

RESULTS SUMMARY

ANNEX D2 Inclusive eCooking in risk-prone areas of Nigeria

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PROJECT	Title: Just transition to solar electric cooking
	Partner: Grasroot Initiative for strengthening Community Resilience (GISCOR), Clean Sustainable Renewable Solutions (CSR Solutions) and Ecoca ApS
	Country: Nigeria
	Period: 2024-2025

CHANGE

Co-funded by the Danish Ministry of Foreign Affairs, the British Modern Energy Cooking Services programme and the global Solar-Electric Cooking Partnership (SOLCO), Mission East with our partners completed the first solar electric cooking (eCooking) pilot in Nigeria. The pilot demonstrated how 170 vulnerable households in isolated, off-grid areas of Borno State transitioned successfully to eCooking. Based on the pilot results, Nigerian authorities committed to supporting wider access to solar-based cooking technologies.

CONTEXT

Amplified by negative impacts of the climate crisis, wood fuel is scarce in Borno State in northeastern Nigeria and wood collection is both time-consuming and comes with high security risks due to violent extremist groups operating in the area. The government of Nigeria is recognising the many environmental and social benefits of the new and innovative eCooking technologies as a potential solution, and is therefore working to adopt an eCooking component in the National Clean Cooking Policy Implementation Plan.

CONTRIBUTION

Most eCooking suppliers target solely customers who can afford high upfront costs, mostly living in areas with electricity access. For now, only one eCooking technology is energy-efficient enough to run on an affordable capacity of solar panels, making it suitable for vulnerable populations in off-grid areas. Mission East therefore partners with this product developer, Danish Ecoca ApS, the Nigerian supplier CSR Solutions and local NGO GISCOR to ensure that this target group is not left behind in Nigeria's eCooking transition.

IMAGES	 <p>eCooking household, by Giscor</p>	 <p>IDP technicians, by Giscor</p>
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ADDITIONAL INFORMATION

ACTIVITIES

Mission East build a consortium with the project partners for this pilot, contracting also a resource person from a Ugandan NGO experienced in piloting the technology in displacement settings to build relevant capacity of the Nigerian partners. 170 eCookers were procured, shipped, imported, and installed within homes of vulnerable, off-grid Nigerians, selected to be offered the opportunity to rent the equipment and receive trainings in its use and in adoptable cooking practices. Resourceful youths in the settlement were trained by the private sector partners in installation, maintenance and digital extraction of data documenting usage and carbon emission reductions. Baseline and endline household energy and social impact data were collected and analysed, establishing transition potential and ability-to-pay for this highly vulnerable target group. Programmatic adjustments were identified for application in 2026 addressing use pattern challenges within the user group to ensure achievement of the highest possible impact, leveraging knowledge for scale-up.

LESSONS

The pilot concluded that eCooking is highly suitable for and can be adopted by the most vulnerable populations in Nigeria, if equipment that can operate in off-grid contexts can be made accessible and affordable. This target group was further established as capable of contributing financially to their access to such equipment, covering either the full costs of installation and servicing or a substantial part of the product costs - paid in instalments. Additionally, the pilot and the consortium work during the pilot period confirmed that sufficient carbon emission can be reduced from regular use of this eCooking technology for carbon credits to finance the remaining product, distribution and support costs, assuming upfront investments are made. As Nigerian lead for SOLCO, Mission East will in 2026 utilise these lessons to explore scale-up possibilities and to advocate for authorities in Nigeria to prioritise vulnerable populations, including those in off-grid areas, in their planned eCooking transition.

EVIDENCE

The data collection following the first months of eCooking established that the 170 vulnerable households (selected based on vulnerability) in the displacement setting 'Monguno' reduced firewood collection frequency by 70% and their wood fuel expenditure by 59%. Taking onto account the monthly rental fee paid by the target group as their contribution towards financing the equipment purchase, installation and maintenance costs, a 36% reduction on total household energy expenditure was achieved. 20% of the households additionally utilised the electricity access provided with the connected solar panel for income-generating activities, thereby increasing the social impact of this technology. In average the income gained by the households engaging in income generating activities through the eCooking technology – most often from phone charging for other community members – obtained an income 1.6 times higher than the monthly cost of renting the equipment.

DOMAINS

<i>Development strategy priorities:</i>	A just sustainable and green transition
<i>Changes in the lives of people facing poverty, marginalisation or vulnerability</i>	-x
<i>Changes in laws, policies and practices that affect people's rights</i>	-
<i>Changes in the capacity of organisations and communities to support rights</i>	-
<i>Changes in partnerships and collaborations that support people's rights</i>	-x
<i>Changes in participation of groups facing poverty, marginalisation or vulnerability</i>	-x
<i>Changes in local leadership of development and humanitarian work</i>	-