

Rapid Response Mobile Laboratory Africa



New Technology brings Laboratory Tests To Remote African Villages

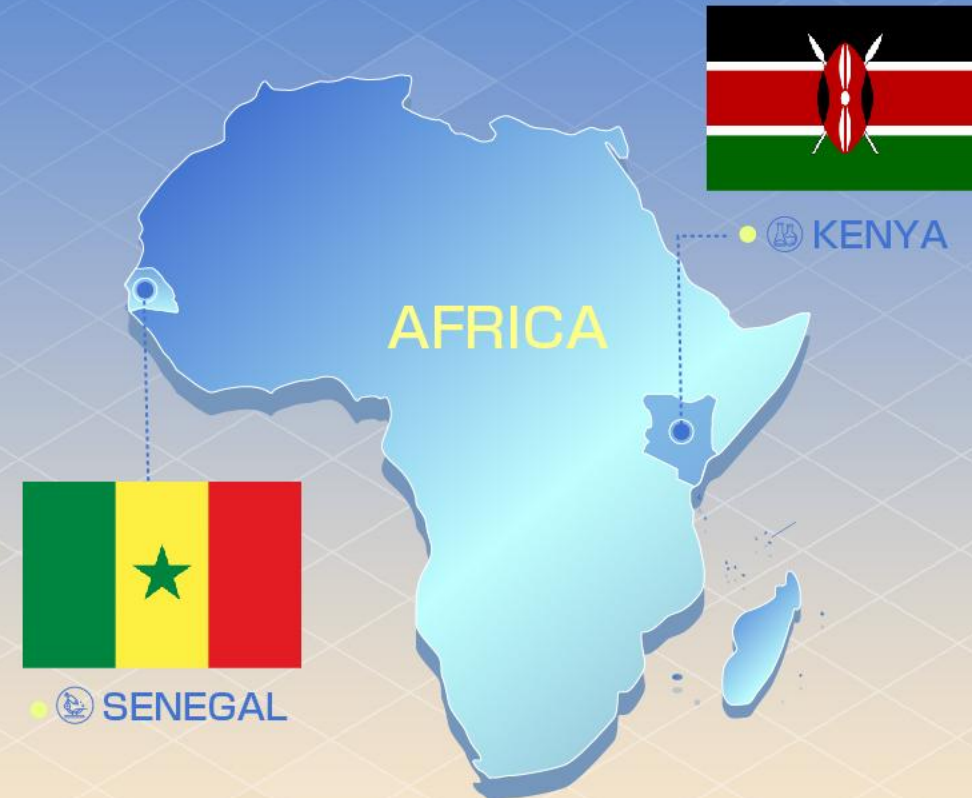


Funded by the EU

SDGs



- Access to timely lab tests has been a big challenge in African countries with limited resources, especially in rural areas and informal communities where many diseases are prevalent.
- Because of these problems, lab testing has become a weak point in treating common health conditions.
- To help with this, mobile labs have been successfully used to reach more people.



How can new technologies improve medical support for local and remote communities and help public health systems better prepare for emergencies?

- Rapid Response Mobile Laboratories (RRMLs) help communities during health emergencies.
- These mobile labs are key to the World Health Organization's (WHO) emergency response, quickly set up during outbreaks, large events, humanitarian aid, and after natural disasters.
RRMLs enhance healthcare in both rich and poor countries by reaching remote areas and offering reliable testing to people in need.
In addition, flexible design of RRMLs allows them to be easily adjusted and quickly set up according to the specific situation they're deployed.
- RRMLs have been successfully used in regions like **Africa**, the **Eastern Mediterranean**, and **Europe** with mobile diagnostic capacities and strengthening health services in public health emergencies.



Strengthen COVID-19 response and epidemic preparedness in Africa.

- The project aims to reinforce the response to COVID-19 and preparedness for epidemics through the West African Health Organization, the Institut Pasteur Dakar, and Praesens Care, a mobile laboratory manufacturer.



West African
Health Organization



Institut Pasteur
Dakar



Praesens Care





BIONEAR, a fast response with Rapid Response Mobile Laboratories (RRMLs) on the Field.

- The BIONEAR is an adequate, fit-for-purpose vehicle that can offer a wide-range of healthcare services across the patient journey. It is designed to reach the most remote regions with limited healthcare infrastructure.



Dual-Use (civil and military) compact multi-terrain vehicle



No installation or set-up time.



Secured BSL3 High Biosafety Level with built-in isolator: safe for operator, sample and environment



Self sufficient energy equipment (generator, batteries)



Polyvalent, open healthcare platform, built for genomics

BIONEAR



Cold chain capabilities , +4°C, -20°C and -80°C to store reagents, samples for biobanking and vaccines



Compliant with the highest quality standards - ISO15189 accreditable



Connectivity: High-speed satellite and GSM systems, customized LIMS



Integrated waste management



(Tele)maintenance

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Practical application of Mobile Laboratory

During a Rota Virus outbreak in children in April 2023, Coast General Teaching and Referral Hospital tested kids who were sick.

Normally, samples would be sent to Nairobi, but results would take several days to arrive.

Instead, BIONEAR offered a quick Film Array test to find the causes—Rotavirus, Campylobacter, and Cryptosporidium—in just 2 hours.

This fast information helped health officials make better decisions to manage the outbreak, saving time and money for everyone involved.

- In Kenya, the BIONEAR project greatly impacted disease monitoring in the County Health Department.



BIONEAR also played an important role during a Cholera outbreak in African Region in April 2023.

There were 53 suspected cases, 5 confirmed cases and 2 deaths.

One sample from a suspected patient at Coast General Teaching and Referral Hospital was tested using FilmArray and showed a positive result for Cholera in just 2 hours.

This quick result was shared with the Department of Health right away, allowing them to take immediate action to control the outbreak.

Advantages of Mobile Laboratory Project in Africa:

- Early detection & quick response to contain outbreaks: Engaging communities, improving early warning surveillance, deploying mobile laboratory capacities, strengthening health systems and ensuring continuity in supply chain.
- A targeted approach to improve prevention: Prevent disease transmission by organizing WASH programs, early detection mechanisms, and administering the oral cholera vaccine.
- Coordination of human, technical and financial resources: The Partnership mobilizes public & private parties from across all sectors to provide a strong platform for advocacy and communications, fundraising, inter-sectoral coordination and technical assistance.



Team

