



Africa LEDS project: achievements & next steps – component 1

Presentation for Côte d'Ivoire

BY: Dr KOUADIO Alain Serges



Background of pilot actions



- ❖ Côte d'Ivoire's economic performance is based on agriculture, which accounts for 24% of GDP.
- ❖ Unfortunately, this growth still contributes to the country's strong deforestation.
- ❖ In fact, according to a recent World Bank study, Côte d'Ivoire has one of the fastest rates of deforestation in the world (90% loss of these forests in 50 years) but also one of the highest indices of climate vulnerability (147th out of 178 countries).
- ❖ To reverse these trends and contribute to the global effort to fight against climate change, the Ivory Coast has priority focus in its NDC on the three most sectors GHG emitters that are agriculture / forestry, Energy and waste.
- ❖ The ambition is to reduce these emissions to 28% by 2030 (reference year 2012).

Background of pilot actions



Component 1 of the LEDS project in Côte d'Ivoire aimed, through demonstration activities, is:

1. To promote and popularize smart agricultural practices among rice farmers in two villages in Gagnoa (forest zone of the country with high rice production); Tipatipa and Tietiekou
2. To promote and popularize agricultural waste valorization techniques in biofertilising and bioenergy at the level of rice mills in the same area of Gagnoa.
3. The case study from these demonstration activities should not only clearly observe the climate co-benefits (GHG reduction) and socio-economic (increase in employment and income of farmers) of these activities but also guide and inform development of the integrated framework for combating climate change in relation to the NDCs of Côte d'Ivoire.

Background of pilot actions

Usual rice cultivation practice of peasants (before the project).

- Bulk dressing requiring more rice flavor while there is a shortage of seed at the beginning of each cycle.
- systematic and widespread use of chemical fertilizers by farmers (NPK and urea)
- almost continuous irrigation of rice-growing areas (2 to 3 months).
- This justifies the emission of methane in rice fields.
- yield per production cycle: 2.9 t / ha



Background of pilot actions



Situation (becoming) of waste on fields and mills (before the project).

- Rice straws are usually burned on fields.
- The rice balls are abandoned and bulky at the mills.
- Thus, on the whole, agricultural waste is not valorised whereas it can be transformed in biofertilizer and biocharbon and allow to reduce the pressure on the forests.



DEMONSTRATION ACTIVITY-1: FARMER'S CAPACITY BUILDING ON CLIMATE-SMART AGRICULTURE

- 87 rice growers were selected for demonstration activities including 62 in Tipatipa with 9 women and 25 in Tiétiékou with 2 women.
- The area covered by the project is 50 ha including 2 ha for demonstration activities.
- farmers training.
 - Training of rice farmers in the rehabilitation and management of water infrastructure in rice paddocks.
 - training and supervision of rice farmers on the application of the intensive rice farming system (sustainable agricultural practice) including nursery preparation, plowing, replication, maintenance and harvesting.
 - training rice farmers on the production of biofertilizer from rice straws,

Achievement



Rice farmer training class



nursery preparation.



Delimitation of the right of way of the canal



transplanting

Achievement



RESULTS OBTAINED (comparative advantages of SRI)

Technical itinerary and out put	Peasant practices	Application of SRI	Results
density of plants on cultivated areas	50 -150 kg/ha	8-10 kg/ha	rice seed saving and farmland and lower production cost
Fertilization	Mineral fertilizer NPK : 200 kg ha ⁻¹ Urée : 100 kg ha ⁻¹	Organic manure: Poultry dung, compost at a dose of 2 to 8 t ha ⁻¹	Lower production cost (organic fertilizers are agricultural residues and therefore available and almost free).
agricultural yield (t / ha)	2,9 t/ha	4,3 t/ha	increased production, yield and income of farmers

Achievement

DEMONSTRATION ACTIVITY-2: SUPPORT LOCAL BUSINESSES TO PRODUCE BRIQUETTES FROM RICE HUSKS.

- improvement of the technological process of production of fuel briquettes



rice balls



non-carbonized briquette
Befor the project



improved briquette thanks
to the project

Pyrolysis reactor



DEMONSTRATION ACTIVITY-2: SUPPORT LOCAL BUSINESSES TO PRODUCE BRIQUETTES FROM RICE HUSKS.

- Socio-economic study to evaluate the social acceptability of briquettes**
- ✓ A survey of about one hundred households and restaurants took place as well as producers and sellers of traditional fuels (charcoal, firewood and Butane gas) (dec 2018)
- ✓ Beyond the comparatively high proportion of smoke and ash, more than half of respondents (52%) believe that the briquettes are not messy, have easy ignition and intense fire,
- ✓ the household cooking test reveals that to cook 1 kg of food requires 563.84 g of charcoal against 527.49 g of briquette made with rice balls.

