Report of the visit of the Cape Verde team to Guinea-Bissau

Stakeholder: BCG-COVID-RCT Project

Period: 26/01/2023 to 31/01/2023

Objective: Strengthening Cape Verde's capacity in Clinical Trials - Visit to the Bandim Health Project

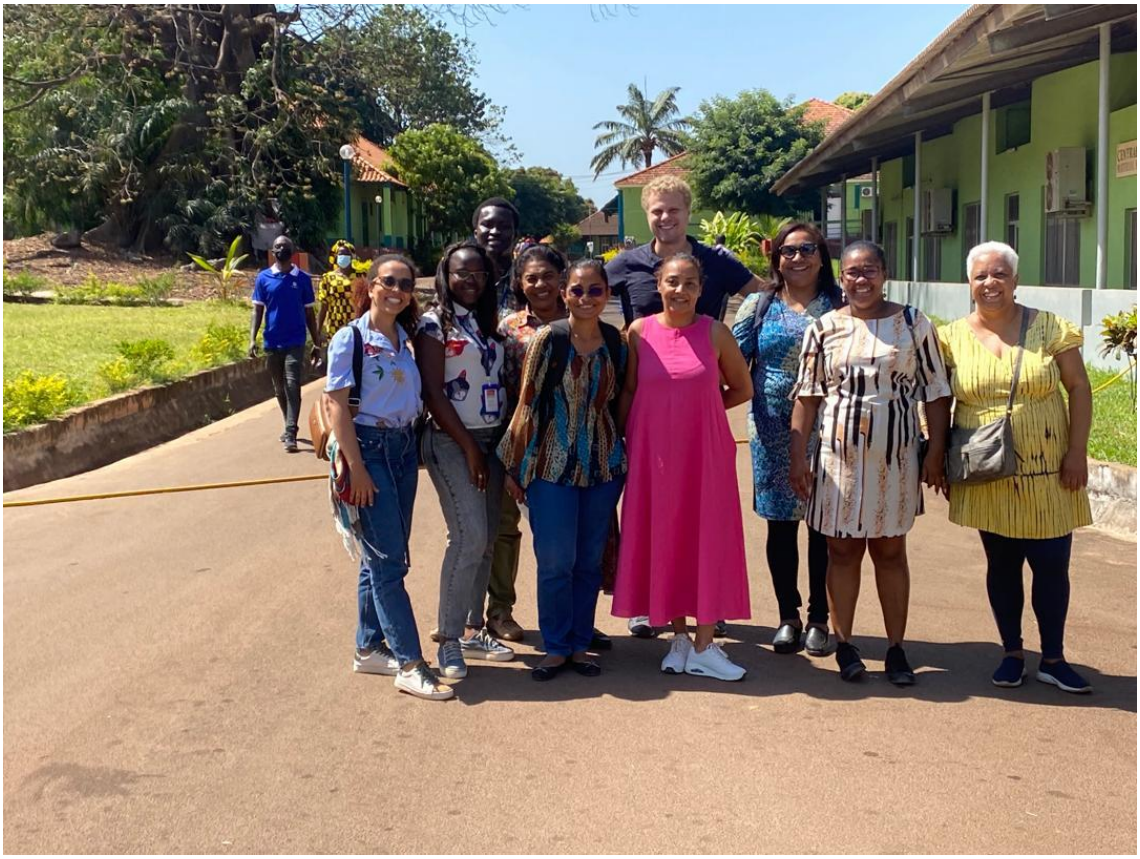


Figure 1. Simão Mendes National Hospital: Cape Verde and Guinea-Bissau teams

Introduction

The visit to Guinea-Bissau, which aimed to visit the Bandim Health Project (BHP), took place within the framework of the research project "BCG vaccine to reduce unplanned absenteeism due to illness of health care workers during the COVID-19 pandemic. A multi-center randomised controlled trial (BCG-COVID-RCT)." This research project was a consortium between University of Southern Denmark (SDU), BHP, Institute of Hygiene and Tropical Medicine at the New University of Lisbon (IHMT/NOVA), Manhiça Health Research Center (CISM), National Institute of Public Health of Cape Verde (INSP), and University of Cape Verde (Uni-CV).

Because it was not possible to conduct the clinical trial in Cape Verde due to the absence of a legal framework for clinical trials, a visit to the countries integrating the study with already established experience in this field was an alternative solution to share the experience and capacity building from BHP in Guinea-Bissau and the CISM in Mozambique.

The BHP follows part of the Guinean population in both urban and rural areas, providing the Guinea-Bissau Ministry of Health with a unique platform for conducting health research. The study of specific and non-specific effects of vaccines is one of BHP's main areas of activity and research.

These discoveries have continuously motivated the project, and in particular its founder - Dr. Peter Aaby. There has been observed tremendous gains in quality of life and reduced morbidity and mortality, and BHP has contributed to the progress in science, which have allowed it to persist for almost 45 years. We were presented these results by Drs. Frederik Schaltz-Buchholzer, Isaquel Silva, and Elsi Cá.

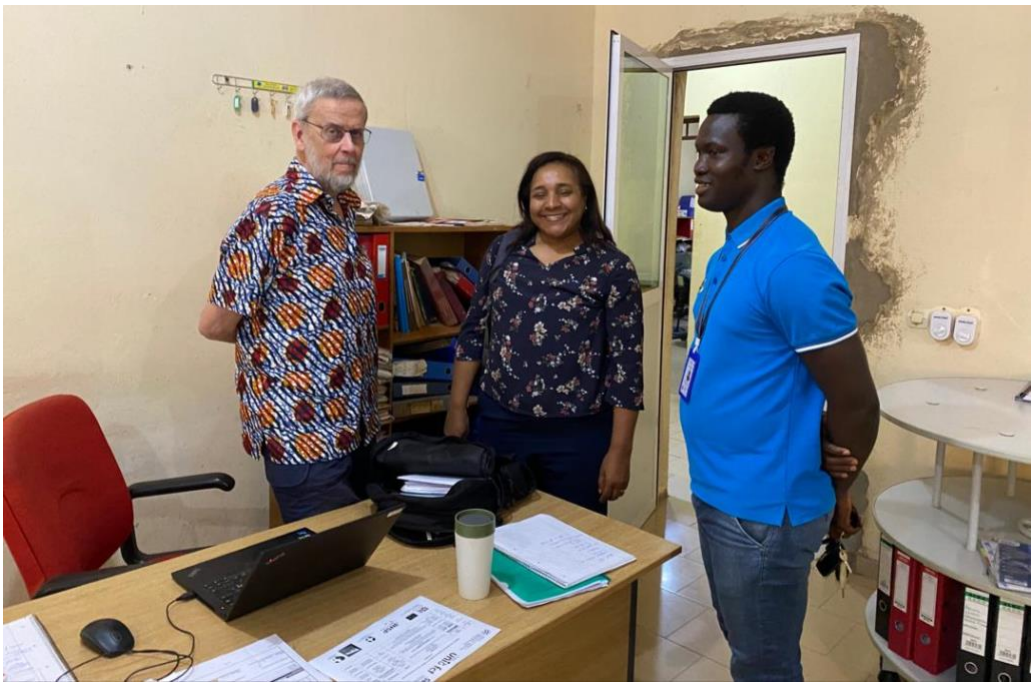


Figure 2. BHP - From left to right: Dr. Peter Aaby, Dr. Maria da Luz Mendonça, and Dr. Isaquel Silva

