




Building Resilient Laboratory Systems: Mitigation Strategies under Reduced External Support in Mozambique

Presentation Outline

- Background
- Laboratory Network Management
- Financing
- Communication
- Mitigation strategy
- Lessons learnt
- Transition plan
- Next steps and technical assistance needs

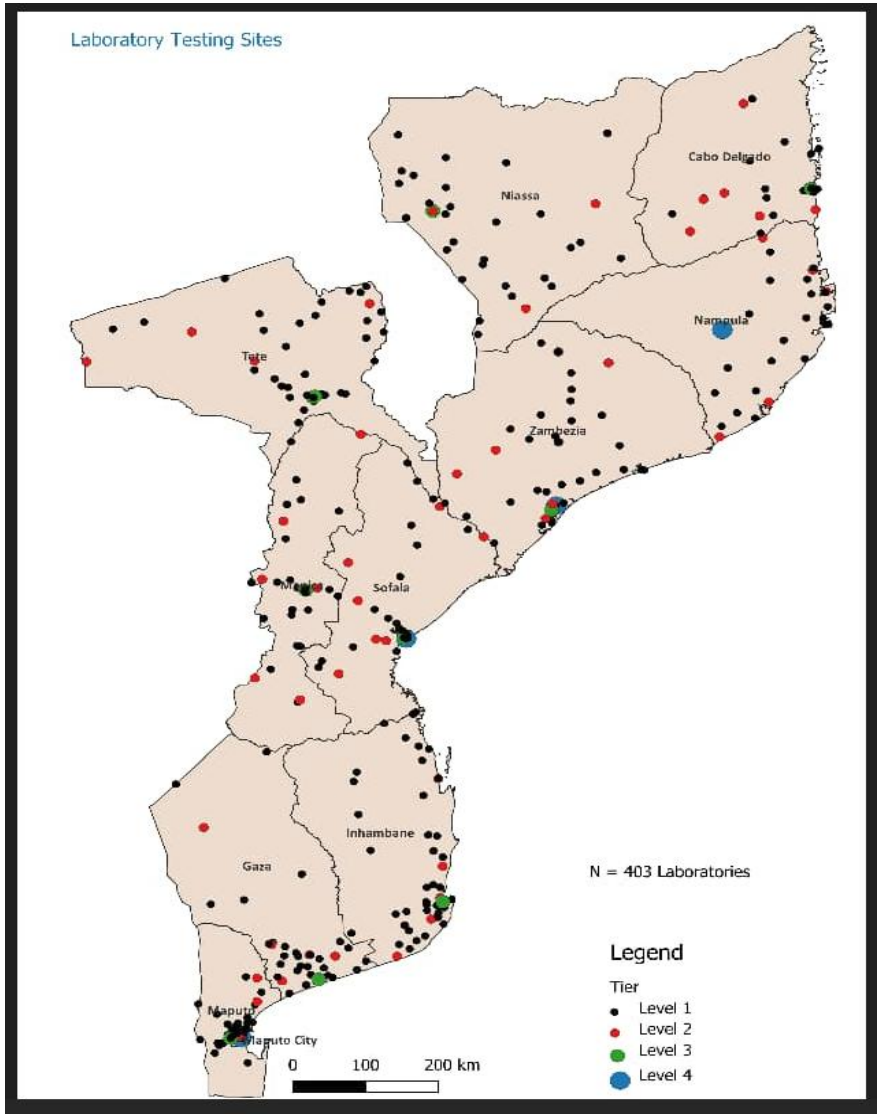
Laboratory Network Management

503 Labs (15 Molecular Labs**)**
27% coverage

367 POC molecular
135 M-PIMA
232 GXPERT

41 conventional platforms

2.8-3.4 millions molecular tests
68-72% average utilization rate



Historic of Funding (1)

U.S. funding previously support

Supply chain & commodities

- Reagents and consumables (HIV VL, EID, TB, Hepatitis, Syphilis etc.)
- Lab equipment maintenance and service contracts

Sample referral system

- Transport of specimens from peripheral health facilities
- Courier contracts and fuel for vehicles/motorbikes

Human resources & capacity building

- Training of laboratory technicians
- Short-term staff contracts supported by partners

Historic of Funding (2)

Quality management & accreditation

- External Quality Assessment (EQA) panels
- Accreditation mentorship and audits

Technical assistance

- Partner-supported supervision and mentoring
- Development of guidelines and SOPs

Information systems & connectivity

- Laboratory Information Systems (LIS, DISA Link)
- Digital tools for result return (SMS platforms, dashboards)

≈80% of laboratory costs are funded by partners.

