



THE PUBLIC HEALTH
INSTITUTE OF MALAWI(PHIM)

STRATEGIC PLAN

2018 - 2022

PHIM | PUBLIC HEALTH INSTITUTE
of MALAWI

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Output	t 5	Evaluation reports disseminated	Occurrence of	Invest in electronic monitoring tools and equipment							Output Description	Objectively Verifiable Indicator	Annual Output Targets	2017 / 2018	2019 / 2020	2021 / 2022	Source and means of Verification	Risks and Assumptions	Responsibility
				Dissemination report	Funds availability	Director of Planning, Monitoring and Evaluation													
Output t 2		Amount of resources	-	x	-	-	-	-	-	-	-	-	-	-	-	Budget	Funds availability	Director of Finance and Administration	
Output t 1		Electronic monitoring tools and equipment identified	Occurrence of meeting to agree on tools and equipment	-	x	-	-	-	-	-	-	-	-	-	-	List of tools	Identified tools are available on market	Director of Finance and Administration	
Output t 2		Electronic monitoring tools and equipment resourced	Amount of resources	-	x	-	-	-	-	-	-	-	-	-	-	Budget	Funds availability	Director of Finance and Administration	
Output t 1		Reporting templates developed	Existence of templates	x	-	-	-	-	-	-	-	-	-	-	-	Templates	Capacity to develop templates	Director of Planning, Monitoring and Evaluation	
Output t 2		Frequency of reporting agreed	Number of reporting per period (e.g. year)	x	2	2	2	2	2	2	2	2	2	2	2	Reporting guidelines	Staff commitment to adhere to guidelines	Director of Planning, Monitoring and Evaluation	
Strategy 2.8.6.3 (c)																			
Output t 5		Evaluation reports disseminated	Occurrence of evaluation	-	-	x	-	-	-	-	-	-	-	-	x	Dissemination report	Funds availability	Director of Planning, Monitoring and Evaluation	
Strategy 2.8.6.3 (d)																			
Ensure periodic reporting on PHM performance																			
Output Description	Objectively Verifiable Indicator	Annual Output Targets	2017 / 2018	2019 / 2020	2021 / 2022	Source and means of Verification	Risks and Assumptions	Responsibility											

ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
AMR	Antimicrobial Resistance
BBSS	Biological and Behavioral Surveillance Survey
BHT	Baobab Health Trust
CDC	Centre for Disease Control and Prevention
DAHLD	Department of Animal Health and Livestock Development
DALY	Disability Adjusted Life Years
DHRMID	Department of Human Resource Management and Development
EHO	Environmental Health Officer
FETP	Field Epidemiology Training Program
GHSA	Global Health Security Agenda
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HSSP	Health Sector Strategic Plan
HSA	Health Surveillance Assistant
IANPHI	International Association of National Public Health Institutes
IDSR	Integrated Disease Surveillance and Response
IHP+	International Health Partnership
IHR	International Health Regulations
I-TECH	International Training and Education Center for Health
ISO	International Standards
LIMS	Laboratory Information Management System
MDG	Millennium Development Goal
MGDS	Malawi Growth and Development Strategy

