

National Public
Health Laboratory

Strategic Plan

(Establishing a strong Public
Health Laboratory System)

October 2012



Ministry of Health
and Social Services

FOREWORD

The Laboratory Services in Namibia have operated for many years without a formal National Laboratory Policy and Strategic Plan to guide planning and implementation. Fortunately the laboratory policy has now been developed. This strategic plan seeks to lay the framework for the implementation of the policy.

The theme for this plan “establishing a strong public health laboratory system” has been adopted to emphasise the need to set up an integrated public health laboratory service. Although Namibia has well-established clinical laboratory services, the public health part has many challenges and is weak and uncoordinated. It is anticipated that at the end of the life of this plan, Namibia will not only have a National Public Health Laboratory but also a strong public health laboratory system.

The National Public Health Strategic Plan was developed by the Integrated Public Health Laboratory Committee (IPHLC) with technical and financial support from Center for Disease Control and Prevention (CDC) and the Association of Public Health Laboratories (APHL). The Ministry of Health and Social Services fully endorses the public private partnerships and will use this vehicle to harness the resources and expertise existing in the private sector.

May I take this opportunity to express my sincere appreciation to all stakeholders for developing this plan and urge all stakeholders to implement and work together with Government to ensure quality healthcare services to our people.



.....
MR. ANDREW N. NDISHISHI
PERMANENT SECRETARY

ACRONYMS

CD4	Cluster of Differentiation Four
CDC	Centres for Disease Control and Prevention
CMS	Central Medical Stores
CPC	Caprivi Pathology Centre
DNPHL	Director National Public Health Laboratory
EQA	External Quality Assurance
EQAP	External Quality Assurance Programme
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immuno-Deficiency Syndrome
HRD	Human Resource Development
HRM	Human Resource Management
IDSR	Integrated Disease Surveillance and Response
IHR	International Health Regulations
IPHLC	Integrated Public Health Laboratory Committee
IQC	Internal Quality Control
KPI	Key Performance Index
LIS	Laboratory Information System
MOHSS	Ministry of Health and Social Services
NAMBTS	Namibia Blood Transfusion Service
NIP	Namibia Institute of Pathology
NPHL	National Public Health Laboratory
NPHLS	National Public Health Laboratory System
PHLN	Public Health Laboratory Network
POC	Point of Care (Testing)
QA	Quality Assurance
SOP	Standard Operating Procedure
TAT	Turnaround Time
TB	Tuberculosis
THC&CSS	Tertiary Health Care and Clinical Support Services
TI	Training Institutions
UNAM	University of Namibia
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation

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CHAPTER 1: INTRODUCTION

The demand for laboratory services has over the years continued to rise as countries increasingly require evidence based decision making for health care interventions. Unfortunately laboratory development has not kept up with this demand mainly due to the little attention given to this sector by many governments. The lack of laboratory policies and strategic plans has contributed to the low investment in the laboratory.

Many African countries are increasingly emphasising the need to strengthen Primary Health Care interventions as a means of addressing the disease burden caused mainly by communicable diseases. While the emphasis is towards addressing diseases of public health concern, laboratory services have been skewed towards clinical diagnosis and interventions.

In recognition of this anomaly WHO/AFRO in its Regional Committee meetings has issued several resolutions requiring African countries to set up National Public Health Laboratories (NPHL) to meet the national and international obligations of disease surveillance, Integrated Disease Surveillance and Response (IDSR) and International Health Regulations (IHR).

1.1 Background

The Ministry of Health and Social Services (MOHSS) provides regulatory oversight of the medical laboratory services in the country while this service delivery is carried out by the Namibia Institute of Pathology (NIP) and other private laboratories in the country.

The Ministry recognises that an efficient laboratory system is critical for the correct diagnosis of clinical conditions and the detection and identification of the causes of disease outbreaks in the shortest possible time. The twin laboratory functions of diagnostic patient services and public health surveillance and response services are essential in providing sufficient information for treatment, prevention and health improvement.

Namibia appreciates the critical role laboratories play in providing timely information for patient management and public health interventions. However, resource limitations and high demand for diagnostic testing services often limit the contribution of clinical laboratory data for surveillance purposes.