Mozambique Response to the Funding pause

Communication

Engagement at Multiple Levels

Provinces

- Shared updates on logistics and sample referral challenges
- Aligned priorities for service continuity

Implementing Partners

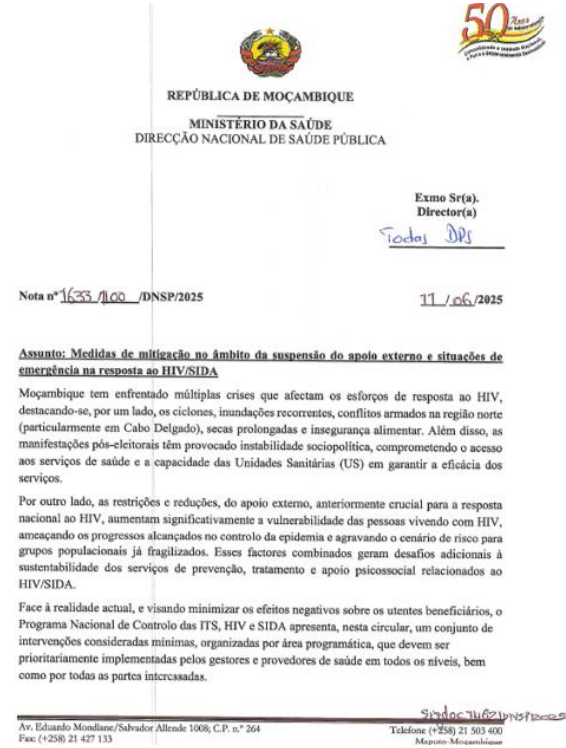
- Regular coordination meetings to reprioritize activities
- Joint planning of mitigation strategies

Donors

- Transparent reporting on funding gaps
- Advocated for sustained support in critical areas

Suppliers

- Negotiated flexible delivery timelines
- Explored local procurement and redistribution options



REPÚBLICA DE MOÇAMBIQUE

MINISTÉRIO DA SAÚDE
DIRECÇÃO NACIONAL DE SAÚDE PÚBLICA

Exmo Sr(a).
Director(a)
Todas DPS

Nota nº 1635 /1108 /DNSP/2025 11 / 06 /2025

Assunto: Medidas de mitigação no âmbito da suspensão do apoio externo e situações de emergência na resposta ao HIV/SIDA

Moçambique tem enfrentado múltiplas crises que afectam os esforços de resposta ao HIV, destacando-se, por um lado, os ciclones, inundações recorrentes, conflitos armados na região norte (particularmente em Cabo Delgado), secas prolongadas e insegurança alimentar. Além disso, as manifestações pós-eleitorais têm provocado instabilidade sociopolítica, comprometendo o acesso aos serviços de saúde e a capacidade das Unidades Sanitárias (US) em garantir a eficácia dos serviços.

Por outro lado, as restrições e reduções, do apoio externo, anteriormente crucial para a resposta nacional ao HIV, aumentam significativamente a vulnerabilidade das pessoas vivendo com HIV, ameaçando os progressos alcançados no controlo da epidemia e agravando o cenário de risco para grupos populacionais já fragilizados. Esses factores combinados geram desafios adicionais à sustentabilidade dos serviços de prevenção, tratamento e apoio psicossocial relacionados ao HIV/SIDA.

Face à realidade actual, e visando minimizar os efeitos negativos sobre os utentes beneficiários, o Programa Nacional de Controlo das ITS, HIV e SIDA apresenta, nesta circular, um conjunto de intervenções consideradas mínimas, organizadas por área programática, que devem ser prioritariamente implementadas pelos gestores e provedores de saúde em todos os níveis, bem como por todas as partes interessadas.

