



ACTION BIOMALI...significant results

The programme ACTION BIOMALI, co-financed by the European Union and implemented from 2006 to 2009 by Fondation Mérieux, had the general objective to increase screening and biological follow-up of patients affected by HIV / AIDS, tuberculosis and malaria in Mali and the surrounding areas, through the strengthening of local biological capacities.

In various developing countries, medical analysis laboratories are considered as an unnecessary appendix to the health system with their role of clinical support being largely unknown and exploited. An investigation revealed that the health structures in Mali were under-equipped and under-trained in the field of biological diagnosis. The screening of diseases such as tuberculosis, malaria and HIV / AIDS encountered difficulties due to a lack of staff, insufficient infrastructures and weak laboratories services. As a result, patients neglected biological examinations which are essential in the process of disease diagnosis. However, biological diagnosis allows the setting of an adapted treatment and provides a better therapeutic care to patients.

The programme, achieved with the collaboration of the Ministry of Health of Mali, created a network of laboratories in Mali by strengthening existing structures, integrated the project in a global approach of healthcare, and set up a reliable database system on biological diagnosis.

The main activities of ACTION BIOMALI programme

- Professional training of health workers;
- Fitting out laboratories with a uniform set of equipment and reagents;
- The creation and animation of a network of laboratories in a bid to harmonise the procedures between them;
- The setting up of a system of biological surveillance;
- The strengthening of quality assurance.

Beneficiaries of the ACTION BIOMALI programme

- **Final beneficiaries:**
 - All patients likely to attend a health care service and suspected to be either affected by or have already been treated against the three diseases.
- **Direct beneficiaries:**
 - Health professionals: head doctors, managers of regional and national analysis laboratories, laboratory technicians, biologists, from Mali and the surrounding countries.

At the end of the programme, finalized in December 2009, the results obtained were more than convincing and largely exceeded the project's initial objectives.

The training of health professionals

- **278 health professionals** were trained over a 3-year period in 4 intensive training modules: TB diagnosis, HIV diagnosis, malaria diagnosis and quality assurance

- Three classes of the degree BAMS (Bachelor in Applied Biological Medicine) have allowed the training of **44 superior laboratory technicians**. This training course has attracted trainees from Mali as well as several neighbouring countries including Senegal, Burkina Faso and one trainee from Niger.
- **137 technicians** were trained in the use and maintenance of the new equipment and MON / GBEA procedures.

Accounts from health professionals

- Thanks to materials and reagents provided as part of the ACTION BIOMALI programme, Dr. Ba Diarra, manager of the laboratory at the N. Fomba Hospital in Segou, assured that the laboratory reached higher standards in biomedical analysis. It has become the reference laboratory for the municipalities in the region;
- Ms. Sidibé Maïmouna Maiga, biologist and manager of the analysis laboratory of the CSCOM of Banconi in Bamako, reported that thanks to the training provided for health staff, the laboratory has been able to provide better results for its patients who are becoming ever more numerous. Ms. Maiga, who wishes to increase the level of her qualifications as well as those of her health workers, regularly, visits the CHU laboratory of Point G to learn about the new analysis techniques that are used there.

Infrastructures

- A total budget of 1,460,971 Euros was allocated to materials and consumables to equip the laboratories. Among those participating in the development of the programme, **77 laboratories of the network** were supplied with analytical and environmental equipment, as well as smaller pieces of apparatus and consumables. The programme has trained **38 laboratory technicians** from the ACTION BIOMALI network in the maintenance of the equipment provided, in order to be able to intervene in the other laboratories of the network.
- **14 laboratories** were provided computer equipment and are linked via an Intranet network to promote communication between the labs and improve the monitoring of infectious diseases by collecting and exchanging data.
- To allow the laboratories to give a reliable and quality diagnosis, a sum of 106,449 Euros was allocated to the building of a pilot laboratory within the National Institute of Research in Public Health (INRSP). This **External Quality Evaluation Unit** is under the responsibility of the **National Quality Assurance Plan**, validated by the Ministry of Health of Mali. The setting up of the **National External Quality Evaluation Programme (PNEEQ)** within this Unit, ensures a level of quality control for all results from the 36 biomedical analysis laboratories in the Mali network.
- The 82 laboratories in the ACTION BIOMALI network now apply the **Guide to the Correct Execution of Biomedical Analysis (GBEA)**, validated by the Ministry of Health of Mali in April 2009. The adoption of this guide aimed at improving the performance of the laboratories on a technical level as well as in terms of the quality of analysis.

Impact on target groups

- The annual attendance of the network's laboratories has increased of 144% between 2006 and 2008;
- The population showed more confidence in the results provided by the network's laboratories, which benefit from efficient equipment and a highly skilled workforce;
- The quality control of the analyses carried out within the laboratories is a determining factor in the increased attendance of the network's laboratories.

Some significant data

Annual attendance of the network's laboratories (regions and district of Bamako) :

2006	157,492
2007	335,333
2008	384,530

Prospects

- Throughout the project, an emphasis was put on the **multiplication** and **durability** of the project's activities. The **RESAOLAB** programme helped to extend the ACTION BIOMALI activities in other countries in West Africa, in Senegal and in Burkina Faso. The Fondation Mérieux is currently seeking new partners to extend the project to other countries in the region, particularly the Ivory Coast and Benin.
- New ways were explored to improve epidemiologic surveillance. **Mobile-Health** was one of the new approaches to improve the diagnosis and epidemiologic surveillance in rural areas in Mali and Senegal, thanks to the training of health workers and experts' recommendations. The project consists of deploying a system of surveillance for infectious diseases using mobile phones, a means of communication widespread in West Africa.