It is the responsibility of the Ministry of Health and Social Services to provide leadership through regulation, policy coordination and collaboration, as well as direct service provision to assure that within resource limitations the most appropriate mix of laboratory services - diagnostic, surveillance and outbreak response - is developed to achieve the best outcomes in health for all. Lack of adequate infrastructure and an operational system is a barrier to providing access to adequate services for clinical and public health functions. Resource limitations can result in a lack of or delay in laboratory diagnostic results with the consequence of less effective patient management and poorer health outcomes. Weak reporting systems and lack of or delays in providing timely testing and response to disease outbreaks results in increased morbidity and mortality for major diseases of public health concern such as TB, malaria, measles, cholera, diabetes and HIV/AIDS.

The Ministry of Health and Social Service's National Health Policy Framework 2010-2020, proposed the establishment of a national public health laboratory to monitor delivery of quality services. If successfully implemented the country will see a more informed and focused public health intervention programme. It is hoped that this will play a crucial role in promoting public private partnerships in the laboratory sector and in harnessing private resources and expertise into public health interventions.

1.2 Health Status

Despite the extensive health network structure in Namibia, there are many challenges of individuals in accessing health services. A significant percentage of the population lives far from health facilities (>5kms) which causes delays in seeking care until illness is severe. In some areas, there are few or no laboratories. Furthermore, many of the existing facilities have insufficient resources and weak infrastructure and as such the service level expected of a facility cannot be provided. Addressing these gaps is a priority for the Government.

In many facilities at the district level, the laboratory infrastructure and workforce are often none existent. Poorly designed facilities and lack of adequately trained staff limit the quality and safe laboratory practice. The country faces the challenges of renovating the existing laboratory facilities to meet recognised standards, establishing new laboratories where there are none and increasing the number of Namibians in the professional laboratory workforce. Achieving these objectives is necessary to provide equitable and affordable access to services for all.

CHAPTER 2: SITUATION ANALYSIS

Laboratories

Namibia has a network of 58 clinical laboratories spread throughout the country. The NIP, an autonomous government agency, operates a network of 38 out of 58 clinical laboratories. These NIP laboratories in general cover the entire country.

Infrastructure

Except for the two stand-alone NIP laboratories based in Windhoek and most of the private laboratories, the rest of the 38 NIP laboratories are attached to a hospital facility. Lack of standards and weak regulations have resulted in inappropriate laboratories with poor infrastructure that does not meet acceptable standards for quality and safety. This plan seeks to establish national standards and mechanisms for their implementation.

Presently the bulk of laboratory testing in Namibia is offered by NIP as part of clinical diagnosis and patient management. There is minimal testing for public testing usual undertaken either as part of patient care or specific disease surveillance tasks. The minimum test package has not been defined leading to skewed delivery of laboratory services for some areas.

Human Resources

For a long time Namibia has continued to suffer a paucity of skilled laboratory personnel. The deployment of the personnel currently in-posts is skewed towards the urban areas. There are now efforts to train laboratory personnel in-country at The Polytechnic of Namibia for Medical Laboratory Technologists and the National Health Training Centre for the laboratory technicians. Despite these efforts there are still challenges in retaining the few trained professionals.

Laboratory Systems

Laboratory support systems (equipment and supplies) are the major contributors to service interruptions and poor quality of testing in the country. In many instances laboratory personnel are not adequately consulted or involved in the procurement process leading to inappropriate equipment and supplies in facilities. Even when commodities have been procured the supply chain systems are weak resulting in stock outs at service level.

Organisation

The MOHSS is currently undergoing reorganization that will result in the establishment of new Directorates. A technical committee comprising of Public Health Laboratory stakeholders coordinated by the Tertiary Health Care and Clinical Support Services Directorate made a request to the Public Service Commission to have National Public Health Laboratory Directorate. A policy document on Public Health Laboratory System has already been approved by Cabinet.

Currently the main functions of Medical Laboratory Services are to oversee the smooth operation and quality medical laboratory services in the country.