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Impact on Human Resources and Training (HR)

Impact on HR and Training

- Contract termination for technicians, counsellors, and support staff. Funding suspension placed ~20,000 professionals at risk.
- Immediate suspension of all training and mentorship activities.
- Drastic reduction of district and provincial QA supervision visits.
- Increased workload for remaining government health staff.
- Loss of specialized expertise previously funded by U.S. partners.

HR & Training: Mitigation Strategy

Internal Mentorship Model: Implemented In-Service Training and a Peer-to-Peer mentorship model for suspended programs.

Targeted Capacity Building: Training focused on new mitigation strategies and activities, such as PSC and VISITECT.

Protocol Quality Approach: Established a strict rule for sites without the required training for sample collection type must not switch (e.g., from liquid plasma to dried plasma). This assured quality in the absence of QA supervision.

Commodities: Impact on Reagent and Consumable Acquisition

Impact & Mitigation Measures Implemented

- Delays and shortages in procurement of key diagnostic supplies.
- Forced prioritization of Viral Load (VL) testing for suspected treatment failure.
- Increased pressure on HIV and TB testing platforms.
- Reduced availability of essential consumables for molecular testing.

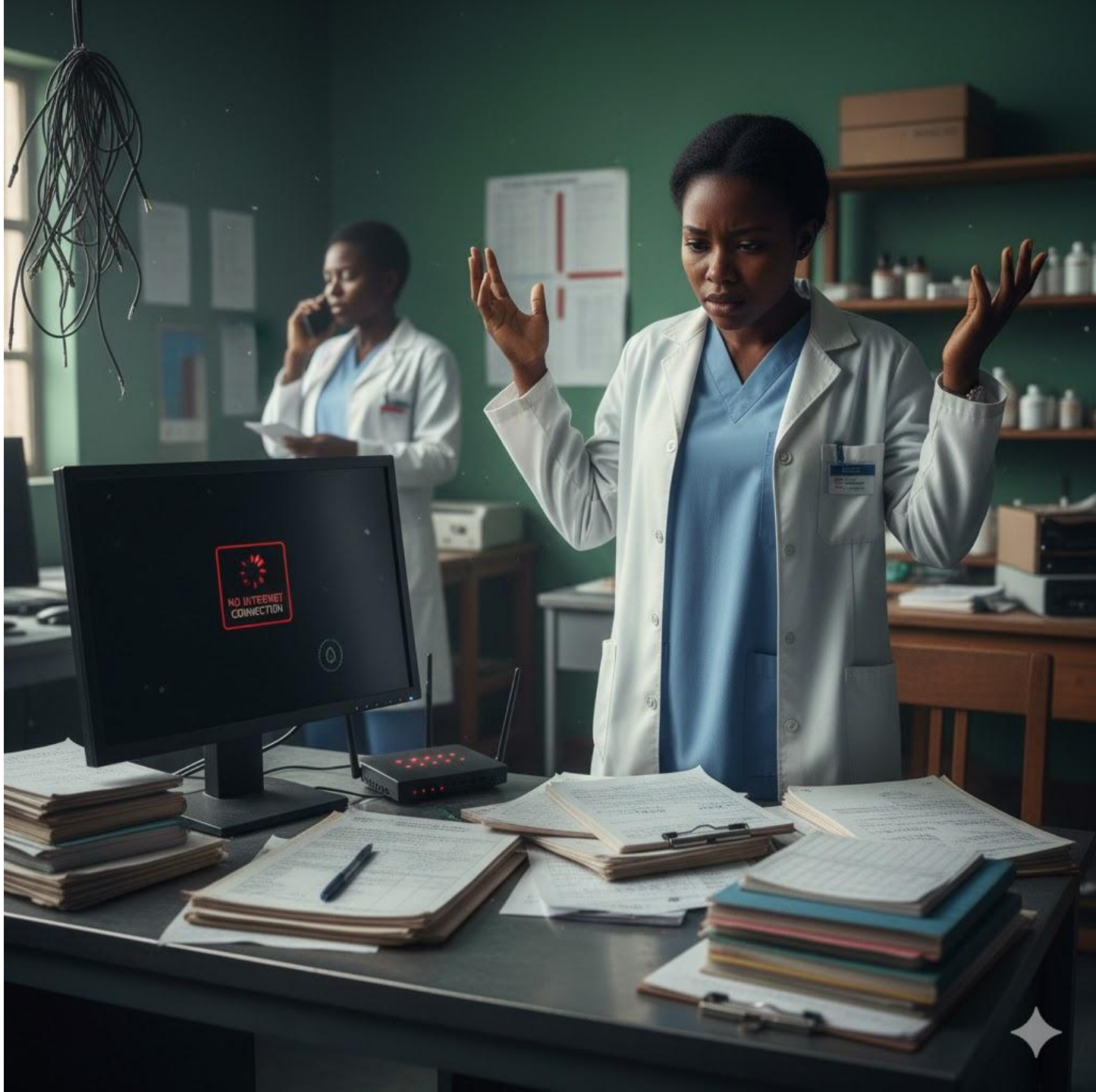
Prioritization and Rational Use: Implemented strict criteria for Viral Load testing, focusing on patients with suspected clinical treatment failure rather than routine annual testing.

