



**REPUBLIC OF RWANDA
WESTERN PROVINCE
RUBAVU DISTRICT**



**ACCESS OF CLEAN COOKING ENERGY FOR MAKING
RUBAVU A RESILIENT CITY**



Jacques Ndikubwimana
Forestry and natural resources Officer
jacquesndikubwimana@gmail.com/+250784934266

Wednesday, July 03, 2019



CONTENT

1. THE PROFILE OF RUBAVU DISTRICT
2. ENERGY FOR COOKING SITUATION
3. SOLUTIONS
4. CHALLENGES AND WAYFORWARD





URBAN AREA

- URBAN AREA
- POP: 195,000
- AREA :45 km²
- DENSITY:4333 pop/km²





COOKING ENERGY SITUATION

❖ **Biomass /**

-Firewood(67.8%) and charcoal(28.9%) 96.7% of the households

-Pellet approximately 1.7% of households

❖LPG (cooking gas) approximately 1% of households

❖Biogas approximately 0.6% of households



SOLUTIONS

- ❖ The construction of Inyenyeri pellet plant Gisenyi sector, Nengo cell , Use of LPG and Biogaz
- ❖ Afforestation and reforestation of all bared land (Mont Rubavu)
- ❖ Setting the program of planting 3 fruit trees per household, (in 2019/2020 we planned to plant 535,000 fruit trees which will help both atmospheric pacification and fight against malnutrition)
- ❖ Agroforestry system adaptation around the city



CLEAN ENERGY : INYENYERI PROJECT

❖ **INYENYERI:** a for-profit clean energy plant that brought solutions in cooking energy sector in Rubavu District, especially in Gisenyi and Rubavu Sectors

Its mission is to:

1. Break the cycle of energy poverty, through the provision of a fuel and Fan Gasifying Cook Stove solution
2. Maximizing the health, environmental, and social impacts of clean cooking.

Inyenyeri is working by collecting the twigs and branches of trees, herbs and crop residues, it chewed and compressed by specified machine to obtain pellet while preventing the carbonization in pellet making and during cooking there is no steam(CO₂)released.

Inyenyeri offers a holistic cooking system and uses an “energy utility” business model. Cook stoves are infrastructure—They require fuel for functionality.



CLEAN ENERGY: Inyenyeri stoves

❑ Fuel pellets are energy they are purchased repeatedly and used every day; one is useless without the other By creating a system that incorporates both the fuel and the stove,





CLEAN ENERGY : INYENYERI PROJECT

❖ **INYENYERI**: a for-profit clean energy plant that brought solutions in cooking energy sector in Rubavu District, especially in Gisenyi and Rubavu Sectors

Its mission is to:

1. Break the cycle of energy poverty, through the provision of a fuel and Fan Gasifying Cook Stove solution

2. Maximizing the health, environmental, and social impacts of clean cooking.

❖ Inyenyeri is working by collecting the twigs and branches of trees, herbs and crop residues, it chewed and compressed by specified machine to obtain pellet while preventing the carbonization in pellet making and during cooking there is no steam(CO₂)released.

❖ Inyenyeri offers a holistic cooking system and uses an “energy utility” business model. Cook stoves are infrastructure—They require fuel for functionality.



CLEAN ENERGY: Inyenyeri stoves

❑ Fuel pellets are energy they are purchased repeatedly and used every day; one is useless without the other By creating a system that incorporates both the fuel and the stove,







Clean cooking by Inyenyeri in nowadays,
Inyenyeri is customizing 2293 households.





CHALLENGE OF INYENYERI PROJECT

- Inyenyeri has ambitious to serve around of 2 million Rwandan and if this become possible, we will save more forest and other vegetation cover but it still challenged by high demand while supply is too low in Rubavu district
- -lacking of financial capacity to serve more people with pellets and stove.
- -lacking of enough equipment to produce more pellets
- -lack of proper and stable infrastructure
- And those challenges are still an issue while Inyenyeri is producing 4t a day as maximum capacity and this is to serve two sectors only out of 12 sectors, in urban area of 195000 with its customer of 2293 only.



CHALLENGES IN GENERAL

- Big number is using biofuel(wood and charcoal)
- Low capacity of Inyenyeri project
- Lack of financial means to transform the waste from Rutagara Landfill into briquettes,
- Big number of population can't access the LPG cost
- Traditional charcoal making method



WAY FORWARD

- Regular sensitization on climate change mitigation(clean and green city)
- One tree per student program from primary school to University(education)
- To mobilize partners in wood value chain, clean cooking and biodiversity conservation sectors.
- To enhance & strengthen through mobilization to the law and regulation related to environment protection



**THANK YOU !
MURAKOZE!
MERCİ!**