2.1 Stakeholder analysis

TYPE	LABORATORY	TYPE OF SERVICE
Public/Private Sector	<ul style="list-style-type: none"> • NIP network • Blood Transfusion Service of Namibia (NAMBTS) • Namibia Standards Institute 	<ul style="list-style-type: none"> • Public sector clinical laboratories • Provision of blood, blood products and related services • Set standards
Other quasi-government laboratories	<ul style="list-style-type: none"> • Veterinary Laboratory • Marine Laboratories • Water Laboratories • Namibia Dairies 	These laboratories undertake testing specific to their area and research
Private sector	<ul style="list-style-type: none"> • PathCare • Clinpath • Caprivi Pathology Lab (CPC) • Oshana • Maxi Med • High Care • Hagstrom 	Private sector clinical laboratories

2.2 Environmental Scanning

2.2.1 The NIP has a functional specimen referral system within their network that ensures coverage of the whole country. The referral system between health centres, clinics and NIP however faces logistical challenges leading to long Turnaround Time (TAT) of results and occasional spoilage of specimens in transit.

2.2.2 Even in the absence of a National Quality Assurance (QA) programme, all laboratories have strong Internal Quality Control (IQC) systems and many of them have voluntarily subscribed to international External Quality Assurance Systems (EQAS). There exists Standards Operating Procedures (SOPs) in all laboratories at all levels. There are four laboratories (2 NIP and 2 private) that have been accredited by SANAS and others are preparing for accreditation.

2.2.3 The country has a growing Point of Care (POC) testing system relying on rapid test kits that are offered mainly by community counselors and nurses. This system has expanded the coverage and accessibility of laboratory testing for HIV, malaria, blood sugar and haemoglobin (Hb). Quality monitoring is provided by NIP through supervisory visits and proficiency testing only for HIV rapid testing. The POC CD4 testing has been piloted and a roll out plan is being developed. The introduction of POC testing has exposed weaknesses in the validation, evaluation and licensing of new technologies.

2.2.4 There are two (2) training institutions in the country. The Polytechnic of Namibia trains medical laboratory technologists and the National Health Training Centre (NHTC) trains laboratory technicians. The University of Namibia (UNAM) does not train medical laboratory technologists but is used mainly for research.

2.2.5 The MOHSS has established a multi-disciplinary Integrated Public Health Laboratory Committee (IPHLC) to advise and support the Ministry on the establishment and monitoring of the NPHLS. The committee draws its membership from both the public and private sectors.

2.3 SWOT Analysis

The SWOT analysis was developed from the combined institutional memory, experience of IPHLC members and observations from supervisory visits to the districts by the Medical Laboratory Services Subdivision's Technologists in the MOHSS.

Strengths:

- NPHL is recognised in the Ministry of Health and Social Services Policy Framework 2010-2020 document.
- Visionary leadership at MOHSS.
- Innovative organisational capacity at NIP.
- Quality independent laboratory services for blood banking, water testing and veterinary testing.
- Developing strong educational programme for laboratory sciences.
- Commitment of government to accessible, affordable services.
- Robust private sector providing laboratory service.
- Support of the NPHL from other Government departments, NIP and private laboratories.

Weaknesses:

- Strategic alliance between MOHSS and NIP not yet clearly defined.
- Weak problem solving capacity of identified issues between MOHSS and NIP.
- Lack of clear structures for private sector participation in and contribution to public health related laboratory testing.
- Lack of a national strategic laboratory plan resulting in weak definition of the organisation, roles and functions of the National Public Health Laboratory for MOHSS, and a defined organisational structure.
- Disease reporting activities are not adequately monitored and enforced resulting in delayed reporting.
- National pre-service training capacity does not meet national workforce needs.
- Lack of a NPHL to provide technical leadership and guidance in public health testing.
- Weak NPHLS to provide policy direction and coordination.
- Inadequate numbers of skilled personnel in the MOHSS.
- Inadequate financing for public health laboratory testing.

Opportunities:

- The strategic alliance that was created by legislation under the Namibia Institute of Pathology Act 1999 (Act No 15 of 1999) can be an engine for creating value and quality laboratory services for Namibia.
- Educational capabilities to develop adequate capacity to meet the national needs for laboratory services workforce.
- Support from Development Partners.

Threats:

- Competition for resources with the clinical laboratories and other MOHSS priorities.

CHAPTER 3: STRATEGIC DIRECTIONS

In its engagement with the stakeholders for provision of laboratory services the MOHSS has identified the following key strategic initiatives driving this plan:

- Strengthening the IPHLC to provide assurance that the Public Health Laboratory activities meet established requirements, and communicate public health priorities and responsibilities to all stakeholders.
- Planning for the development of a comprehensive national laboratory strategic plan that includes a strategic initiative for assuring capacity for public health laboratory testing.
- Coordinating and integrating fragmented testing services that are in different government branches at different levels of the system including the private sector.
- Coordinating and integrating surveillance and response capacities and capabilities so that the Government can respond effectively to emerging disease problems and disasters.
- Assuring availability of adequate numbers of competent laboratory professionals to perform management and technical functions in all sectors.
- Strengthening the delivery of quality laboratory services.