Strategy 2.8.6.3 (a)		Develop a framework for monitoring and Evaluation		Annual Output Targets						Objectively Verifiable Indicator		Output Description	
Output	Output t1	Output t2	Existence of output and outcome indicators developed and agreed	2017 / 2018	2019 / 2020	2020 / 2021	2021 / 2022	Report	Funds availability	Director of Planning, Monitoring and Evaluation	Output t1	Output t2	
Planning workshop conducted	Output t1	Output t2	Existence of output and outcome indicators developed and agreed	-	x	-	-	-	-	Indicator matrix	Funds availability	Director of Planning, Monitoring and Evaluation	
Output t1	Output t2	Output t3	Output t4	2017 / 2018	2019 / 2020	2020 / 2021	2021 / 2022	Source and means of Verification	Risks and Assumptions	Responsibility	Output t1	Output t2	
Internal Weekly meeting to review progress and plan forward	Output t1	Output t2	Output t3	Output t4	2017 / 2018	2019 / 2020	2020 / 2021	2021 / 2022	Source and means of Verification	Risks and Assumptions	Responsibility	Output t1	Output t2
Number of minutes held	Output t1	Output t2	Output t3	Output t4	100 %	100 %	100 %	Minutes	Discipline of holding meetings	PHIM Executive Director	Output t1	Output t2	
Documented schedule exist	Output t1	Output t2	Output t3	Output t4	x	x	x	Schedule	Schedule is respected by staff	Director of Finance and Administration	Output t1	Output t2	
Existence of TORs for mid term evaluations of SP developed	Output t1	Output t2	Output t3	Output t4	-	-	-	TORs	Capacity to develop TORs	Director of Planning, Monitoring and Evaluation	Output t1	Output t2	
Existence of consultants for mid-term contracts of the SP hired	Output t1	Output t2	Output t3	Output t4	-	-	-	Consultant contract	Funds availability	Director of Planning, Monitoring and Evaluation	Output t1	Output t2	

Output	Needs assessment conducted	Number of priority areas	Objective indicator						Source and means of Verification		
			2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022	2022			
Output t1	Long and short term training programmes established	Number of people trained	x	100%	100%	100%	100%	100%	Assessment report	Capacity to do needs assessment	Director of Human Resource Development and Training
Output t2	PHIM staff Training Plan developed		x	x	x	x	x	x	Training Plan	Funds availability	Director of Human Resource Development and Training
Strategy 2.8.6.2 (c)											
Provide a safe and conducive working and learning environment											
Output Description		Objectively Verifiable indicator	2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022	2022	Source and means of Verification	Risks and Assumptions	Responsibility
Output t1	Procurement plan including wear protective wear plan developed	Existence of procurement plan	x	x	x	x	x	x	Procurement plan	Funds availability	Director of Finance and Administration
Output t2	Use of protective wear monitored	Number of reports	-	x	x	x	x	x	Staff in protective wear		Director of Public Health Laboratory Services
Output t3	Resource Centre established	Existence of the center	-	x	-	-	-	-	Resource center	Space availability	Director of Research and Development
Output t4	Policy and procedures developed	Existence of policy and procedures	-	x	-	-	-	-	Policy and procedure document	Funds availability	Director of Research and Development
Output t5	Knowledge manager deployed	Existence of the manager	-	-	x	x	x	x	Knowledge manager	Capacity availability	Director of Research and Development
Strategic Objective 2.8.6.3											
Develop a robust monitoring and evaluation system											

MoH&P	Ministry of Health and Population
NCD	Non-Communicable Diseases
NCST	National Commission on Science and Technology
NEMC	National Emergency Management Committee
NHRA	National Health Research Agenda
NPRL	National Public Reference Laboratory
OECD	Organisation for Economic Cooperation and Development
PHC	Primary Health Care
PHIM	Public Health Institute of Malawi
PHRL	Public Health Reference Laboratory
PESTEL	Political, Economic, Social, Technology, Environmental, Legal
SDG	Sustainable Development Goals
SLIPTA	Stepwise Laboratory Quality Improvement Process Towards Accreditation
SLMTA	Strengthening Laboratory Management Toward Accreditation
SWOT	Strengths, Weaknesses, Opportunities, Threats
THE	Total Health Expenditure
TWG	Technical Working Group
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
WHO	World Health Organization

FOREWORD

The Public Health Institute of Malawi (PHIM) is pleased to unveil its 2018-2022 revised Strategic Plan which was created through a comprehensive collaborative process using weeks of input solicited from development partners, public service collaborators, academicians and other stakeholders combined with extensive individual interviews with core personnel in core strategic areas of PHIM. The strategic planning process has led to a clear, compelling and shared vision for the Institute that will serve as a guide for the organization and its partners as we move forward together.

The Plan provides a roadmap and strategic direction on key priorities and articulates the agreed vision, mission, mandate and core values of the Institute. It also sets strategic objectives, strategies, major activities, time frame, resource requirements and assigned responsibilities for achieving expected outputs in the next five years.