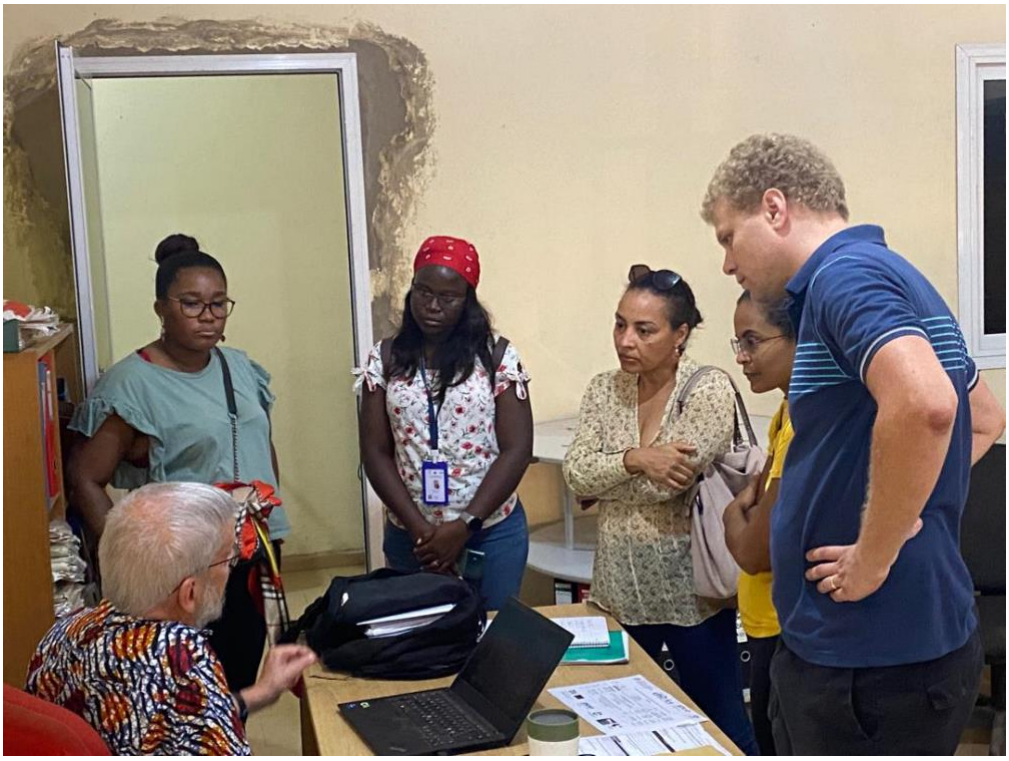


Figure 3. BHP - From left to right: Dr. Peter Aaby, Dr. Kleidi Monteiro, Dr. Elsi Cá, Dr. Ofélia Monteiro, Dr. Janaína Vicente, and Dr. Frederik Schaltz-Buchholzer in conversation with Dr. Peter Aaby

The Cape Verde team that went to Bissau consisted of:

- Isabel Inês Araújo - Biomedical, Professor at Uni-CV, Coordinator of the project and of the team
- Maria da Luz Lima Mendonça - Physician, President of the National Institute of Public Health, project member
- Dilma Pires - Nurse, Lecture at Uni-CV, master's student in Public Health at the Uni-CV
- Kleidi Monteiro - Biologist, MSc student in Public Health at Uni-CV
- Janaína Vicente - Physician, Project Focal Point at Hospital Regional Dr. Santa Rita Vieira
- Maria do Céu Teixeira - Physician, Member of the National Ethics Committee for Health Research (CNEPS), and Master student in Public Health at the Uni-CV
- Ofélia Monteiro - Physician, Project Focal Point at Dr. Agostinho Neto Hospital

Figure 4: Team from Cape Verde and Guinea-Bissau - From left to right: Maria da Luz Mendonça, Maria do Céu Teixeira, Ofélia Monteiro, Kleidi Monteiro, Frederik Schaltz-Buchholzer, Janaína Vicente, Dilma Pires, Iniza Araújo and Elsi Cá.

Day 1 – 26/01:

The group traveled and arrived in Bissau in the early morning of January 26, 2023.

Figure 5: Bissau Airport - From left to right: Iniza Araújo, Ofélia Monteiro, Maria de Céu Teixeira, Janaína Vicente, Kleidi Monteiro, and Dilma Pires.

According to the visit's program, on the afternoon of the first day, there was a visit and work meeting with the National Institute of Public Health of Guinea-Bissau (INASA), in which the current President, Dr. Aladje Baldé, made us see the importance of the assertive use of technological innovations (at the level of Molecular Biology and Biotechnology) in realities that would not be thought for the immediate time, such adequacy.

It was made possible by a bold will and leadership in view of the common good in response to the COVID-19 pandemic, through the preparation and training of local technicians with an integrating vision based on the technical knowledge and experience acquired, the knowledge of the local reality, and the correct recognition and stimulation of local potentialities. This was the scenario experienced, and the preponderant role played by INASA in SARS-COV-2 diagnosis, making the RT-PCR-COVID-19 tests possible in the country, among several other contributions in this local and global fight.

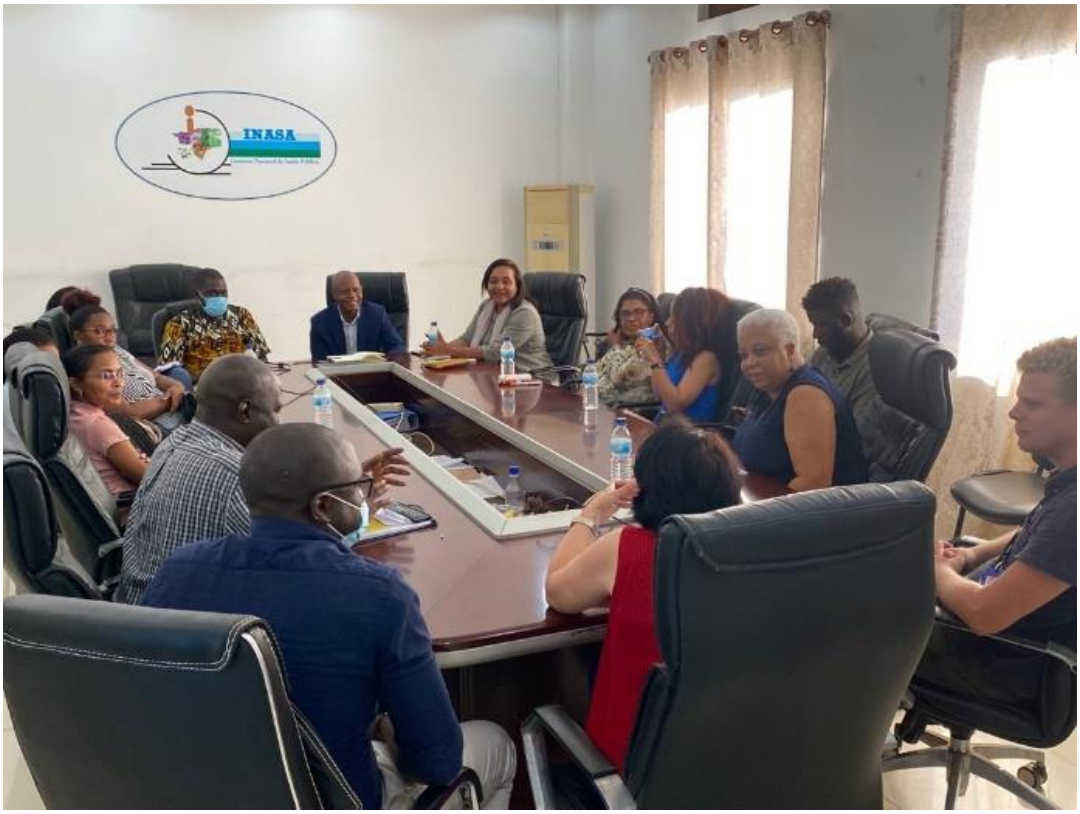


Figure 6: Meeting with the INASA team at the INASA headquarters in Bissau.

