



REPUBLIC OF MOZAMBIQUE  
MINISTRY OF HEALTH  
National Directorate of Medical Assistance

**Mozambique's experience in mapping laboratories**

**September 26, 2024**

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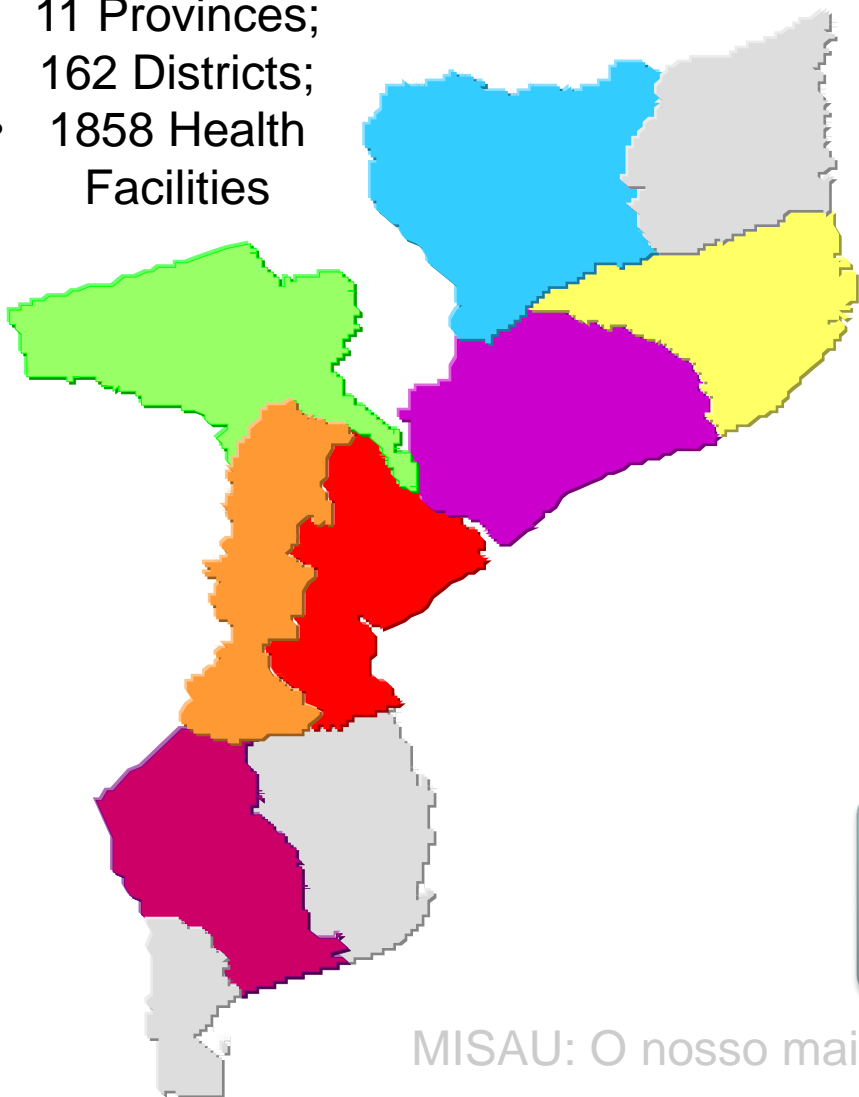
**Monitoring and review**



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## Coverage:

