risk premiums by commercial banks, i.e. sustainable forest management and purchase of energy efficient kilns. Each loan application will be screened against a set of criteria, such as experience with forest management, experience with charcoal production or existing long-term contracts with charcoal producers (for forest management projects) and charcoals buyers (for charcoal producers). The amount of interest rate subsidy will be determined on a case by case basis, but as a rule of the thumb it will be used only to cover the interest rate spread, but not the bank funding costs. It is expected that at an average interest subsidy rate of 50% over five years, the proposed interest subsidy fund can mobilize approximately 30 million EUR equivalent in loans.</p> <p>Additionally, in order to minimize the risks on the side of the Kenya Commercial Bank associated with financing of new types of assets (i.e. forestry management and purchase of new kilns), a loan guarantee scheme will be set up with additional funding from the NAMA Facility amounting to 4 million EUR. The fund will be used to guarantee the loans extended during the first three years of the operation of the interest rate subsidy fund. It is considered that this period will be sufficient for the</p>

bank to gain experience with this new type of assets and develop internal risk management mechanisms.

The subsidized loans will be extended for a period of not more than five years (in line with the current lending practice of commercial banks in Kenya) with one year grace period.

In order to guarantee compliance with the sustainability principles for charcoal production, all borrowers will be subject to sustainability compliance monitoring, i.e. they have to prove that they efficiently produce sustainable biomass and use sustainable biomass for charcoal production. **Non-compliance will result into repayment of the entire interest rate subsidy after the repayment of the loan principal and the subsidized interest rate.**

Details of the monitoring and compliance system will be designed during the DPP stage.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Grace Period	Principle + Subsidized Interest Rate Repayment				Interest Subsidy Repayment	

In case of violation of sustainable charcoal production practices.

Figure 1: Loan Repayment Schedule (Example)

Additionally, once the repayment of the loans covered by the loan guarantee facility is over, the remaining loan guarantee funds may be used for providing new interest rate subsidies. In this way, project developers in Kenya will have a financing scheme that can continue operating after the end of the NAMA Facility support and will allow the existing model to spread throughout Kenya. The details of the financing mechanisms will be developed during the DPP stage.

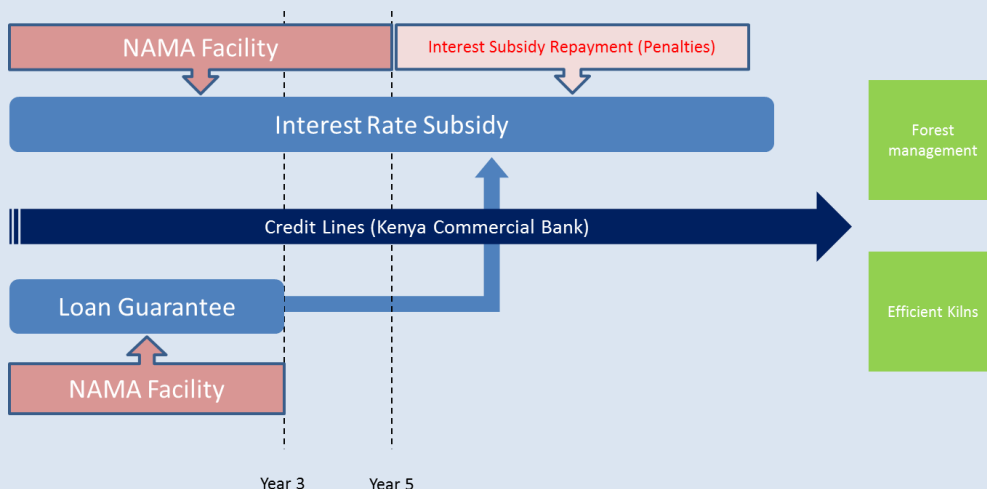


Figure 2: Financing Mechanisms Concept

Outline of a Typical Forest Management Project

The typical forest management project will involve the establishment of a forest management system that will allow sustainable production, harvesting and sale of biomass. All forest management companies/cooperatives will agree to follow a pre-determined set of sustainable forest management rules. The loans under the NAMA facility will finance the initial investment for the establishment of the forest managements system in case of existing forest or the costs for establishing a plantation of fast growing plants, as well as their initial operational costs. The business models for forest management are described later in this section.

Outline of a Typical Energy Efficient Kiln

Producing charcoal technically consists of carbonization of wood and other woody biomass by pyrolysis, i.e. combustion with reduced access to oxygen. During pyrolysis, biomass undergoes a sequence of changes and normally yields a black carbonaceous solid, called charcoal, along with a mixture of gases and vapours. Generally, charcoal production through pyrolysis is maximized in a process of low temperatures and slow heating rates, so-called carbonization. The need for heat to support the process can be reduced if the hot gases are recycled to heat the carbonizing material.