3.1 Vision

To provide laboratory services of the highest standard of quality that will contribute to the overall health of all Namibians.

3.2 Mission

The IPHL system will provide and assure quality testing services where and when needed for all, support clinical care providers in the treatment, prevention of diseases; support the MOHSS in its disease surveillance and response; planning and policy development to prevent unnecessary disease and advance continual health improvements.

3.3 Core Functions of a Public Health Laboratory

3.3.1 Treatment and Monitoring: Provide clinicians with accurate laboratory results for initiation of appropriate treatment and monitoring of treatment outcomes.

3.3.2 Disease Prevention and Control: Provide accurate and timely laboratory results to identify disease causative agents and guide effective public health interventions.

3.3.3 Surveillance: Facilitate proper understanding of disease, microbial and other outbreak patterns and trends to guide public health planning, policies and program initiatives.

3.3.4 Laboratory Information Systems: Support data management that will provide timely, sound evidence based data sets from expert epidemiological design surveys, health information systems, and monitoring of an integrated laboratory delivery reporting system to support decision making, programming and formulation and implementation of policy in a cost-effective manner.

3.3.5 Disease Outbreaks and Response: Identification and characterisation of unusual disease occurrences to facilitate appropriate and timely response and the implementation of prevention and control measures.

3.3.6 Research and Development: Undertake operational research and supporting research in health sector by providing laboratory based evidence and data.

3.3.7 Forensic and other Laboratory Investigative Services: Providing medico-legal expert advice in understanding the causes of unexplained death.

3.3.8 Human Resource Management: Supporting national strategies with innovative approaches to work force planning and development, use of human resource information systems, pre-service and in-service professional training, leadership and management development, task-shifting, performance assessment and quality improvement and the development of effective recruitment and retention policies.

3.3.9 Health and Safety: Maintaining the health and safety of personnel directly involved and the public at large with an effective containment and disposal strategy and processes that protect the environment and prevent any improper or illegal usage of laboratory pathogens or outputs.

3.3.10 Food, Water and Environment: Monitoring food, water and the environment to ensure they meet national and international quality and standards and are free from any contaminants injurious to human health.

3.3.11 Policy Development: Provide scientific and managerial leadership in developing state public health policy as well as participate in the development of standards for all health-related laboratories.

3.3.12 Partnership and Communication: Develop state wide partnerships and maintain strong communication within the state governance system e.g. regional council, city or town council public health leaders, epidemiologists, heads of health programs such as TB, HIV/AIDS, malaria, laboratory management etc. and the private sector.

3.3.13 Integrated Data Management: Serve as a focal point for the accumulation, blending and dissemination of scientific information in support of public health programmes. There shall be a national database system for data to be analysed in a standardised format to provide for proper network reporting.

3.3.14 **Quality Assurance:** Develop, coordination and promote quality assurance programmes for clinical and public health laboratories through training and proficiency testing.

3.4 Core Values

In order to assure that the national laboratory initiatives provide appropriate quality laboratory services, MOHSS has defined Core Values to support correct actions by all professionals who work in the laboratory system.

3.4.1 **Equity:** Laboratory resources and services are distributed equitably throughout the country.

3.4.2 **Accessibility:** Services are affordable and within reach of all.

3.4.3 **Relevance:** Laboratory services are appropriate for the purpose and address the needs of the community.

3.4.4 **Partnership:** Promote teamwork and team spirit among all laboratory personnel and networking and collaboration with stakeholders.

3.4.5 **Confidentiality:** Promote professionalism and ethical practice among all staff and in their relationships with patients.

3.4.6 **Timeliness:** Ensure laboratory results reach the caregiver and the patient on time and contribute to appropriate patient management.

3.4.7 **Customer focus:** Always bear in mind who we are serving. The customer may be the community, patient, clinician, individual or public good.

3.4.8 **Reliability of results:** Laboratory test results that are accurate and acceptable to clients.