- 11 Provinces;
- 162 Districts;
- 1858 Health Facilities



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# Contextualization

## Categorization of HF/Laboratories





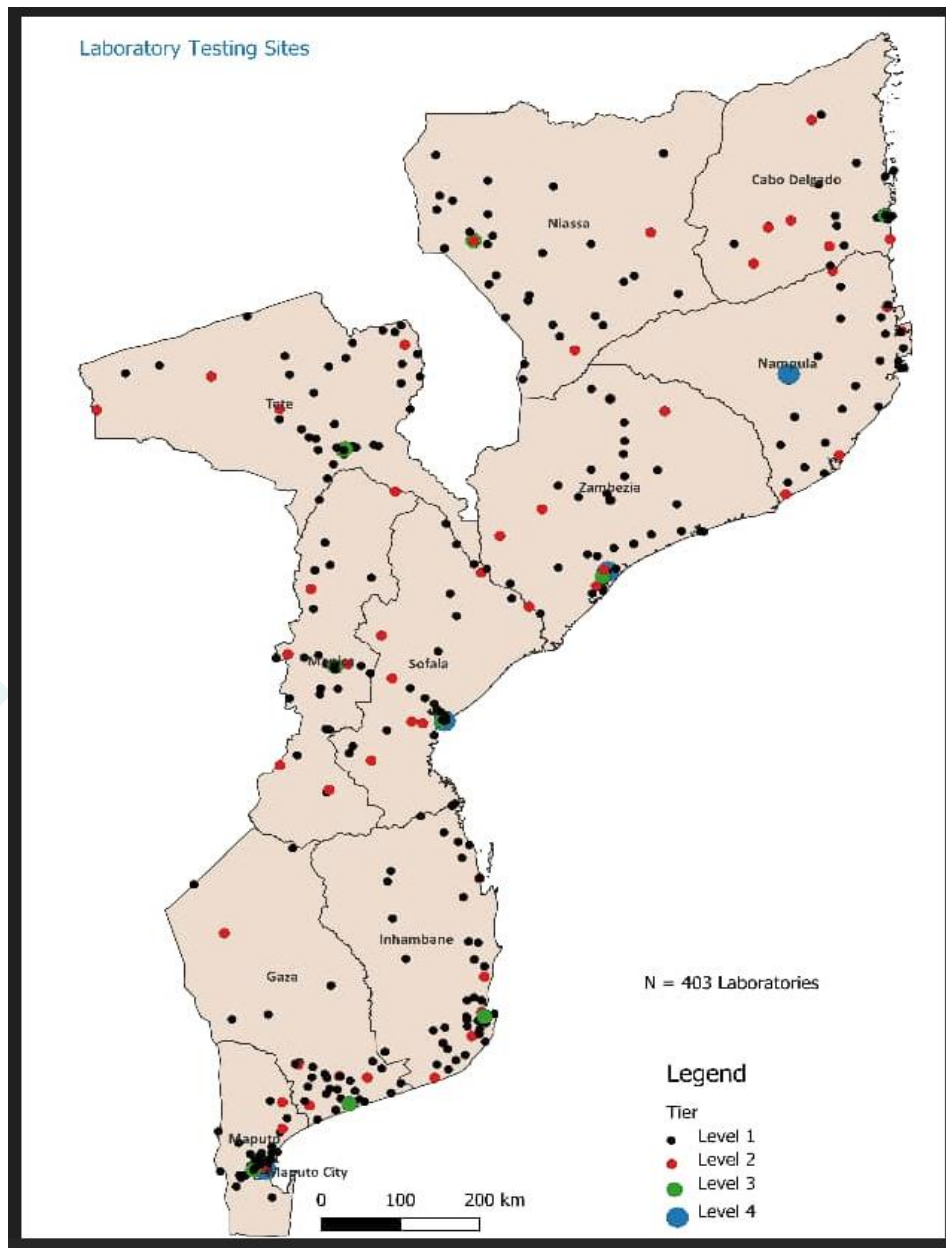
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# Mapping results

Total  
N = 503

- 04 labs level IV
- 07 labs level III
- 59 labs level II
- 433 labs de level I

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# Evaluated areas

1. Geographical location
2. Testing capacity
3. Human resources
4. Type of laboratory infrastructure
5. Type of existing equipment
6. Material supply chain
7. Quality Management System
8. Connectivity
9. Biosafety
10. Sample referral system

10/30/23, 9:44 AM Survey on laboratory capacity Mozambique v2 - 2023

### Survey on laboratory capacity Mozambique v2 - 2023



**Nível de laboratório**

O laboratório recebeu um nível de classificação formal?