The interest fund under the NSP will finance kilns that meet a certain minimum efficiency benchmark, 30 %. This will allow more advance charcoal production technologies to be disseminated in Kenya.

Activity 2: Design and implementation of a certification and labelling system

As part of this activity, a robust Kenyan nationwide certification and labelling scheme for all charcoal sourced from local biomass and produced (carbonized), transported, traded, and consumed in Kenya. Its theory of change is based on the assumption that if the final consumer is able to easily identify and only purchase sustainably sourced and efficiently produced charcoal, the objectives of Activity 1 (sustainable biomass supply and efficient charcoal production) will to a large extent have been achieved. For corporate consumers that heavily rely on charcoal including hotels, factories, schools, hospitals and such, a national sensitization campaign will see immediate shift to sustainably produced certified and labelled charcoal.

Activity 3: Capacity development for government entities and other stakeholders

This activity will involve information dissemination to relevant stakeholders regarding the NAMA and the NSP approaches and enable transformation by building relevant capabilities with each stakeholder, development of policy (both incentives and enforcement) which addresses the goals and present shortcomings, and finally enable the policy packages (incentives and regulation for woodlots). This will also involve tracking of biomass sourcing and restoration plans for each site to promote sustainable sourcing of biomass.

EXPERIENCE WITH PILOTS

The NSP will build upon the experience of successful pilots that have been implemented. In the African continent, there have been several pilots that have been funded and conducted to study and demonstrate solutions on how to make charcoal sourcing and production sustainable. In Kenya, in line with the recently introduced energy and forestry laws to regulate charcoal production and drive more sustainable

production, the UN's Food and Agriculture Organisation (FAO) carried out a study into the methods of charcoal production in two regions of Kenya and to pilot more efficient production methods. The pilots were successful and communities in target areas expressed their strong wish to continue with the technology introduced in the pilot. With funding support for the NSP will allow reproducing the successful pilots on a nationwide scale which will result in the development and maturity of the market for sustainably sourced and efficiently produced charcoal that can continue operating on a low-carbon path even after the end of the support.

BUSINESS MODELS

Business Models in Forest Management

The following business models are considered for forest management.

Model 1: Community based forest management

Duly registered community forest associations (CFAs) may be licensed to produce charcoal as per the relevant sections of the Forest Act (2006) and Forests (Charcoal Production, Transportation and Marketing) Rules, 2016 woodlots will be encouraged to sustainably produce and supply fuelwood for their own commercial charcoal production or to sell to other interested CFAs or independent licensed charcoal producers.

Model 2: Private sector based forest management

Private sectors such as smallholder farmers, land owners, and entrepreneurs renting land will be encouraged to establish woodlots. The Forest Act (2005) requirement that all private landowners set aside at least 10% of their land for forests will be enforced to encourage more sustainable supply of biomass for charcoal production. The private land owners will be encouraged to join or form CFAs or CPAs if they want to sell their timber or commercially produced charcoal.

Model 3: Public sector forest management

Public forest can be utilized through the establishment of demonstration woodlots to showcase various tree species, agro-forestry techniques, and so on to CFAs, individual landowners, and the general public.

Business Models in Charcoal Production

Production of charcoal for commercial purposes will only be done by landowners and charcoal producers such as CPAs legally licensed to do so. The transition will be enabled by capacity building, incentives and regulation. This will make it easy to target such charcoal producers with technical and financial support to acquire and operate efficient kilns.

Model 1: Efficiently producing charcoal using sustainable biomass from entrepreneurs providing sustainable biomass. The entrepreneur profits from the cost difference between the sustainably sourced biomass and the charcoal sold to brokers or transporters.

Model 2: Supplying charcoal production technology. Thousands of efficient kilns sanctioned by the Kenya Forestry Research Institute (KEFRI) will be commissioned

around Kenya including small scale and larger units, mobile (truck), modular, and stationary units.

THE FINANCIAL SUPPORT MECHANISM

The financial support mechanism is described under Activity 1. It is built upon the replication of an already existing pilot which is **successful and profitable, but lacks the access to initial funding (kick-start finance) for replication and expansion**. The financial support mechanisms will allow for replication of similar projects under the existing business model across Kenya.

REGULATORY FRAMEWORK TO MAKE THE NSP SUCCESSFUL

Strict enforcement and compliance with relevant policies and regulations is a key to the success of the NSP. Kenya's policies and regulations for conservation and sustainable management of forests are extensive and robust, but with insufficient enforcement. Therefore, the NSP is expected to provide further support on the enforcement of legislation.