Tangible socio-economic benefits from component 1

- ❑ In terms of socio-economic impacts, two indicators were used: number of jobs created and wealth created in terms of value added.
 - ❑ Thus, according to the simulation carried out on the transformation of rice waste into biofertilizer,
 - ✓ 24 jobs are created for 150 ha of rice for 50 000 USD per year
 - ✓ 4 080 new jobs created out of the 25 500 ha of irrigated rice growing on the extended territories
 - ✓ 16 000 jobs created if all 100,000 ha of available rice paddy farms are to be exploited .
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Feed back to policy

Contribution of the LEDS project to the implementation of NDCs in Côte d'Ivoire

NDC priorities Sectors	NDC Strategic orientations	Actions and actions planned in the NDCs	Contribution of component 1 of the LEDS project	Impact of the project on the political decisions taken
Agriculture / Forestry	Intensification of agricultural, animal and fishery production respectful of the environment and avoiding deforestation	Streamlining the use of chemical inputs and facilitating the use of organic inputs	Training program for farmers in the production of biofertilizer from agricultural residues	Elaboration of the national climate smart agriculture strategy highlighting the conditions for the scaling up of the LEDS project results
	Promoting sustainable and integrated practices to improve agricultural production capacity and promote environmental resources	Maximum reduction in rice submergence to limit methane emissions	Training program on intermittent water management and management of rice-growing basins	

Feed back to policy

NDC Priorities Sectors	NDC Strategic orientations	Actions and actions planned in the NDCs	Contribution of component 1 of the LEDS project	Impact of the project on the political decisions taken
Energy	Development of sustainable domestic energy solutions for the cooking needs of populations	Promotion of alternatives in charcoal through the valorization of agricultural biomass	Support program for the development of micro enterprises producing combustible briquettes from agricultural residues	<ul style="list-style-type: none"> - Development of the focus on sustainable cooking energies of the REDD + mechanism - Strengthening the national framework for stimulating private investment in the energy sector, particularly on sustainable cooking energy - creation of a Green SME Cluster aimed at supervising SMEs in the field of biofuel production
Waste	Efficient recovery of resources to move towards a circular economy	Develop circular economy actions	Program to support the development of micro-fuel briquettes and biofertilizers from agricultural residues	<ul style="list-style-type: none"> - Strengthening the national framework for stimulating private investment in the energy sector, particularly on sustainable cooking energy - creation of a cluster of green SMEs to coach SMEs in the field of production of biofertilizers and biocharbons

Feed back to policy



Role of the Political Task Force in taking into account the results of Component 1

- Ensure, in general, the strategic framework of the LEDS project so as to be aligned with national policies and priorities and Côte d'Ivoire's international commitments on climate
 - Assist and motivate Ministries to own and integrate Component 1 field results into their respective sectoral planning
 - Facilitate the collaboration of the decentralized structures of the ministries with the other stakeholders of the project at the local level
 - Evaluate the political conditions for scaling results from component 1
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Testimonials



Dr Eric ASSAMOI, Director of the fight against climate change

"LEDS project, in its conception was for us, a great asset, a first approach in the implementation of the NDC, because it allowed us finally to decline our NDC in a concrete and well-structured project in the case of pilot project that has implemented in the rice sector. So for us, it's to see how we could decline our NDC into projects that could eventually be scaled up"

Mrs. COULIBALY RAMATOU, manager and promoter of briquette production unit (AFRICA BUSINESS GROUP (AFRIBUG)).

"We produce whitened rice and we value waste (rice husks) in bio-coal. As part of the LEDS project, we have received capacity building in the socio-economic aspect and the recycling of waste into briquettes. Our ambition is to produce bio-coal with rice husks instead of charcoal in our households, so that to preserve our forest".

Conclusion



- ❑ The LEDS project in Côte d'Ivoire has seen the involvement of the Government, researchers, implementing agencies, local authorities, local businesses, NGOs and farmers. It has clearly identified the central role they must play in the decision-making process, implementation planning and monitoring of LEDS.
- ❑ With component 1, it has been observed that through demonstration projects, farmers are willing to adhere to smart agriculture programs to face climate change, to increase their income and create jobs at the same time.
- ❑ This component was also an opportunity to test the SRI technique developed by ANADER a few years ago and had conclusive results for scaling up in the national level and the production of briquettes from agricultural residues (rices), the implementation planning and monitoring of LEDS.

Next steps



- ❖ **Continue monitoring and evaluation of project beneficiaries (rice growers, biofertilizer and briquette producers) over at least two crop cycles**
 - Ensure that sustainable agriculture practices are always applied
 - Ensure that producers of biofertilizers and briquettes continue production and successfully implement their marketing and marketing strategy
 - Ensure the existence of a contagion effect for non-beneficiaries of the project
 - ❖ **Adopt, at Government level, a strategy for regional and national scaling up of the results of the demonstration activities**
 - ❖ **Develop a program to implement this strategy in coherence with the LEDS planning resulting from the model to be done.**
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Thank You!

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