Sim

Não

Não aplicável (N/A)

Selecionar o nível de nível do laboratório (de acordo com a designação nacional de nível para laboratórios médicos)

Nível I

Nível II

Nível III

Nível IV

Nível V

Nível VI

**Perfil do laboratório**

» **Informações gerais**

Data de avaliação

\_\_\_\_\_

yyyy-mm-dd

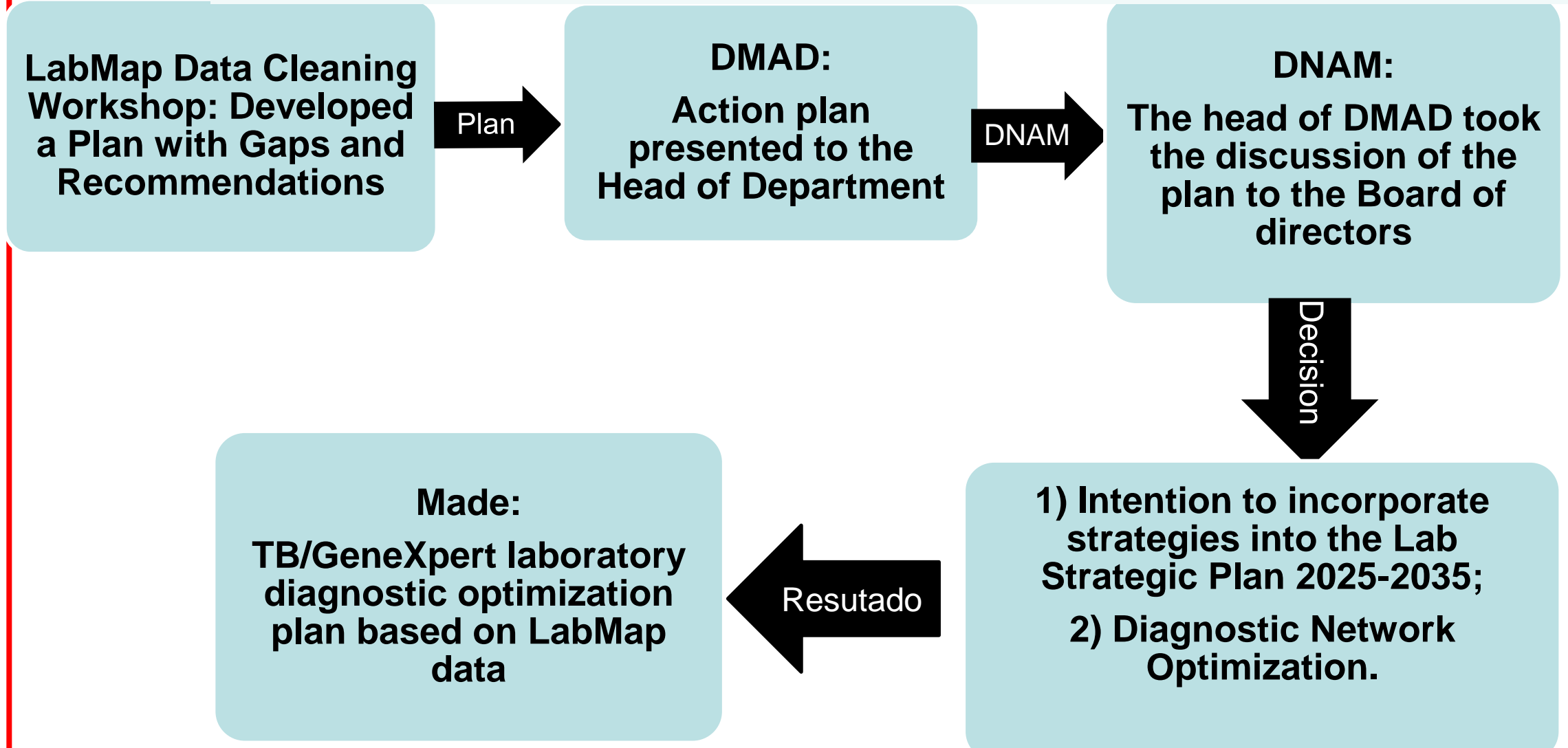
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# Institutionalization and integration into national structures