Technical framework for the production and use of efficient kilns: A technical advisory committee on the production, efficiency and quality assessment as well as the development of proper guidelines for the use of different types of efficient kilns is established and work with the Kenya Bureau of Standards to ensure that the certification of efficient kilns is carried out.

Regulate use of efficient kilns: Section 7(4)f of the revised (2012) charcoal regulations states that for one to be issued with a license to produce charcoal, the licensing sub-committee shall consider the type of technology. It is proposed that all commercial charcoal production in Kenya must be done using kilns with – a thermal efficiency of at least 30%.

Training on efficient kiln design, construction, and use: To ensure that high quality efficient kilns are readily available and at an affordable price, targeted training will be provided to Jua Kali (informal sector) artisans throughout the country in the design and construction of such kilns.

Currently, Kenya has no charcoal certification and labelling scheme. This NSP will introduce a third party certification and labelling scheme. In addition, the following will be implemented:

- Establishment of a system of environmental standards and fiscal reform;
- Review of specific policies and regulations;
- Guidelines on labels and packaging technology; and
- Inter-county and international cooperation.

2.4 Barrier analysis

[max. 600 words]

The following barriers hinder the charcoal sector in its fight against unsustainable charcoal production and use.

- **Regulatory Barrier**

Kenya's existing policies and regulations concerning conservation and sustainability of forests include but are not limited to the Forests Act (2005), Forests (Charcoal Production, Transportation and Marketing) Rules, 2016, Wildlife Conservation and

	<p>Management Act (2013), Agriculture Act (revised 2012), and (GoK, 2015b), the Environmental Management and Coordination Act (1999). While these are in place, the challenge has been the chronic inability to its enforcement and compliance resulting in unregulated commercial activities and deforestation.</p> <p>The interventions proposed under this NSP will address the existing regulatory barrier by supporting the capacity of relevant institutions mandated to implement these policies and regulation. The support will be extended to the county governments where most of the charcoal is produced. In addition, the establishment of a certification and labelling scheme would allow stakeholders of the entire CVC to supply, produce, and use sustainably sourced products, and more importantly, enhance and facilitate enforcement and compliance with the various legislations intended to regulate the charcoal sector. It will also create more business opportunities as more people get into the regulated and streamlined charcoal sector.</p> <ul style="list-style-type: none"> • Technical Barrier <p>Charcoal in Kenya is predominantly produced in traditional earth mound kilns that have very low recovery rates (estimated at 16% but can be as low as 10%). Local producers often lack the skills, raw material and investment capacities to switch towards more efficient technologies. Since production is often intermittent and the firewood used often is freely or very cheaply available, there is little incentive for the producer to aim for efficient production.</p> <p>The NSP will address this barrier by implementing efficient charcoal production technologies enabled by capacity building, incentives, and regulation. It is also proposed that the charcoal regulations and Energy Act be revised to explicitly state that all commercial charcoal production in Kenya is done using kilns with an efficiency of at least 30%.</p> <ul style="list-style-type: none"> • Financial Barrier <p>Unregulated commercial activities in the CVC results in reduced fiscal revenues. This in turn limits the capacity and ability of relevant agencies in regulating and enforcing despite the presence of extensive and robust policies and regulations intended to conserve and sustain forests.</p> <p>The proposed NSP will allow overcoming this barrier through the establishment of an interest rate subsidy fund and provision of loan guarantees. Furthermore, through the repayment of the interest rate subsidy, the fund will be replenished and will provide a long-term solution for overcoming the financial barriers. It is expected that after a period of two – three years, commercial banks in Kenya will gain better understanding of recycling and composting projects and they will not be considered risky assets, thus leading to the natural phase out of the interest rate subsidy fund.</p>
<p>2.5 Embedding [max. 700 words]</p>	<p>Kenya submitted its INDC to the UNFCCC secretariat in July 2015, ahead of the COP21 in Paris. The INDC commits the country to reduce its GHG emissions by 30% by 2030 relative to the national BAU scenario of 143 MtCO_{2e}, or by 42.9 MtCO_{2e} by 2030.</p>

The NSP will contribute towards this target which is expected to reduce 4.98 MtCO_{2e} per year by 2030. Moreover, the INDC states that “emissions of carbon dioxide from combustion of biomass are assessed but not counted towards the contribution.” This means that the GHG emissions from biomass combustion, including charcoal production, is included in the BAU emission scenario of 143 MtCO_{2e} but their reduction or abatement is not part of the 30% emission reduction target. Therefore, if GHG emission reductions from non-sustainable biomass sourcing and combustion as proposed in this NSP were included, Kenya’s emission reduction target could be higher than the 30% (42.9 MtCO_{2e} by 2030) stated in the INDC.

