

Greening the Charcoal Value Chain in Côte d'Ivoire

- a NAMA approach



Charcoal remains one of the most important sources of fuel in Sub-Saharan Africa including Côte d'Ivoire. A look through the supply chain highlights the inter-linkages with issues of energy, deforestation, employment and other socio-economic and environmental challenges.

A Nationally Appropriate Mitigation Action (NAMA) provides an opportunity to develop a "sustainable charcoal value chain" through a combined approach of policies, technology intervention, finance and capacity building.

Charcoal Value Chain

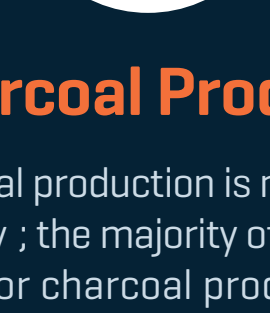
Current status in Côte d'Ivoire



1. Deforestation in Côte d'Ivoire

- Côte d'Ivoire has lost vast amounts of forest since its independence in 1960.
- At independence, Côte d'Ivoire had 16 million hectares [ha] of forest. The remaining forest area is now significantly smaller although the exact area is unknown. The FAO estimates the area to be 10.4 million ha; alternative sources state the forest area to be as small as 1.7 million ha.

Source: FAO [2010]. Global Forest Resources Assessment



2. Charcoal Production

- Charcoal production is mainly done illegally ; the majority of the wood used for charcoal production is obtained without permission and the majority of carbonization is done without proper permits.
- Almost all kilns in Côte d'Ivoire are traditional earth mound kilns which are the least efficient kilns in terms of charcoal yield.
- Charcoal production has been steadily increasing in order to meet the demand of a growing population which is increasingly urbanized.

Source: FCPF and UN-REDD [2013]. Readiness Preparation Proposal, Country: Republic of Côte d'Ivoire.



3. Charcoal Value Chain Regulatory Framework

Charcoal value chain is cross-sectoral with sometimes conflicting and often poorly aligned policies and regulation coming from a variety of ministries:

- Water and Forest
- Environment and Sustainable Development
- Petroleum and Energy
 - Agriculture
 - Industry
 - Transport

Source: Republic of Côte d'Ivoire National Institute of Statistics [2002]. National Household Standard of Living Survey [in French]. Abidjan, Côte d'Ivoire. Republic of Côte d'Ivoire Ministry of Transport [2014]. Reform of Procedures for Processing of Services for Road Transport Operations [in French].



4. Transportation and Consumption

- Charcoal is the main cooking fuel for urban areas, 47% with of the urban population cooking using charcoal.
- Only a limited [4%] amount of the rural population cooks using charcoal; of the 95% rural population cooks using wood.
- Transport sector is disorganized and rife with corruption which leads to significant increases in the cost of charcoal.
- Use of improved cookstoves is extremely limited although there are a number of recent initiatives to sell or distribute improved cookstoves.

Sustainable Charcoal Value Chain

Improvements under NAMA

1. Addressing deforestation and degradation

Train community member trainers, who then train others, in sustainable biomass procurement



Facilitate system for collecting agricultural and wood waste



Seeding and nursery



Forest management



Waste made available for charcoal briquettes



Sustainable woodlot management



2. Ideal carbonization scenario

Woody Biomass + Agricultural & wood waste



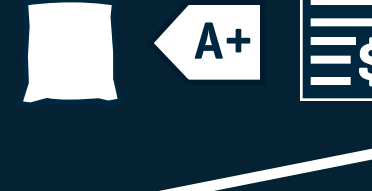
Interventions and capacity building



Technological support



Charcoal bagging, ecolabels and taxes



Transportation



Member of charcoal association travels with transporters to negotiate the best price at the charcoal warehouse

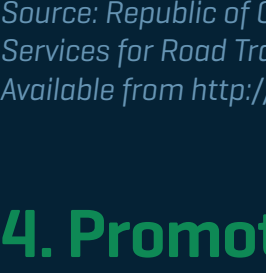
3. Improved national transport system



Centralized data management system allowing for improved planning based off reliable statistics