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# Capacity Gaps , Strategies & Monitoring

Findings/Gaps	Recommendations	Status
Lack of adequacy in categorization by level of care in private laboratories and teaching/research institutions;	<ul style="list-style-type: none"><li>Develop a guideline governing the categorization models by level of care aligned with the NHS classification that also includes private laboratories and teaching/research laboratories;</li></ul>	<ul style="list-style-type: none"><li>In process/ongoing, updating of the Guideline to include all laboratories (Public and private).</li></ul>
Lack of specialists for different areas of laboratory diagnosis (Pathologists, Microbiologists, among others);  There only a few accredited clinical laboratories in the country.	<ul style="list-style-type: none"><li>Allocate laboratory specialists to levels III and IV by 2030;</li><li>Accredit all laboratories that are implementing the ISO 15189 standard by 2026;</li></ul>	<ul style="list-style-type: none"><li>Not started.</li><li>Ongoing preparation for accreditation of some laboratories of level II and III.</li></ul>



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# Capacity Gaps , Strategies & Monitoring

Achados/Lacunas	Recomendações	Status
<p>Inadequate infrastructure for the diagnosis and management of endemic, pandemic and epidemic diseases in level III and IV laboratories.</p>	<ul style="list-style-type: none"><li>• Strengthen the capacity for management measures for high-security pathogens in level III and IV infrastructures.</li></ul>	<ul style="list-style-type: none"><li>• In the process of updating the Laboratory Infrastructure Guidelines.</li></ul>
	<ul style="list-style-type: none"><li>• Ensure the availability of biosafety cabinets in level II, III and IV laboratories by 2026.</li></ul>	<ul style="list-style-type: none"><li>• 19 BSL-2 and 3 installed in 19 laboratories of level III and IV</li></ul>
	<ul style="list-style-type: none"><li>• Establish equipment calibration and maintenance centers within the country.</li></ul>	<ul style="list-style-type: none"><li>• Completed, with acquisition of maintenance kits and training of technicians in equipment calibration</li></ul>





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# Accreditation of 12 Laboratories



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Organisation Type	Title	Accreditation Number	Status	Approved Date	Expiration Date	Schedule of Accreditation
Medical Laboratories	LABORATÓRIO DE ANÁLISES CLÍNICAS DO HOSPITAL GERAL DE MAVALANE - MOÇAMBIQUE	MED 167	Approved	31 May, 2024	5 December, 2025	<a href="#">Download</a>
Medical Laboratories	LABORATÓRIO DE ANÁLISES CLÍNICAS DO HOSPITAL GERAL DA MACHAVA- MOÇAMBIQUE	MED 168	Approved	31 May, 2024	5 December, 2025	<a href="#">Download</a>
Medical Laboratories	LABORATÓRIO DE ANÁLISES CLÍNICAS DO HOSPITAL CENTRAL DE MAPUTO - MOÇAMBIQUE	MED 169	Approved	31 May, 2024	5 December, 2025	<a href="#">Download</a>
Medical Laboratories	LABORATÓRIO CLÍNICO DO HOSPITAL PROVINCIAL DE TETE - MOÇAMBIQUE	MED 170	Approved	31 May, 2024	5 December, 2025	<a href="#">Download</a>
Medical Laboratories	LABORATÓRIO DE ANÁLISES CLÍNICAS DO HOSPITAL CENTRAL DE NAMPULA - MOÇAMBIQUE	MED 171	Approved	31 May, 2024	5 December, 2025	<a href="#">Download</a>

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# DIAGNOSTIC NETWORK OPTIMISATION

Population diagnostic accessibility analysis



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# Current and optimised scenarios

## Baseline: Lab Network with GeneXpert

### Assumptions used :

- Total population of the country;
- Distance (10 km) recommended to reach health facility in the country;
- Number of laboratories with GeneXpert;
- Projections of programmatic data and quantification of Xpert cartridges, where the country expects to test 2% of the population corresponding to 600,000 tests per year, 50,000 patients per month.