In addition, the NSP is aligned with the INDC in achieving its target through the implementation of mitigation activities, namely, the enhancement of energy and resource efficiency across the different sectors, and make progress towards achieving a tree cover of at least 10% of the land area of Kenya.

Prior to enactment of Forest Act 2005 (FA2005) now under revision, Kenya forest sector did not recognize charcoal as a legal forest product in spite of the high utilization by the citizens. This constrained any development of the sector and encouraged thriving of illegal production. The FA2005 provided for development of charcoal rules 2009 (legal notice 186 of 2009) and revised 2012, which provided for the start of organized sourcing of charcoal production biomass and licensing of the dealers. The rules had good provisions for regulation and penalties, although one major weakness was that they were formulated for fulltime charcoal producer, which is not the case in most producers. At the same time, enforcement of these rules has remained weak. Along with the Forest Act 2005 are the Forests (Charcoal Production, Transportation and Marketing) Rules, 2016, Wildlife Conservation and Management Act (2013), Agriculture Act (revised 2012), and the Environmental Management and Coordination Act (1999) among others. Again, the chronic inability to enforce and ensure compliance remains a challenge.

In line with Kenya’s national and sectoral strategies and policies, the implementation of the NSP will trigger the transformation of the sector into a low carbon development pathway, minimize the impact of the current CVC, act on the causes of deforestation, improve the livelihoods of the communities relying on charcoal and improve the energy dependence of the country.

In addition to GHG mitigation, the NSP is designed to produce sustainable development co-benefits. The SD impacts identified that can be monitored include access to clean and sustainable energy, capacity building, job creation, policy and planning, and law and regulation. There are also impacts attributable to the NSP which are difficult to incorporate in its MRV system, and therefore, not measured. These include air pollution/air quality, biodiversity and ecosystem balance, livelihood of poor, poverty alleviation, peace, health, time savings/availability, education, empowerment of women, access to sustainable technology, and energy security.

Without the support of the NAMA Facility, the transformation of the charcoal value chain in Kenya will be very difficult due to the existing barriers of the sector. Therefore, the NSP is additional.

3 Project Ambition

3.1 Potential for transformational change

[max. 600 words]

The NSP will result in significant transformational change to the charcoal value chain in Kenya.

Catalytic Effect

The NSP will change public perception of charcoal as a nationally produced good, which can be produced legally and sustainably with the cooperation of the regulator, law enforcement and the consuming public. In addition to the development of a large number of projects under the NSP, the capacity building and the improvements in the law enforcement will support the irreversible transformation to sustainably sourced and efficiently produced charcoal with carbon emissions equivalent to a small fraction of the present, while maintaining and increasing production. Along with this, the NSP will create jobs, providing rural employment. Consumers can move away from practices resulting in high GHG emissions, indoor air pollution which damages health and deforestation

Sustainability

The NSP is sustainable as it provides a clear business model with clearly defined costs and revenues. After its implementation period, it is expected that the interventions and measures proposed will have become established and thus able to sustain themselves through the various exit strategies put in place.

Replicability/Scalability

The scope of the NSP covers counties in the vicinity of Nairobi. The NSP can be replicated throughout Kenya and in neighbouring Sub Saharan African countries which rely heavily on charcoal for cooking and heating. In particular, there have been several NAMA studies conducted for charcoal such as in Uganda, Côte d'Ivoire, and Ghana, that could benefit by replicating this NSP.

3.2 Financial ambition

[max. 500 words]

The total cost of the NSP is estimated to be approximately 51 million EUR. The NSP will request investment support from the NAMA Facility in the amount of 13.4 million EUR which will be used for financing of Activities 1 - 3 described above.

Under Activity 1, the NAMA Facility will contribute 9 million EUR for the establishment of the interest subsidy fund, 2 million EUR of which will be for the loan guarantee system. The funds from the NAMA Facility will be provided for an interest subsidy to support loans for improved forest management and purchase of highly efficient charcoal kilns. This is expected to leverage approximately 30 million EUR equivalent from the participating private bank– Kenya Commercial Bank.

The creation of the interest rate subsidy fund will allow the mobilization of approximately 30 million EUR of private capital in GHG emission reduction activities over a period of 5 years, thus providing a trigger for the replication of the sustainable charcoal production value chain across Kenya.

