

Climate Action

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DIGEST



FROM VULNERABILITY TO THRIVING ENTERPRISE AND ECONOMIES: THE PLACE OF CLIMATE ACTION ENTERPRISE IN NIGERIA

In Nasarawa, cassava is the primary produce. It is the only crop, that can be processed into over 300 products, including delicious ready to eat snacks that can be sold to markets and individual consumers across the country. In addition, even during harsh weather and with less water as climate change already causes, cassava is the only crop where losses are lowest – just 8%, compared to 20% and more for other traditional staples in the continent. In addition, Nigeria has the ready cassava bread policy whose projected benefits can be realised starting in Nasarawa. Projections show that the solar drier applied to cassava, will preserve cassava to prevent losses in times of glut.

The Emir of Nasarawa, Ibrahim Djibril addressing the people of Nasarawa on the importance of climate action and its impacts to the livelihood if not well addressed in time.

From vulnerability to thriving enterprise and economies: the place of climate action enterprise in Nigeria



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Group photo with the Emir of Nasarawa, H.R.H Usman Ibrahim Jibril being fifth from left followed by UNEP's climate change coordinator for Africa Dr. Richard Munang.

While Africa is faced with this seemingly insurmountable challenges of climate change that are already shrinking income revenue streams by a massive 75% in the continent. Nigeria, is the 55th most vulnerable country to climate change and 22nd least ready. Overarchingly, climate change is projected to cost 6 – 30% of Nigeria's GDP by 2050, translating to \$100 billion – \$460 billion in losses. This is an existential threat to the realisation of shared socioeconomic development aims as enshrined in the Economic Recovery and Growth Plan (ERGP). Throughout Nasarawa and the entire Nigeria and Africa, market days are usually busy days. A stroll across the different market stalls in any part of the country or continent, will reveal a variety of food products, in abundant quantities, all this are under the serious threat of climate change including also the unsold food that will be classified as post harvest losses which end up rotten and hence unconsumable.

Reversing these post harvest losses to create income opportunities is of vital importance to counter the anticipate shrinking income revenues as a result of climate

change. It is this glaring opportunity for transformation that will ensure homes are food secure, of ensuring we create incomes to the youth and combat climate change.

As a continent, we lose food worth \$48 billion each year as postharvest losses (PHLs), because of failing to add value. That cassava or tomato rotting on the ground in the market, could have been converted to dried cassava or dried tomato, and provided much needed calories, vitamins and minerals to a hungry, dying child. The process of preserving and converting this tomato or cassava into a value-added product could have engaged the youth and created incomes in various enterprises – be it fabricating solar dryers, packaging, marketing – you name it. And all this achieved without piling emissions that compound climate change. Nigeria losses billions in PHLs. For example, while the country is the second largest producer of tomatoes in Africa, it loses up to 60% of what it produces, averaging over \$70 million each year – largely because of inadequate processing.

In Nigeria, solar dryers have revolutionised the way tomato, pepper, vegetable and cassava farmers view market days. While previously, end of market days meant counting losses, where a large basket of tomato can be sold for as little as 20Naira, because the seller fears what is left over will rot, with solar driers, farmers have nothing to fear.



A local open market in Nigeria with excess supply of fresh tomatoes that usually go unsold and hence end up rotting and makes local farmers suffering losses.

“ Nasarawa vibrant youth will therefore be trained in fabricating clean energy solutions like solar driers and being guided to produce quality solar driers. ”

Up to \$1billion each year is spent importing tomato and tomato paste – leading to market opportunities that would have created enterprises locally, being taken up by others. In 2017, Nigeria lost tomato valued at \$15 billion. Tomato is not the only loss. In cassava, where Nigeria is the largest producer globally, up to \$400 million is lost each year as PHLs. Rice registers up to \$155 million in PHLs. And the list goes on. Because of these losses, iconic policies like the cassava bread policy and the tomato production policy – meant to safeguard Nigeria’s producers – fail to be meaningfully implemented and realised.

Full implementation of these policies can create hundreds of thousands of much needed jobs. Currently in Nigeria, nearly 25% of the general population is unemployed, 20% is underemployed and over 50% of youth aged 15 – 35 years are without work. Solutions to these challenges call on us all to combine efforts. Nasarawa kingdom therefore seeks to create formidable agro-value addition channels and youth enterprises through an enterprise perspective to act as a buffer against the predicted effects of climate change. The Emir of Nasarawa is therefore leading the push from the front to actively take up action to highlight the menace.

Nasarawa vibrant youth will therefore be trained in fabricating clean energy solutions like solar driers and being guided to produce quality solar driers. The market for the clean energy solutions fabricated will be sensitized by the youth actors so as to reach as many people as possible. This will be pegged on how ready both the youth and the farmers are, to collaborate in using the driers to preserve and add value to what is harvested. Because the potential is immense, the youth and the farmers are, to collaborate in using the driers to preserve and add value to what is harvested because the potential is immense.



Innovative Volunteerism actors from Ecosystem Based Adaptation for Food Security Assembly (EBAFOSA) demonstrating how cassava peelings can be used for briquettes and various purposes to the people of Kingdom of Nasarawa



Women from Nasarawa kingdom listen attentively to the speeches during the visit by UNEP's Africa regional climate change coordinator on ways to combat climate change through local mitigation and adaptation methods.