CHAPTER 4: LABORATORY INSTITUTIONAL AND MANAGEMENT FRAMEWORK

STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
Laboratory Institutional and Management Framework			YR1	YR2
To establish a functional Public Health Laboratory System with a Public Health Laboratory	% of the objectives of the policy implemented	0	10%	20%
Infrastructure				
To provide a NPHL and other laboratory facilities designed to national standards	% of progress made towards the building of the NPHL	0	10%	20%
	% of the NPHL infrastructure including hardware, software and equipment in place.	0	10%	20%
	% of all required standards for the NPHL developed	0	10%	20%
STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
Human Resources				
To ensure the development of skilled and competent Public Health Laboratory personnel to meet country's requirements and provide comprehensive laboratory services	% of skilled personnel in place for the NPHL against required.	10%	30%	60%
	% of HRD plan developed for the NPHL	10%	100%	100%
	% of specialised testing trainings provided	10%	30%	60%
To have a health and safe work force	% of safety regulations adhered to	70%	100%	100%
Laboratory Services				
To have a minimum test menu offered at each level	% of minimum test menu in place	10%	70%	100%
STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
	% of sample referral and results feedback system developed.	10%	30%	60%
To undertake research and development	% of research programmes undertaken	0%	30%	60%
To insure that Forensic and Laboratory Investigative Services	% of Forensic and Laboratory Investigative Services provided	0%	30%	60%
To ensure that quality food and water and a safe environment to the nation are provided	% of food, water and safe environment that meet national and international quality standards	100%	100%	100%
	% of quality monitoring of point of care services provided	10%	80%	100%

			INITIATIVES	RESP UNITS	COST ESTIMATE
YR3	YR4	YR5			
40%	80%	100%	Strengthen the IPHLC to provide advisory coordination services	Director, DD:CSS	N\$500,000.00
40%	80%	100%	Purchase and develop land	Director, DD:CSS	N\$40,000,000.00
40%	80%	100%	Ensure availability of NPHL infrastructure including hardware software and equipment	Director, DD:CSS	N\$2,000,000.00
40%	80%	100%	Develop standards that meet requirements for Public Health Laboratories in general	Director, DD:CSS	Staff time
			INITIATIVES	RESP UNITS	COST ESTIMATE
80%	90%	100%	Ensure appointment of qualified personnel for NPHL and NPHLS	Director, DD:CSS	Staff time
100%	100%	100%	Develop HRD plan for Laboratory personnel	Director, DD:CSS	Staff time
80%	90%	100%	Liaise with training institutions to develop and provide training in specialised testing	Director, DD:CSS	N\$500,000.00
100%	100%	100%	Develop and review health and safety regulations	Director, DD:CSS	Staff time
100%	100%	100%	Develop test menu for each laboratory tier	Director, DD:CSS	Staff time
			INITIATIVES	RESP UNITS	COST ESTIMATE
80%	90%	100%	Develop sample referral and results feedback system	Director, DD:CSS	Staff time
80%	90%	100%	Develop research protocols	Director, DD:CSS/ training institutions	N\$ 750,000.00
80%	90%	100%	Assist in the Provision of Forensic and Laboratory Investigative Services for medico legal purposes.	Director, DD:CSS/ MLT	Staff time
100%	100%	100%	Monitor quality of food, water and environment to ensure that they meet the national and international quality standards	Director, DD:CSS/ MLT	Staff time
100%	100%	100%	Develop a plan for provision and quality monitoring of point of care services.	Director, DD:CSS	Staff time

STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
Human Resources				
To ensure the development of skilled and competent Public Health Laboratory personnel to meet country's requirements and provide comprehensive laboratory services	% of skilled personnel in place for the NPHL against required.	10%	30%	60%
	% of HRD plan developed for the NPHL	10%	100%	100%
	% of specialised testing trainings provided	10%	30%	60%
To have a health and safe work force	% of safety regulations adhered to	70%	100%	100%
Laboratory Services				
To have a minimum test menu offered at each level	% of minimum test menu in place	10%	70%	100%
STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
	% of sample referral and results feedback system developed.	10%	30%	60%
To undertake research and development	% of research programmes undertaken	0%	30%	60%
To insure that Forensic and Laboratory Investigative Services	% of Forensic and Laboratory Investigative Services provided	0%	30%	60%
To ensure that quality food and water and a safe environment to the nation are provided	% of food, water and safe environment that meet national and international quality standards	100%	100%	100%
	% of quality monitoring of point of care services provided	10%	80%	100%
STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
Support System				
To establish a framework that ensures an effective supply chain management system	% of essential laboratory tests and number of standards in place	10%	30%	60%
	% of guidelines developed for the procurement of laboratory supplies	10%	70%	100%
	% of guidelines developed for safe disposal of expired supplies	10%	70%	100%
	% of guidelines developed for donations of Laboratory supplies	10%	60%	100%
	% of logistics and supply chain management systems developed	10%	30%	60%
	% of personnel trained in supply chain management against planned	10%	30%	60%