In the second part of this meeting, we were once again presented with the steps that have supported the improvement of the quality of health service offered in collaboration with external partnerships, namely the implementation of the first training cohort in Intermediate Level Field Epidemiology with support from the Brazilian Association of Field Epidemiology Professionals (ProEpi), other international organizations, local tutors and INASA staff. It is expected to train 15 masters in Field Epidemiology and provide the countries with professionals able to perform epidemiological surveillance and training at different levels of field epidemiologists with the recent creation of the advanced level from Uni-CV, with students from Cape Verde, Guinea-Bissau and São Tomé and Príncipe, in coordination of the National Institutes of Health of these countries.

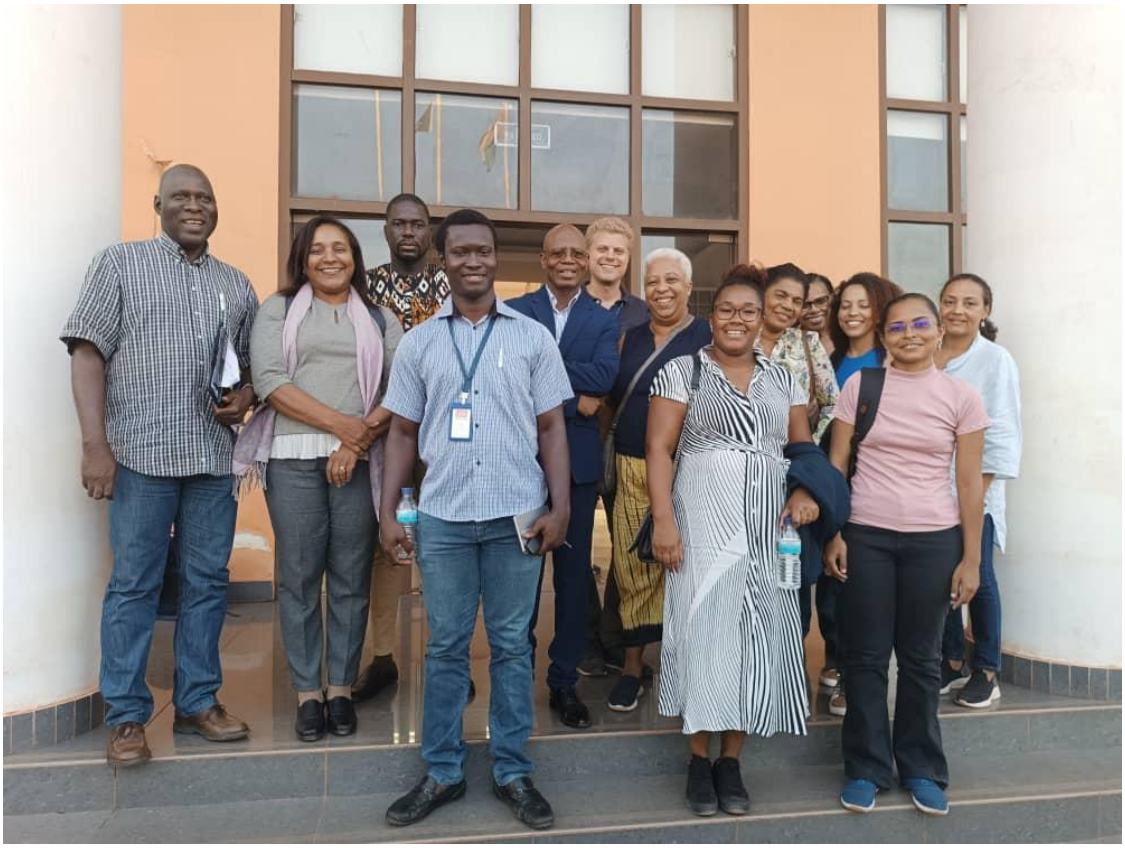
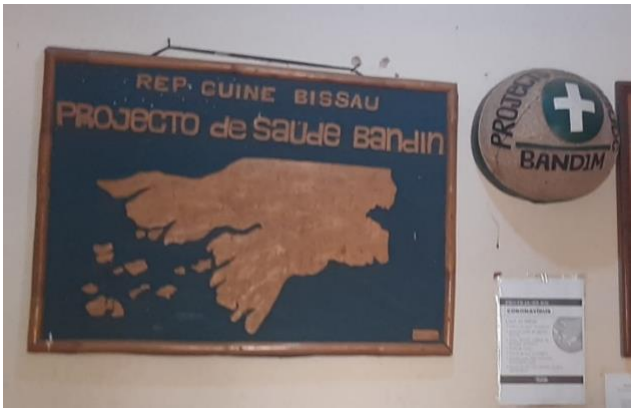


Figure 7: Visit to INASA - Team from Cape Verde, members of the BHP, President of INASA, and collaborators.

Day 2 – 27/01:

Visit at the Bandim Health Project



What emerges from this visit is the commitment and dedication to investigative the non-specific protective effects of vaccines. We learned that the aim of the entire BHP organization and rigor of all the work is reflected in all parts of the project's structure.

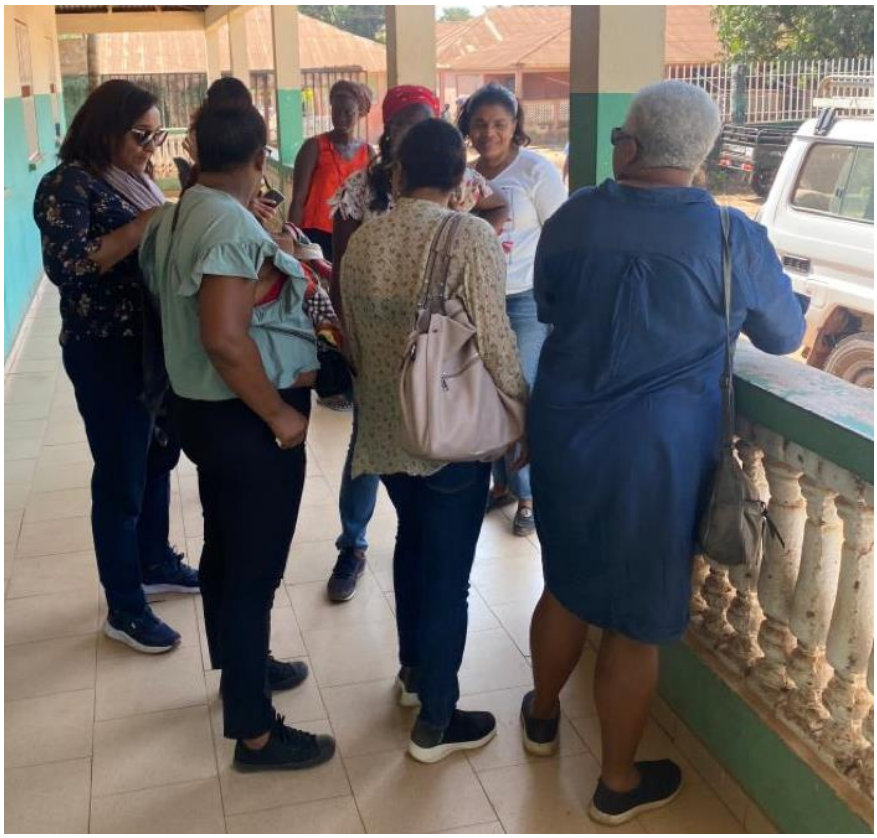


Figure 8: The Cape Verde team at the Bandim Health Project

The visit to the BHP was important to understand all the work involved in the organization as well as the instruments and structures necessary for conducting clinical trial and in terms of developing a basis for ethics considerations, obtaining credible information, and knowledge sharing.