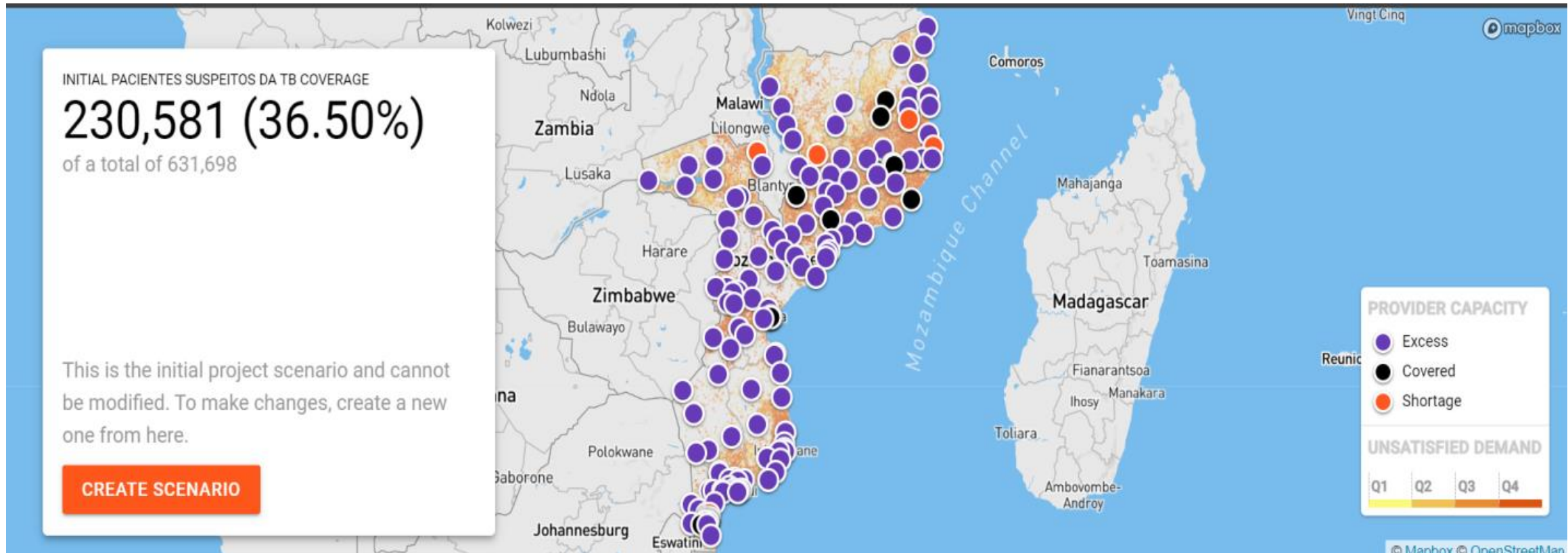
The analysis was performed using ASLM's "PlanWise" tool.