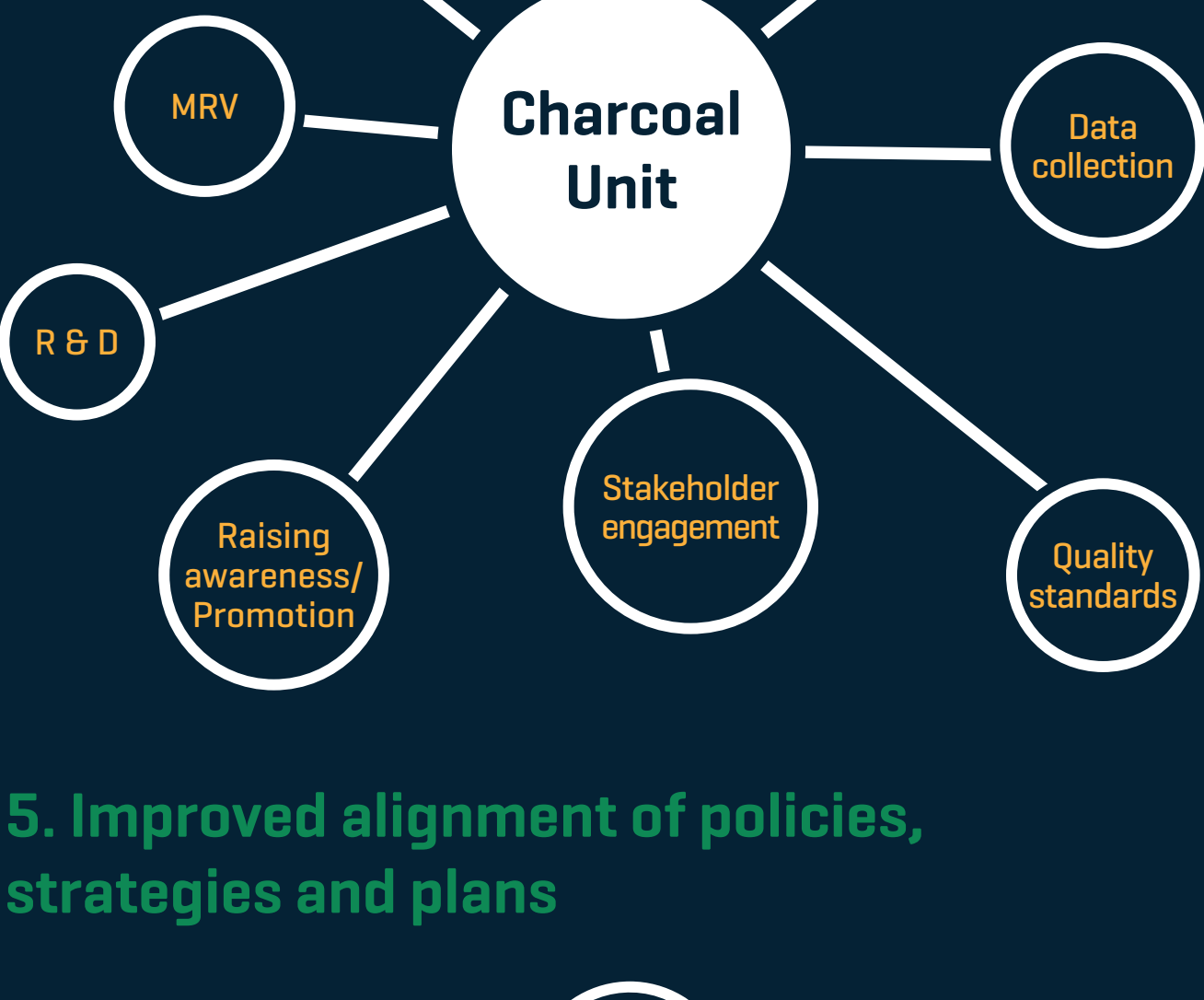
Real time operational management of the administrative procedure related to all road transport operations



Secure management of transport titles

Source: Republic of Côte d'Ivoire Ministry of Transport [2014]. Reform of Procedures for Processing of Services for Road Transport Operations [in French]. Available from <http://www.transports.gouv.ci/img/1406734180LA%20REFORME.pdf>.

4. Promotion of efficient charcoal consumption through the proposed Charcoal Unit



5. Improved alignment of policies, strategies and plans



The complete NAMA Study jointly developed by UNDP's MDG Carbon and the Regional Environment Project on the Management of Environmental Services and Financing for Sustainable Development is available here: <http://www.undp.org/content/undp/en/home/librarypage/environment-energy/mdg-carbon/nama-study-for-sustainable-charcoal-value-chain-in-cote-divoire/>

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