Alternative Sample Types: Adopted the use of DBS/PSC (Plasma Separation Card/Dried Blood Spot) for Viral Load testing, which optimizes reagent use and accommodates less frequent SRS.

Contingency plan for TB: Reoriented primary diagnosis for Tuberculosis (TB) to use smear microscopy as a low-cost screening tool before molecular testing.

Reallocation and Coordination: Assessed stock availability for alternative collection/testing and coordinated the redistribution of consumables across the lab network.

Laboratory Information System (LIS) and Connectivity shockwave



LIS and Connectivity

- Suspension of internet/SIM card payments across district and provincial labs.
- Immediate return to paper-based data record (logbooks).
- Loss of real-time data reporting and visibility at central level.
- Delayed result transmission and compromised clinical decision-making.
- Withdrawal of project-funded IT hardware (computers/printers).

LIS & Connectivity: mitigation actions

- **Manual Registration**: The system immediately reverted to the manual, paper-based registration system (Log Books), acknowledging the loss of connectivity.
- **Protocol Protection**: The system ensured the continuity of existing, proven functional internal strategies to manage data flow via paper (e.g., forms) to offset the delay in clinical notification.
- **Strategic Readiness (Future)**: Recommendations were made for mapping of all sites and referencing needs, to prepare for future, resilient LIS solutions.
- **Logistical Reorientation**: The focus shifted to optimizing the physical delivery of results and samples (referencing), accepting the data delay as unavoidable.
- Current mitigation relies on internal protocols, not external funding.

Sample Referral and Logistics

Sample Referral and Logistics

- Interruption of the last-mile transport network (fuel, maintenance, couriers).
- Spike increase in TAT — from days to weeks/months.
- Higher rate of rejected samples due to compromised integrity.
- Reduced movement of VL, EID, CD4, and TB samples.

Mitigation Measures for SRS

- **Integrated Transport Flow**: The system ensured coordination with all HF so that sample collection occurred, whenever possible, at least twice per week, following a single, optimized flow and using all available transport and resources.

- **Route Adjustment**: New collection dates were agreed upon, and adjustments were made to the routes and the defined of sample convergence centers at the provincial level.

- **Conditional Collection**: HF that could perform referencing at least twice per week were instructed to maintain the functional system. Conversely, if the sample stability requirements could not be met, sample collection was suspended

Mitigation Measures for SRS

- **Transition to Stable Samples (HIV)**: Where SRS was not possible at least twice a week, the system mandated the use of DBS (Dried Blood Spot) or PSC (Plasma Separation Card). These samples offer 15 days of stability, compared to 5 days for liquid plasma.

- **CD4 Testing**: For peripheric HF without laboratory, sample collection was recommended according to the availability of transport. VISITECT testing was recommended in sites without FACSPresto.