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# Optimization baseline

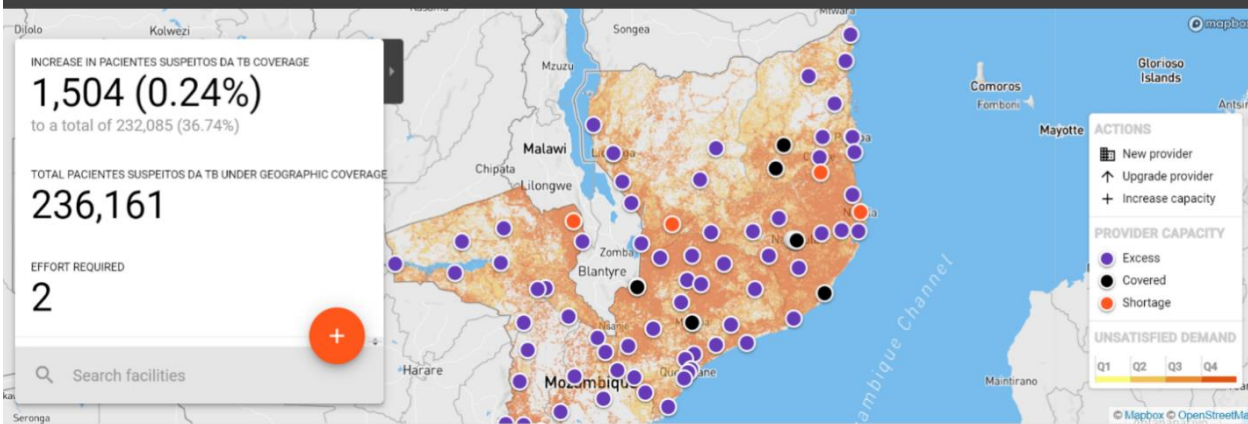
The 175 laboratories with GeneXpert cover 230,581 inhabitants, which corresponds to only 36.50% of the country's general population that reaches TB laboratory diagnostic services.;



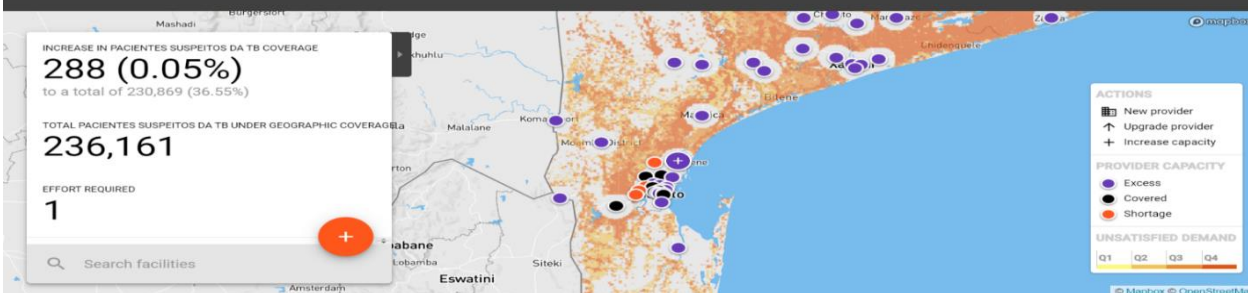
## Optimização do diagnóstico da TB > Scenario B



## Optimização da rede de diagnóstico laboratorial da TB > Scenario A



## Optimização da rede de diagnóstico laboratorial da TB > Scenario C



# Decision Made based on scenarios

- Increase from current 175 Labs to 203 (add 28 more GeneXpert Labs) by 2026;
- Optimize the number of GeneXpert modules (add 72 more modules) in laboratories based on TB testing demand by 2026;
- Add 40 GeneXpert modules for other tests such as: COVID-19, Viral Load/HIV, hepatitis among others by 2026;



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# Monitoring and Review

- MoH developed timelines and KPIs.
- Regular reviews using KPI and timeliness..
- Have updated all sites after first phase
- Updates Global Fund on progress.

Indicador	Metas
Exam Menu implemented in the SNS (private and public);	Levels I, II, III and IV with Exam Menu implemented by 2026
Number of private teaching/research laboratories categorized by level of service provision;	100% of private and research laboratories categorized by level of service provision by 2026
Public Health Laboratories coded;	100% of public health laboratories coded to differentiate from NHS clinical laboratories by 2026



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# Lessons learned

- The country developed the TB Diagnostic Network Optimization plan until 2026 based on the LabMap findings;
- Identificação de lacunas ou necessidade que irão ajudar no desenvolvimento do plano estratégico dos laboratórios clínicos 2025 -2035;
- Self-assessment of the TB and HIV laboratory diagnostic network carried out;
- **A second phase was carried out to complete the mapping of the laboratories;**
- Laboratory diagnostic accessibility analysis – PlanWise.