The administrative structures of the BHP were visited, namely the archive, the storage sector, data compilation, cross-referencing and geoprocessing, and work areas of the researchers - prevention of infant morbidity and mortality, follow-up of pregnant women, tuberculosis, malaria, and support offices. In each area visited, the technicians and professionals present reported on the work done, their experiences, the gains achieved, and future plans, always with much goodwill, pleasure, and gratitude for participating in this important institution, BHP.

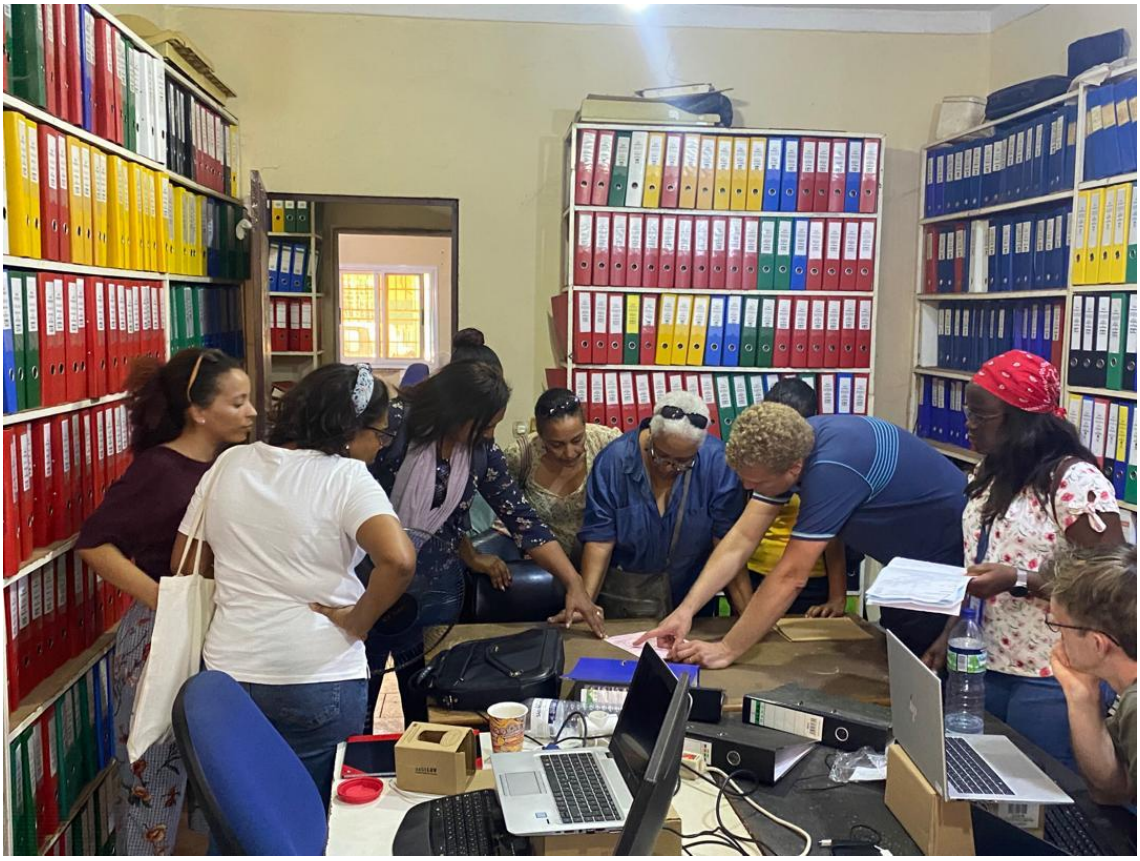


Figure 9: Visit to the Bandim Health Project: Frederik Schaltz-Buchholzer and Elsi Cá explaining the dynamics of the work and functioning of the projects.

The Field Visit in the MATVAC study (“Specific and non-specific effects of measles and BCG vaccines for mother and child”). MATVAC is a Clinical Trial investigating the effect of vaccinating women in the fertile age before they become pregnancy with the live measles vaccine and BCG vaccine against tuberculosis. The study aims to evaluate different vaccination programs that provide the best protection for women and children against measles and for their NSEs for the child's immune system and overall health.

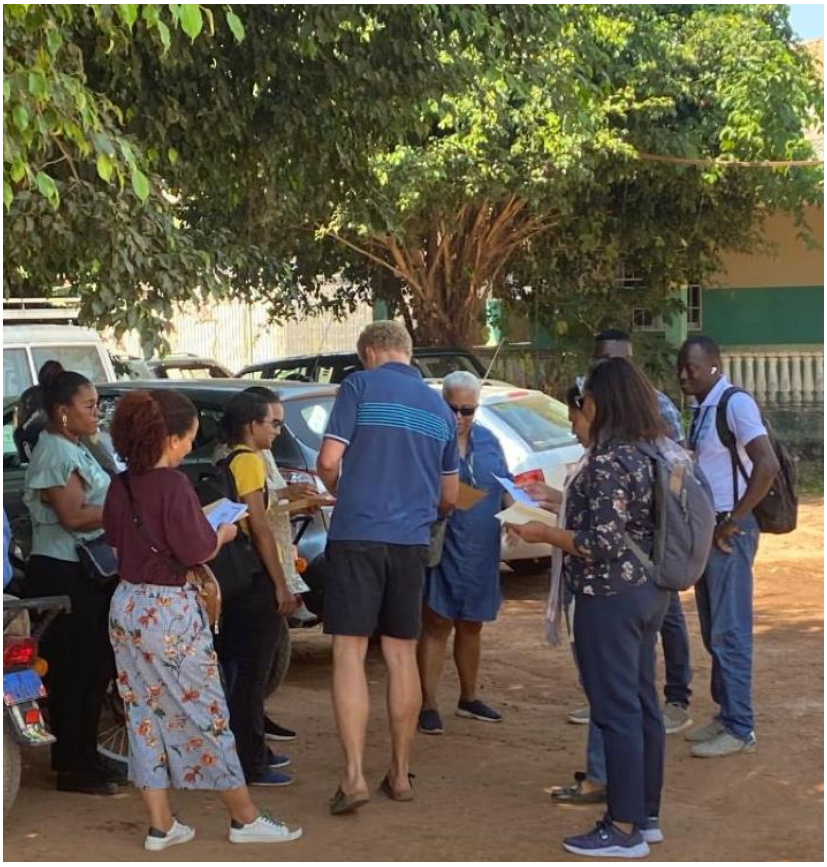


Figure 10: Visit to the Bandim Health Project: preparation meeting for field visits as part of the MATVAC study

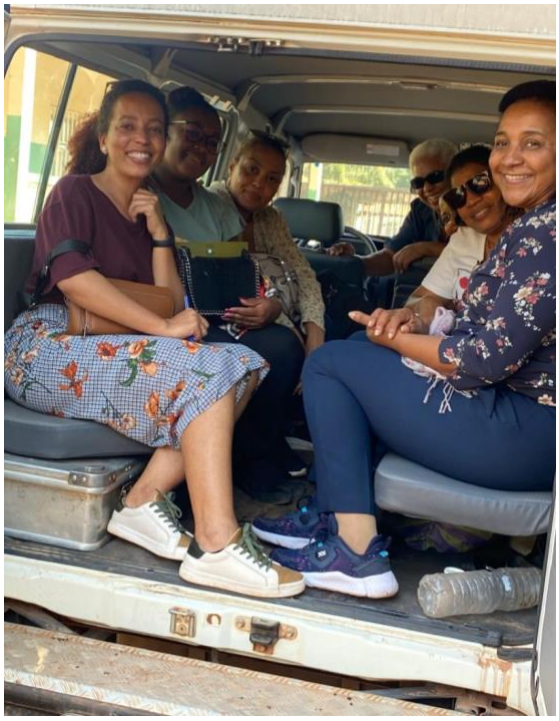


Figure 11: Visit to the Bandim Health Project: On the way to the field visit as part of the MATVAC study.