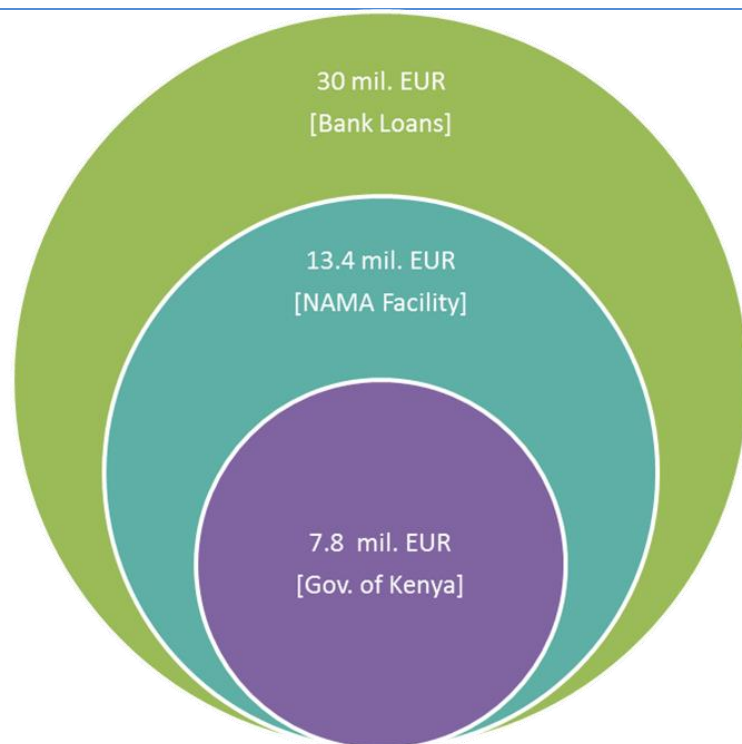


Figure 3: Financial Ambition

The NAMA Facility will also provide 3 million EUR for the establishment of the national certification and labelling system in Kenya which will be matched with 7 million EUR equivalent from the National budget of Kenya in terms of the establishment of certification centres and employment of the staff.

Finally, the NAMA Facility will provide 1.2 million EUR for consulting, capacity building and knowledge dissemination activities, both for working with stakeholders, as well as for strengthening the regulatory framework.

3.3 Mitigation ambition

[max. 400 words]

The GHG mitigation potential of the NSP amounts to 4.98 MtCO₂e of GHG emissions reduced during the NSP.

As a result of the NSP implementation, the emissions from deforestation linked to charcoal production are projected to reduce by up to 75% (3.9 MtCO₂e) per year by 2030. The BAU emissions for the forestry sector attributed to charcoal production were estimated as 7.6 MtCO₂e in 2010, declining to 5.2 MtCO₂e in 2030. The BAU emissions for the forestry sector were obtained from the National Climate Change Action Plan (NCCAP). While no data is available on the emissions contribution of charcoal production alone, it was estimated using proxy data from a Tanzanian study.

Emission reduction target from the introduction of efficient kilns are estimated to reach 0.12 MtCO₂e per year during the NSP, which amounts to 1.08 MtCO₂e per year by 2030. The BAU figures for charcoal production in Kenya in 2010 was 0.8 MtCO₂e and is projected to rise to 1.2 MtCO₂e in 2030 if no mitigation actions are undertaken.

Emission reduction achieved by improving efficiencies in charcoal production is calculated using a CDM approved methodology *AMS-III.BG: Emission reduction through sustainable charcoal production and consumption*.

4 Expected Budget and Financing Structure (in EUR)

4.1 NSP Implementation: Overall cost and financing contributions (Estimate)

NSP - Implementation	Total cost	Nama Facility	National budget	private sector	other donors	total finance
1. Financial mechanism(s)						
1.1 Activity 1	39,000,000	9,000,000		30,000,000		39,000,000
1.2 Activity 2	10,000,000	3,000,000	7,000,000			10,000,000
1.3 Activity 3	2,000,000	1,200,000	800,000			2,000,000
2. TA (Expert services / consulting)						
3. Other direct and indirect costs		200,000				
Total <gross>	51,000,000	13,400,000	7,800,000	30,000,000	-	51,000,000

Please be aware that 1% of the overall NF budget need to be reserved for M&E (mid-term and final evaluations)

4.2 NSP Detailed Preparation Phase (DPP): Funding requirements from the NAMA Facility

NSP - Preparation	Total
1. Personnel	182,000
2. Travel and allowances	15,000
3. Procurement of materials and equipment	-
4. Other direct and indirect costs	4,000
Total <gross>	201,000