In Nigeria, solar dryers have revolutionised the way tomato, pepper, vegetable and cassava farmers view market days. While previously, end of market days meant counting losses, where a large basket of tomato can be sold for as little as 20Naira, because the seller fears what is left over will rot, with solar driers, farmers have nothing to fear. Tomato or vegetables that are unsold at the end of the market day are simply solar dried and converted to dried tomato or dried vegetables, as an alternative product line. With this solution, cassava, tomato farmers are charging up to 30 times more for their dried produce in the off season which could not sell during peak seasons as a result of glut. And unlike open sun-drying, use of the solar dryer does the job of drying faster – up to 48times faster as has been recorded by rice farmers in Kenya, and more efficiently and hygienically as produce is not soiled by dust, animal droppings and other debris. The result being a quality dried product that fetches more in the market. These are just examples of what can be achieved - more incomes to enable communities to afford to feed, clothe and educate their families, live in better housing, afford better medical care and have more money in their pockets.

As the resolve to invest in value addition is advocated, the choice of value chain to focus on is not in doubt. Cassava will be the choice of people of Nasarawa. This is selected so that focus can be to leverage on the existing strengths of Nasarawa kingdom to make progress. This is the case for enterprises across the globe.

To be competitive, the shortest route is to build on existing

strengths and comparative advantages. In cassava, Nigeria holds the clear comparative advantage of being the largest producer in the world. This is not the only advantage, the abundant sunshine in Nigeria including in Nasarawa sets the basis for solar powered value addition of cassava. This coupled with the fact that over 90% of people in Nasarawa engage in agriculture, including cassava farming, leaves no doubt that the value addition in the cassava value chain is where Nasarawa's comparative advantage lays. Such focus is the foundation of modern-day big economies.

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in Nasarawa. Projections show that the solar drier applied to cassava, will preserve cassava to prevent losses in times of glut.

These dryers as part of a system of cassava value addition in driving the cassava bread policy implementation will create hundreds of thousands of employment opportunities – about 260,000 in cassava farming, over 40,000 in processing of high-quality cassava flour, and about 3000 in manufacturing equipment like the solar driers.



Top Left are the men of Nasarawa kingdom attentively listening to speeches, top right is Emir of Nasarawa and Dr. Munang consulting, bottom left are the members of Innovative volunteerism actors showcasing how to make various products from cassava and finally bottom right is the Emir of Nasarawa, UNEP representative Dr. Munang and EBAFOSA Nigeria president Mr. James Oyesola

These are reserved estimates – for flour only. If we consider the 300 diverse products that cassava can be processed into, and factoring in a multiplier effect of just 2, translates to over 600,000 jobs excluding in transportation and bread improves value chains.

The kingdom of Nasarawa needs to ensure cassava farmers in Nasarawa state are linked to clean energy interventions – in this case the solar driers – that are critical to effectively, efficiently and hygienically, dry cassava and prevent spoilage. Such solar dryers are capital assets. And financing their acquisition may seem like a tall order if the action is not done in a collaboration.

The kingdom of Nasarawa will also leverage on cooperatives, who's structure is well established across Africa, including in Nasarawa. Nasarawa has an established cooperative culture & structure to build on, and this is what they will build on. Cassava farmers, across the entire emirate, will be mobilised so they get affordable solar dryers needed. With the dryers, earnings will be improved.

Affordability of the dryers is another factor to be considered. The primary approach will be to ensure local manpower and materials are prioritised. For this, the local youth enterprise leveraging on Innovative Volunteerism called – EBApreneur Solutions Nigeria. With UNEP technical backstopping,

EBApreneur Solutions will fabricate quality dryers using locally available material, train local artisans and interested youth on solar dryer fabrication and absorb them to be making these dryers for the local market with quality control, for the market in Nasarawa and across the country.

EBApreneur Solutions will also be making fuel briquettes from cassava waste and will train and engage our women and youth on this as well. The energy from briquettes will be used for an innovative product development around the cassava value chain. From cassava flour, to various confectionaries, Nasarawa will become the centre of cassava product development in Nigeria. Through Innovative Volunteerism EBApreneur Solutions, cassava sourced from local farmers will be linked to millers and packaged into pure cassava flour. This flour will not only be marketed among local consumers, but women will also be engaged to use it in making various confectionaries and snacks that are popular for breakfast as well as lunch and dinner, among the local consumers and Nigerians as a whole. And all these products - will be made using non-chemicalised approaches and processed using zero emissions approaches – the solar dryers and briquettes – to ensure they compete on health and sustainability strengths. All this will follow all relevant codes and national standards issued through the Standards Organisation of Nigeria.



This is a very clear potential for success for Nasarawa to drive the fabrication and product development that will unlock the climate, social, economic and enterprise benefits of cassava to Nasarawa. That will make Nasarawa, a shining example in Africa, of how climate action enterprises can ensure there is enough food in every home, a job for every youth, more money in more pockets and higher revenues for government.

Register to become an Innovative volunteerism actor at : [Registration link \(Click\)](#)
Join our continental platform of agro-industry actors and fill your GAP at : [Registration link to join MeBAFOSA \(Click\)](#)