It was a remarkable experience to learn the details of the fieldwork, namely the planning and preparation of the visits, recruitment and follow-up of families, data collection, and retro information. It included the formation of three groups to visit the communities of Cuntum and Bandim, in three aspects: sensitization, recruitment, and follow-up. The importance of the project stands out, and the dedication of everyone is revealed by the professionalism of the field professionals, and the readiness of community to participate in the study.

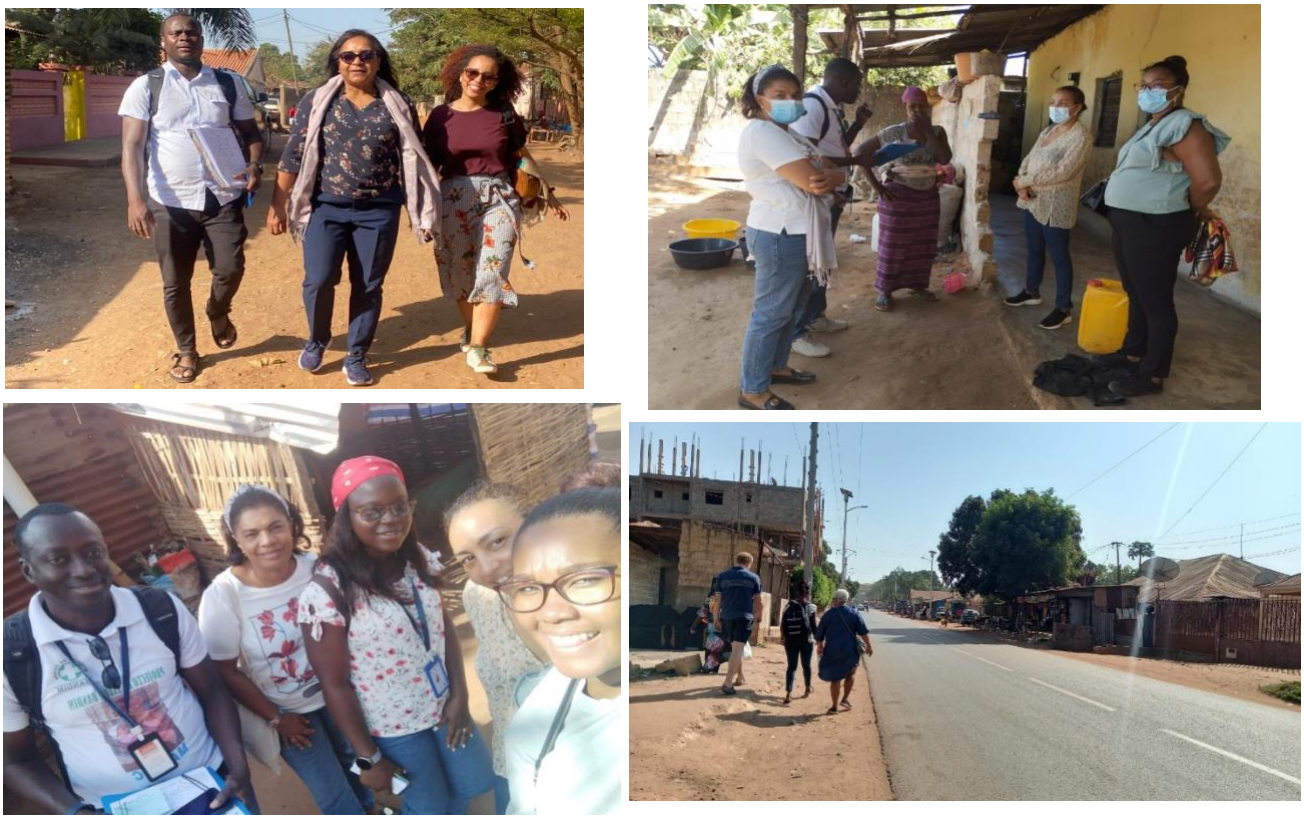


Figure 12: Field visit as part of the MATVAC study

The visit to the Cuntum Health Center took place in the afternoon, where the practical example of inclusion of women of childbearing age (MATVAC study) was followed, some sensitized in the morning. The arrival and reception, communication and provision of information, presentation of the Informed Consent Form, data and samples collection, and exams performed were followed.

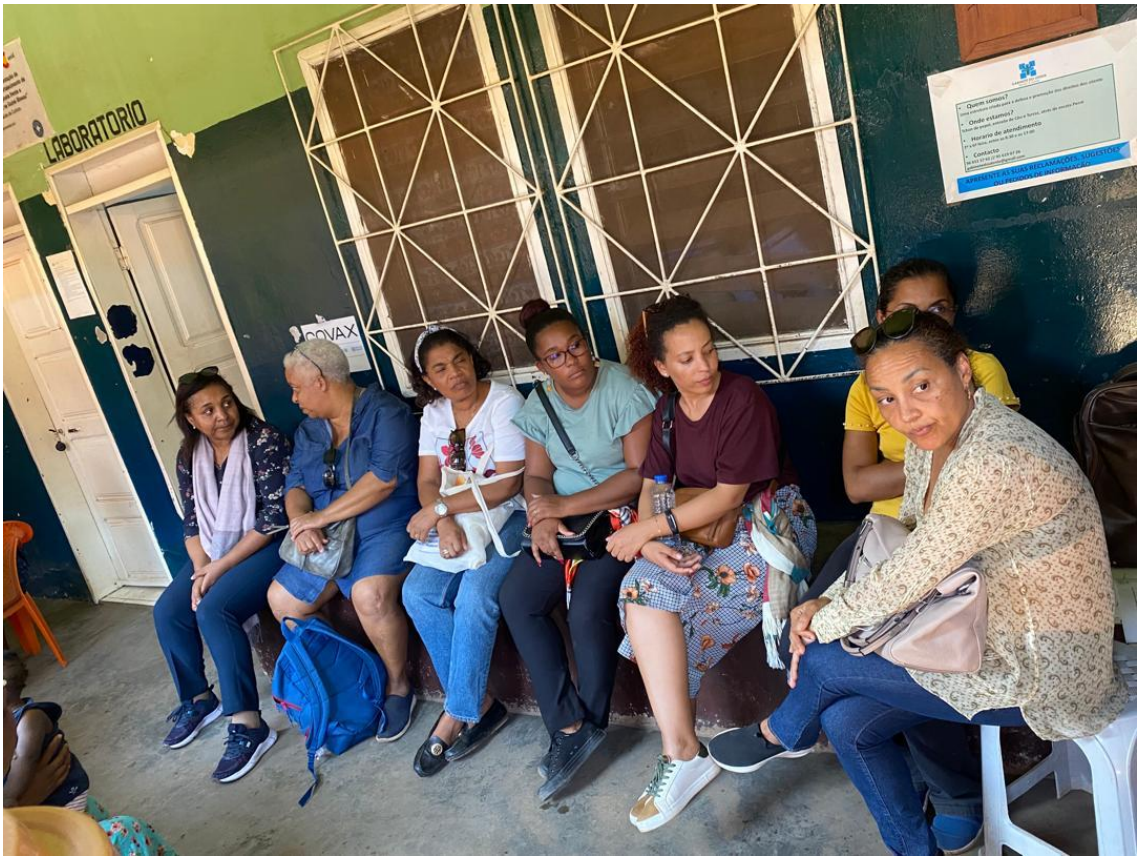


Figure 13: Visit to the Cuntum Health Center as part of the MATVAC study.