			INITIATIVES	RESP UNITS	COST ESTIMATE
80%	90%	100%	Ensure appointment of qualified personnel for NPHL and NPHLS	Director, DD:CSS	Staff time
100%	100%	100%	Develop HRD plan for Laboratory personnel	Director, DD:CSS	Staff time
80%	90%	100%	Liaise with training institutions to develop and provide training in specialised testing	Director, DD:CSS	N\$500,000.00
100%	100%	100%	Develop and review health and safety regulations	Director, DD:CSS	Staff time
100%	100%	100%	Develop test menu for each laboratory tier	Director, DD:CSS	Staff time
			INITIATIVES	RESP UNITS	COST ESTIMATE
80%	90%	100%	Develop sample referral and results feedback system	Director, DD:CSS	Staff time
80%	90%	100%	Develop research protocols	Director, DD:CSS/ training institutions	N\$ 750,000.00
80%	90%	100%	Assist in the Provision of Forensic and Laboratory Investigative Services for medico legal purposes	Director, DD:CSS/ MLT	Staff time
100%	100%	100%	Monitor quality of food, water and environment to ensure that they meet the national and international quality standards	Director, DD:CSS/ MLT	Staff time
100%	100%	100%	Develop a plan for provision and quality monitoring of point of care services	Director, DD:CSS	Staff time
			INITIATIVES	RESP UNITS	COST ESTIMATE
80%	90%	100%	Develop a framework that ensures an effective supply chain management system	Director, DD:CSS	Staff time
100%	100%	100%	Develop national standards and specifications for the procurement of laboratory supplies	Director, DD:CSS	N\$400,000.00
100%	100%	100%	Develop guidelines for safe disposal of expired supplies	Director, DD:CSS	N\$400,000.00
100%	100%	100%	Develop guidelines for donations of Laboratory supplies	Director, DD:CSS	N\$400,000.00
80%	90%	100%	Develop a system for logistics and supply chain management	Director, DD:CSS	N\$400,000.00
80%	90%	100%	Ensure capacity building in supply chain management	Director, DD:CSS	N\$400,000.00

STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
Support Systems(Equipment)				
To ensure availability of standardised appropriate equipment for laboratories	No. of guidelines developed for the installation and commissioning of laboratory equipment	0	0	1
	% of Service Level Agreements (maintenance and servicing) in place	10%	60%	100%
	No. of guidelines developed for the decommissioning and safe disposal of obsolete laboratory equipment	0	0	1
	% of laboratories with appropriate equipment	10%	50%	100%
STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
Laboratory Quality Systems				
To guide laboratories towards the delivery of quality laboratory services to maintain international standards of practice	% of a national quality assurance programme for all reportable diseases developed	10%	50%	75%
	% of laboratories enrolled to participate in WHO AFRO/ SLIPTA programme	4%	20%	40%
Bio safety and Bio security				
To strengthen biosafety and bio security measures in all laboratories	% of laboratories meeting standards for biosafety and bio security	10%	30%	60%
	% of MOHSS laboratory certification, biosafety and bio security requirements in place	10%	30%	60%
STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
	% of personnel trained in bio security and biosafety	10%	30%	60%
	% of conformity of all laboratory facilities to bio security and biosafety standards	10%	30%	60%
Integrated LIMS				
To develop a framework for collection, management and dissemination of data to relevant stakeholders	% of standardised national laboratory reporting system for notifiable diseases in place	0%	80%	100%