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# Challenges

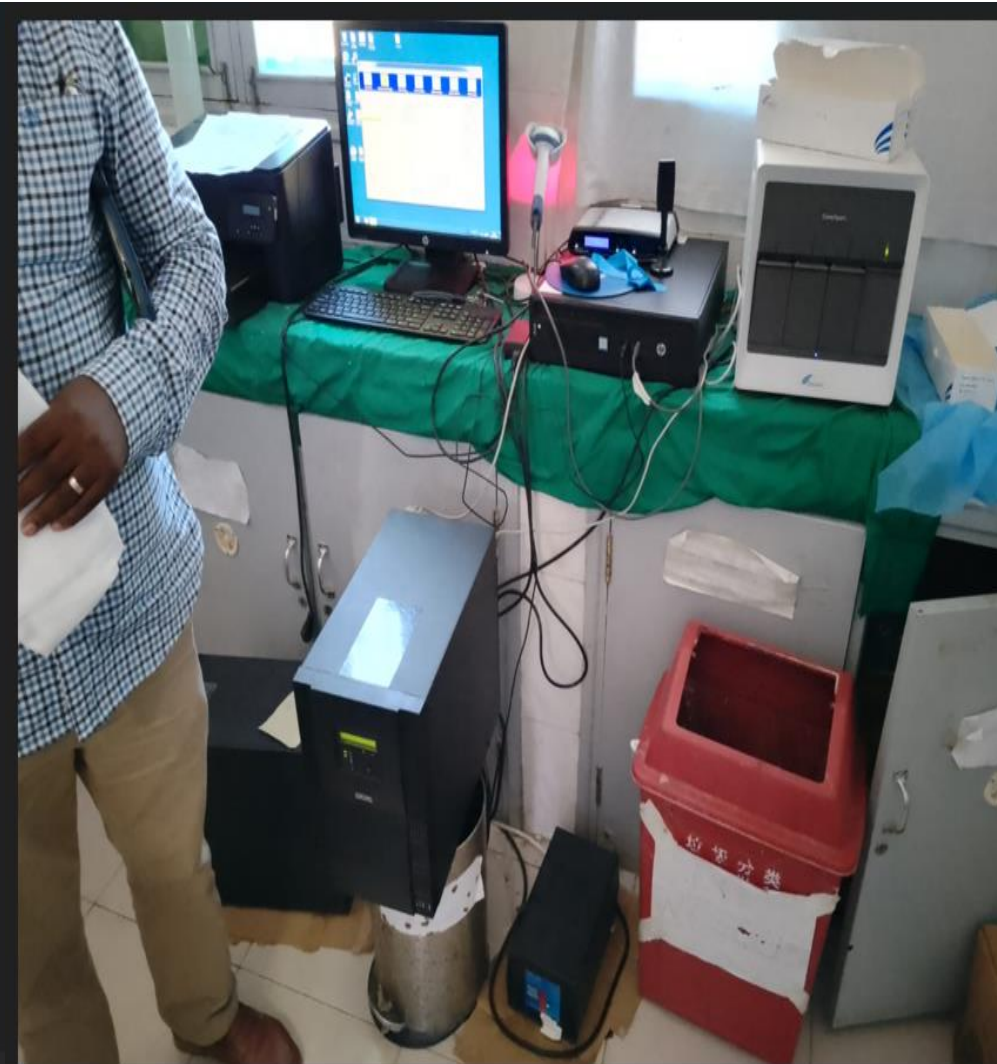
- Map all academic and private for-profit laboratories;
- A second phase was carried out to complete the mapping of the laboratories;
- Generate a GPS-based list of the locations of all laboratories including academic and private for-profit;





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# Laboratory infrastructure in the country



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**Thanks You**

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