Day 3 – 28/01:

On the third day of the visit, a visit was made to the Simão Mendes National Hospital, where the whole hospital structure was briefly presented and then focused on the Maternity (BCG STRAIN IV study) and Pediatrics services. BCG STRAIN IV is a blinded clinical trial carried out in the Simão Mendes Hospital Maternity ward to compare BCG vaccination of two strains, Danish (AJ Vaccines, Copenhagen strain 1331) and Bulgarian (BB-NCIPD, BCG-SL strain 222 Sofia), to test the their differential effects on mortality, morbidity, case fatality rate during hospitalization and skin reaction.

The BCG vaccination of newborns (inclusion) was followed in the Maternity Hospital, as well as all the dynamics inherent to this process (talking to the mothers, identifying the newborns, explaining the study and consent form, filling out the individualized forms of the newborns (baseline information) and randomizing children to the type of vaccine administered.

In the Pediatric Department, we were explained the organizational form of the care and follow-up of the children included in the different studies carried out by the BHP. As a note of emphasis (mandatory, because important), all the benefits that are granted to children included in studies of the BHP, include exemption from payment of services provided among others, are also granted to those who for various reasons do not fit the inclusion criteria. The organization of the database of Pediatrics ward is exceptional.

Figure 14: Visit to the Simão Mendes National Hospital

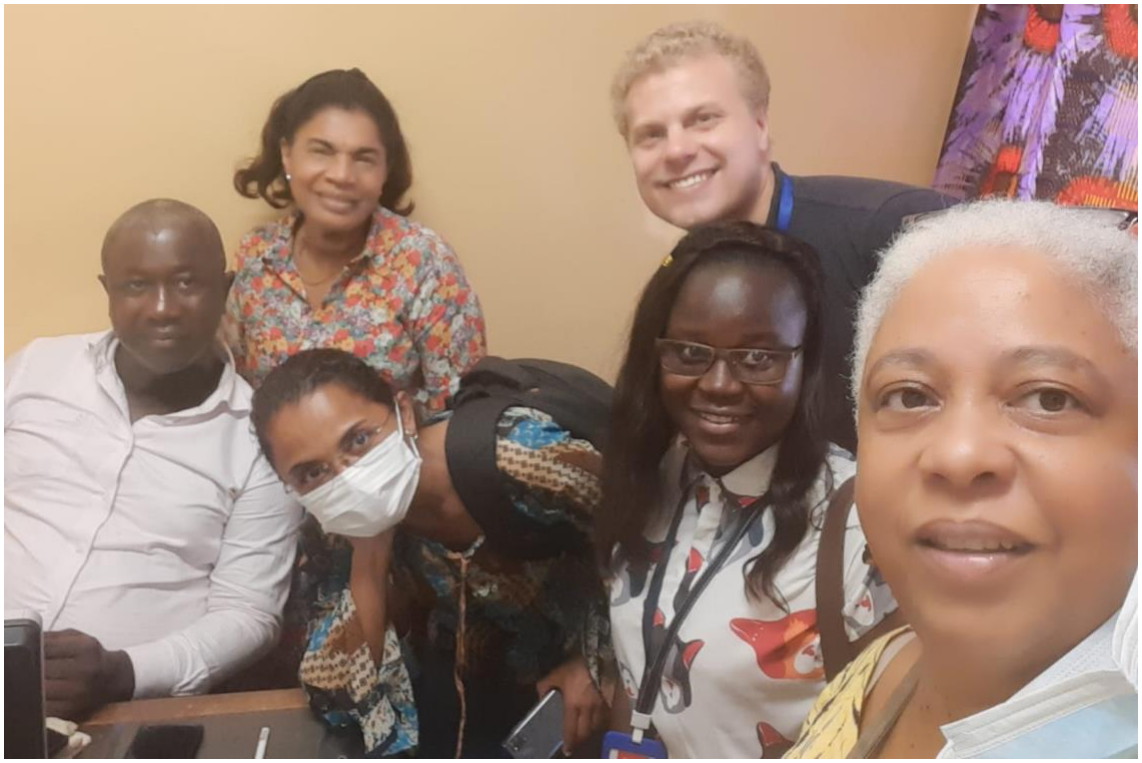


Figure 15: Visit to Simão Mendes National Hospital - Maternity Follow-up

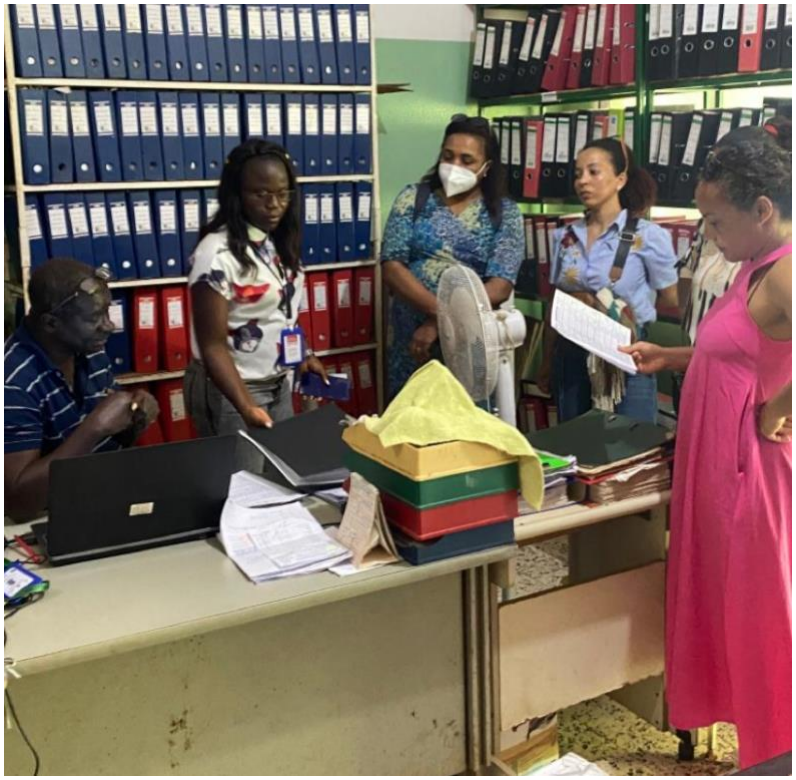


Figure 16: Visit to Simão Mendes National Hospital - Pediatric Follow-up

Day 4 – 29/01:

Because it was Sunday, our hosts organized a picnic in Canafrista, which also showed us another face of this project with a human face, and we came across a view of the lush Guinean landscape. Moments of sharing, good company, and ... canoe rides.