			INITIATIVES	RESP UNITS	COST ESTIMATE
1	1	1	Develop guidelines for the installation and commissioning of laboratory equipment	Director, DD:CSS	N\$400,000.00
100%	100%	100%	Develop Service Level Agreements (maintenance and servicing) with stakeholders	Director, DD:CSS	N\$400,000.00
1	1	1	Develop guidelines for the decommissioning and safe disposal of obsolete laboratory equipment	Director, DD:CSS	N\$400,000.00
100%	100%	100%	Facilitate procurement of appropriate equipment for all laboratories	Director, DD:CSS	Staff time
			INITIATIVES	RESP UNITS	COST ESTIMATE
100%	100%	100%	Develop a national quality assurance programme for all reportable diseases	Director, DD:CSS	Staff time
60%	80%	100%	Facilitate participation of all laboratories in WHO/AFRO/SLIPTA accreditation	Director, DD:CSS	N\$ 500,000.00
80%	90%	100%	Develop and manage national biosafety programme	Director, DD:CSS	N\$100,000.00
80%	90%	100%	Develop biosafety and bio security requirements for MOHSS laboratory certification	Director, DD:CSS	Staff time
			INITIATIVES	RESP UNITS	COST ESTIMATE
80%	90%	100%	Customise and implement standard training programme for bio security and biosafety standards	Director, DD:CSS	Staff time
80%	90%	100%	Ensure conformity of all laboratory facilities to bio security and biosafety standards	Director, DD:CSS	Staff time
100%	100%	100%	Establish and implement a standardised national laboratory reporting system for notifiable diseases/conditions, events according to IDSR guidelines and International Health Regulations (2005)	Director, DD:CSS	Staff time

STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
To have an integrated data management system in place	% of the national data base system in place	10%	30%	60%
	% of appropriate tools for data capturing in place	10%	70%	100%
	% of personnel trained on LIMS and laboratory data analysis against planned	10%	30%	60%
	% of electronic LIMS data base established and maintained	10%	30%	60%
Networking				
To promote national and international networking and collaboration that will improve access to laboratory services and maximise on resource mobilisation and utilisation	No. of meetings, workshops held and attended out of planned	4	4	4
STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
Surveillance, Disease control and Epidemic preparedness				
To provide adequate surveillance of priority diseases and participate in epidemic preparedness, response and disease control activities in the country	% of mechanisms for reporting developed for surveillance information from both the private and public sector laboratories to central repository	0%	20%	40%
	% of HR with appropriate expertise on disease outbreak, investigation and response	10%	30%	60%

STRATEGIC OBJECTIVE	KPI	BASELINE	TARGETS	
	% of personnel trained against planned	10%	30%	60%
Financing of NPHLS				
To develop a financing mechanism to enable laboratories to provide affordable, sustainable and quality public health laboratory services to the entire Namibian population	% Budget line for NPHLS in place	10%	30%	60%
	% Additional funds for Public Health related activities available	10%	30%	60%

				INITIATIVES	RESP UNITS	COST ESTIMATE
	80%	90%	100%	Develop a national data base system for scientific information	Director, DD:CSS/IT	Staff time
	100%	100%	100%	Define the data to be collected and develop appropriate tools for capturing these data	Director, DD:CSS	N\$ 300,000.00
	80%	90%	100%	Train laboratory personnel on LIMS and laboratory data analysis	Director, DD:CSS	N\$500,000.00
	80%	90%	100%	Establish and maintain electronic LIMS data base	Director, DD:CSS	Staff time
	4	4	4	Attend all planned meetings and workshops	Director, DD:CSS	Staff time N\$300,000.00
				INITIATIVES	RESP UNITS	COST ESTIMATE
	60%	80%	100%	Develop a mechanism for reporting of surveillance information from both the private and public sector laboratories to central repository	Director, DD:CSS	Staff time
	80%	90%	100%	Train and recruit staff with expertise on disease outbreak, investigation and response	Director, DD:CSS	N\$500,000.00
				INITIATIVES	RESP UNITS	COST ESTIMATE
	80%	90%	100%	Train laboratory personnel in surveillance, disease control, epidemic preparedness and response	Director, DD:CSS	N\$500,000.00
	80%	90%	100%	Ensure inclusion of Public Health Laboratory Services in overall Health financing plan for MOHSS	Director, DD:CSS	N\$1,000,000.00
	80%	90%	100%	Mobilise additional funds for Public Health related activities	Director, DD:CSS	Staff time

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