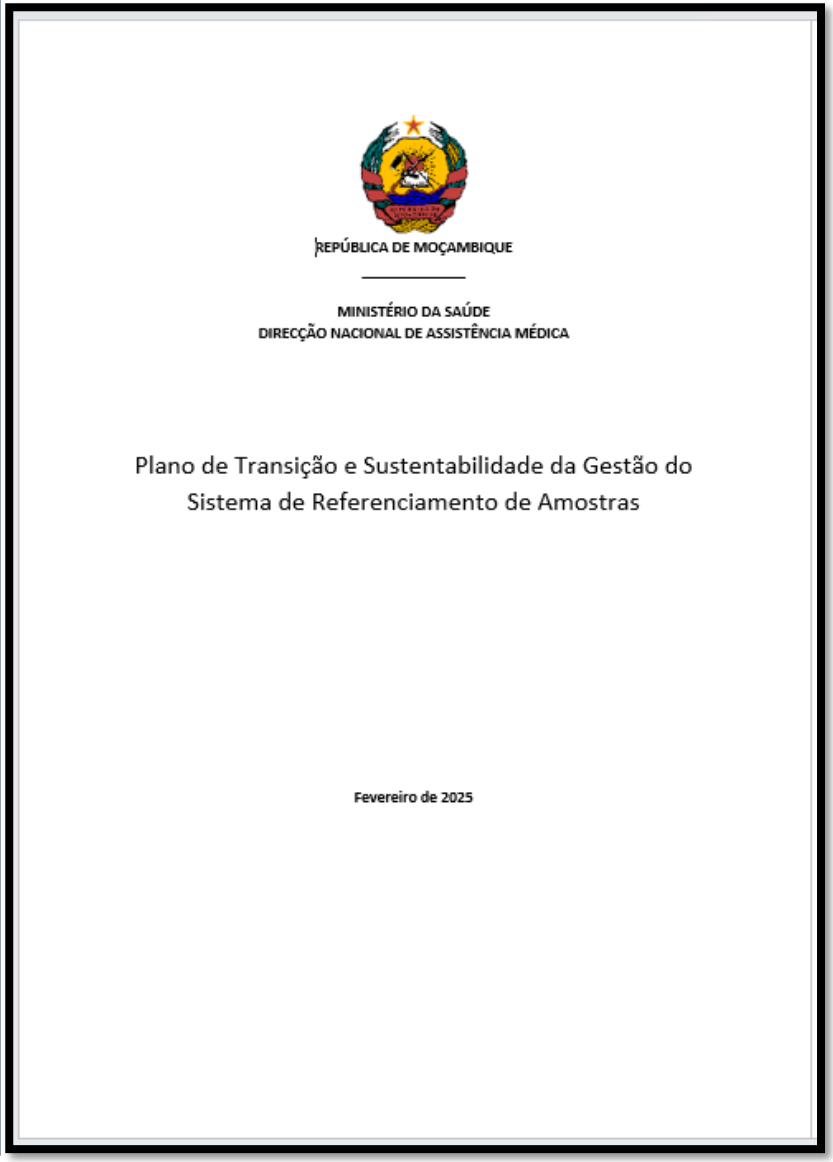
- **Tuberculosis (TB)**: Samples for culture and DST were referred at least twice per week to the respective reference laboratories (Nampula, Beira, Maputo, and Carmelo)
- Enhanced communication to HFs to reinforce use of stable sample types (DBS/PSC) under reduced transport frequency

Lessons learnt

- Proactive planning and coordination are critical to ensure continuity of services in resource-limited settings.
- Contingency plans and innovation (e.g., decentralized testing, optimized SRS) help reduce external dependency and strengthen sustainability.
- Strong partnerships and transparent communication across central, provincial, donors, and suppliers build trust and long-term resilience.
- Investing in domestic capacity (human resources, logistics, and information systems) is essential for sustainable laboratory systems.

Transition plan

- Gradual shift from donor-driven to government-led operational support.
- Strengthening provincial and district-level logistical capacity.
- Institutionalization of successful mitigation strategies.
- Diversification of suppliers and optimization of procurement processes.



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Plano de Transição e Sustentabilidade da Gestão do Sistema de Referenciamento de Amostras

Fevereiro de 2025

Transition plan

- Development of hybrid LIS solutions combining local and cloud-based approaches.
- Sustaining effective mitigation measures regardless of future donor support ("donor funding as a bonus" principle).
- Embedding resilient practices into routine workflows to ensure long-term sustainability.

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Next steps and technical assistance needs

- Advocacy for increased domestic investment in laboratory systems
- Capacity building and ownership for provincial and district-level staff
- Technical support for digital health integration and monitoring tools
- Continued collaboration with global partners for sustainability.



Obrigado(a)/Thank you