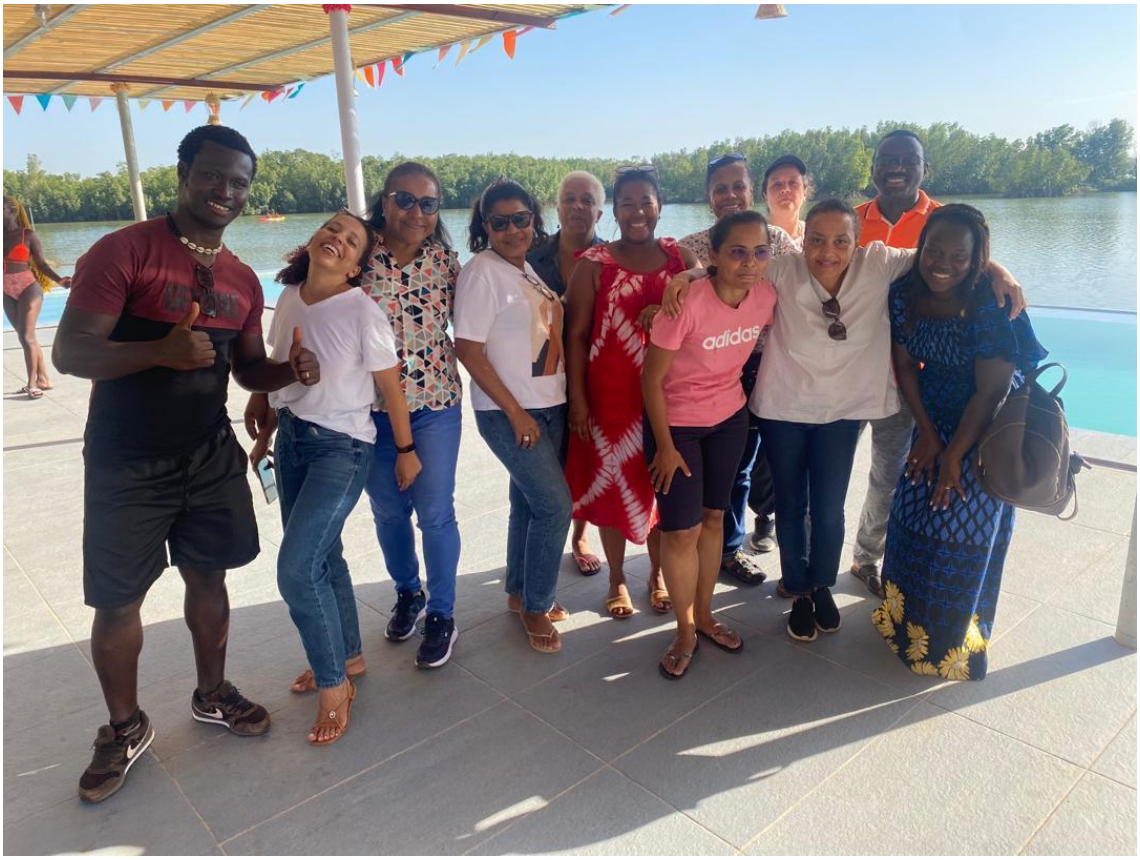
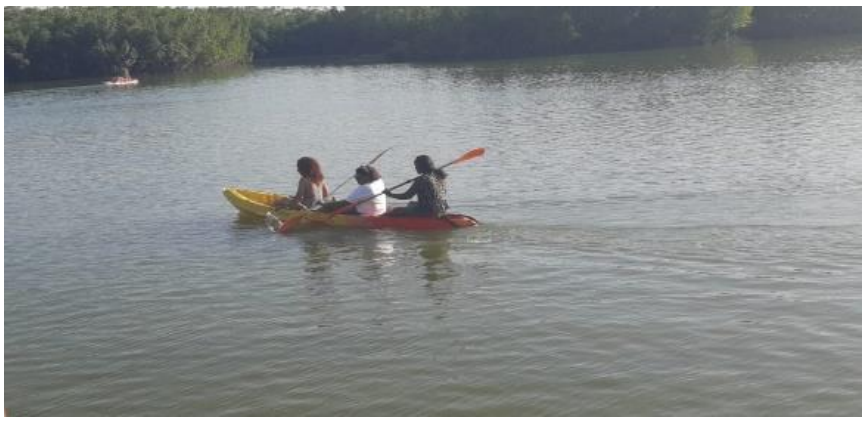


Figure 17: Picnic at Canafrista



18: Canoe trip in Canafrista

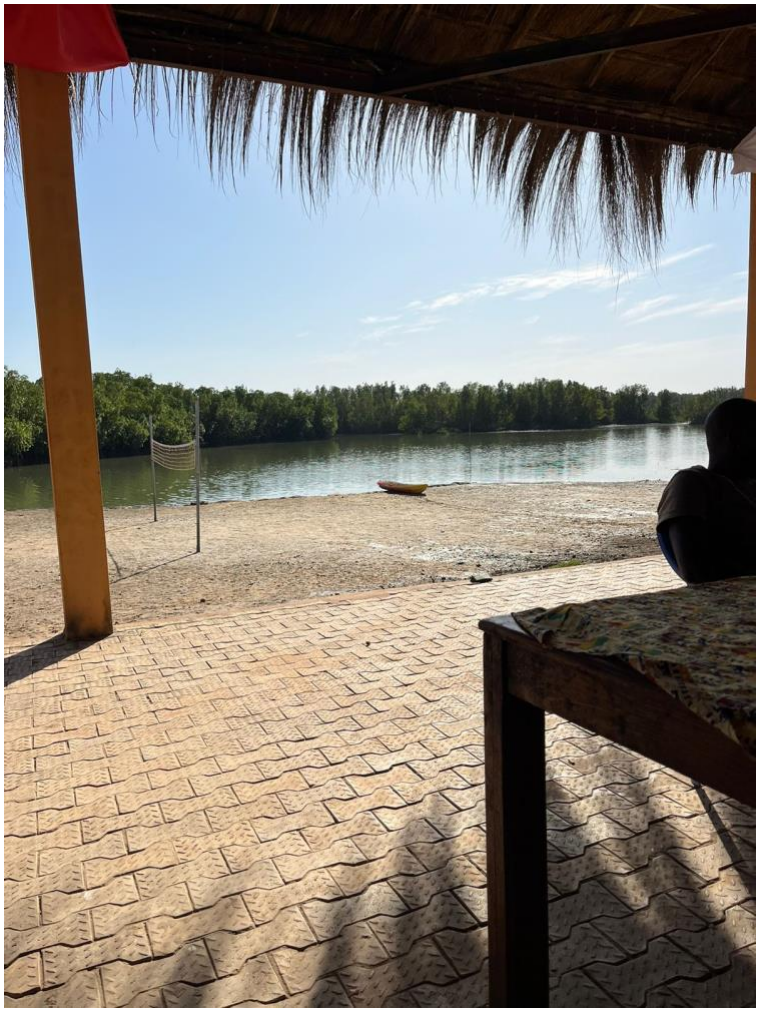


Figure 19: View from Canafrista

Day 5 – 30/01:

Learning day. We participated in a Seminar organized by the BHP to present and disseminate the studies conducted during the COVID-19 pandemic. Studies on seroprevalence of SARS-CoV-2 in healthcare workers, children under 5 years of age, in the general population, and risk groups were presented and discussed. The randomized trials included interventions such as the use of face masks, administration of oral polio vaccine (OPV), administration of BCG to healthcare workers and on non-specific effects of the vaccine during the pandemic (BCG-COVID-RCT).

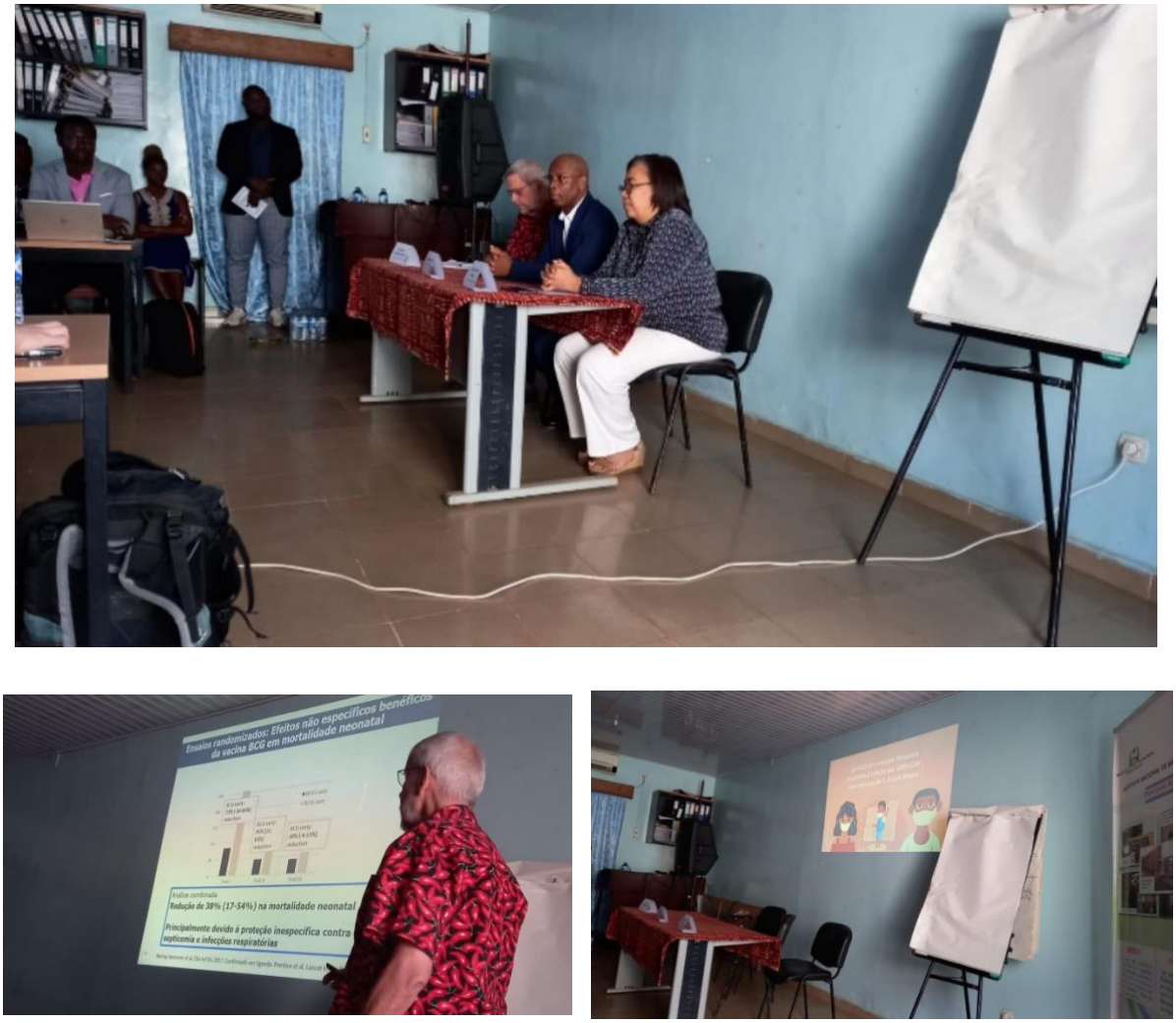


Figure 20: Seminar to disseminate the studies conducted during the pandemic of COVID-19

Concluding remarks

The objectives of the visit were fully achieved. The opportunity allowed us to witness the extensive, important, and thorough work of the BHP, especially in Clinical Trials and other studies for the well-being of the people of Guinea Bissau. A solid team, strong leadership, stable funding, strategic partnerships, respect and ethics in human relations and research, decent wages, motivation and recognition of work, and career progression, among other principles pursued by the BHP, seem to be the basis for its sustainability and national and international recognition.

We are convinced that research in Cape Verde has much to learn from our brothers and sisters in Guinea-Bissau, and we are counting on the continuity of this partnership for the development in Cape Verde of research projects similar to those developed in Guinea-Bissau, in the field of Respiratory Infections in Children (RTI) Antimicrobial Resistance (ARM), HIV/AIDS and much more.

Such an experience was accompanied by good conviviality, delicious and spicy food, and contact with landscapes of exuberant beauty.

May it be the beginning of many fruitful scientific and personal exchanges.

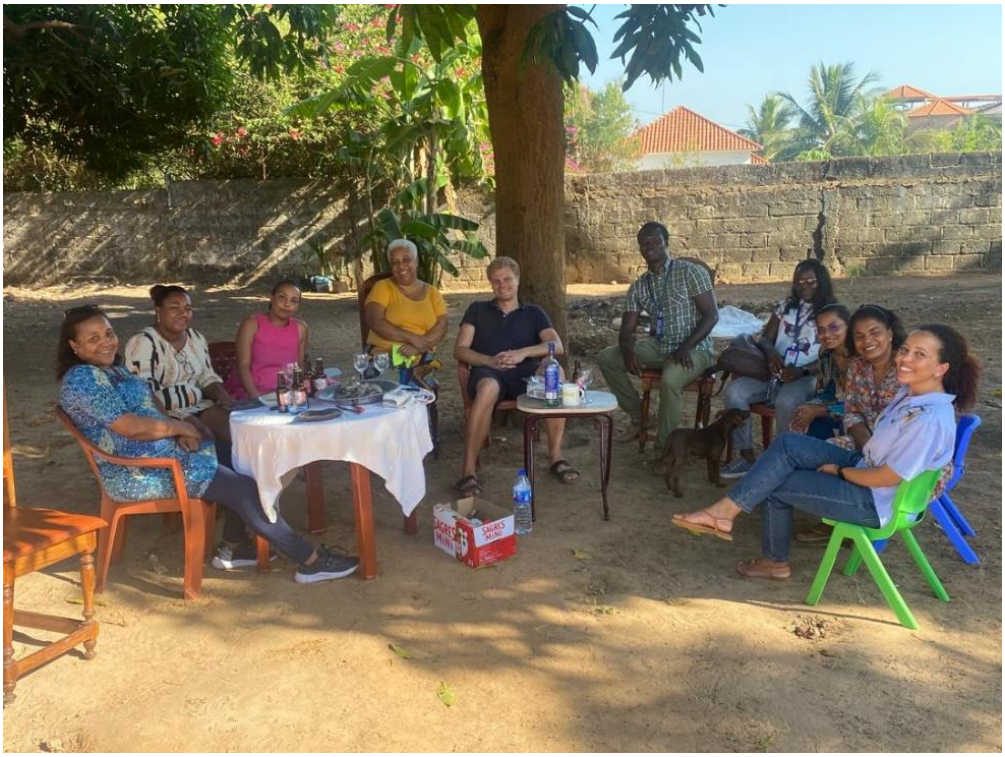


Figure 21: Sharing a cold drink and farewells for this time.