The Institute's goal and objectives are to maximize effectiveness in public health and consumer service; create a work environment that promotes employee success to better serve the public; take a proactive leadership role in structuring 21st century public health institute; and to implement the Ministry of Health and Population strategic goals in partnership with other health agencies. Ongoing strategic planning ensures continual improvement of public-health, anticipation of future public needs, and evaluation of performance

There is a genuine desire to make a difference in enabling the delivery of improved standards of public health. We wish to provide a supportive environment that allows professional and career development so that public health practitioners can use their skills to enhance the client/patient experience whilst working with their partners in health and social services.

In conclusion, we appeal to our development partners and all stakeholders to support the Implementation of the Strategic Plan through collaboration and partnership to enable us to achieve the strategic goal of this Plan.



Hon. Atupele Muluzi, MP
 MINISTER OF HEALTH AND POPULATION

Strategy 2.8.6.2 (c)		Strategy 2.8.6.2 (d)								
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Annual Output Targets	Risks and Assumptions	Responsibility	
		2017 / 2018	2019 / 2020	2020 / 2021	2021 / 2022	2022				
procedure manual developed	Recruitment policy implemented	x	x	x	x	x	Existence of reports	Documentation on each recruitment	Funds availability	Director of Human Resource Development and Training
Output t5	Existence of recruitment policy implemented	x	x	x	x	x	Existence of reports	Documentation on each recruitment	Funds availability	Director of Human Resource Development and Training
Output t6	Conditions of service developed	x	-	-	-	-	Existence of service	Conditions of service document	Funds availability	Director of Human Resource Development and Training
Output t7	PHIM staff oriented on conditions of service	x	x	x	x	x	Orientations sessions	Report on each session	Funds availability	Director of Human Resource Development and Training
Output t8	Human resources management practices customized	-	x	-	-	-	HRM practices documented	HRM document	Funds availability	Director of Human Resource Development and Training
Institute performance management system										
Individual performance contracts developed										
Output t1	Existence of individual performance contracts	x	x	x	x	x	Existence of individual contracts	contract	Willingness to implement	Departmental Directors
Output t2	Rewards and sanctions developed	x	x	x	x	x	Existence of incentive scheme	Incentive scheme	Alignment to national policy	PHIM Executive Director
Output t3	Departmental and organizational performance contract developed	x	x	x	x	x	Existence of departmental and organizational contract	contract	Willingness to implement	PHIM board
Develop staff capacity development system										

Strategic Objective	Develop Human Resource capacity										
	Determine staffing needs of PHIM										
Output 3	Effective communication system established	Existence of communication system	-	X	X	X	X	X	Director of Planning, Monitoring and Evaluation	Funds availability	
Output 1	Terms of reference	Existence of TORs	-	X	-	-	-	-	Director of Human Resource Development and Training	Capacity to develop TORs	
Output 2	PHIM recruit consultants	Existence of consultants	-	X	-	-	-	-	Director of Human Resource Development and Training	Funds availability	
Output 3	Job analysis workshops conducted	Number of workshops	-	X	-	-	-	-	Director of Human Resource Development and Training	Funds availability	
Output Description		Objectively Verifiable Indicator	Annual Output Targets						Risks and Assumptions	Responsibility	
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022					
		Existence of career progression plan	X					Plan	Director of Human Resource Development and Training	Capacity to develop plan	
Output 1	Develop a career progression plan	Existence of plan							Director of Human Resource Development and Training	Funds availability	
Output 2	Recruit consultant	Existence of consultants	X					Consultant contract	Director of Human Resource Development and Training	Funds availability	
Output 3	Career progression plan developed	Plan documented		X				Plan	Director of Human Resource Development and Training	Funds availability	
Output 4	Recruitment policy and manual	Existence of manual			X			Manual	Director of Human Resource Development and Training	Funds availability	
Strategy 2.8.6.2 (a)		Determine staffing needs of PHIM									
Output Description		Objectively Verifiable Indicator	Annual Output Targets						Risks and Assumptions	Responsibility	
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022					
		Existence of communication system	X	X	X	X	X	Communication system	Director of Planning, Monitoring and Evaluation	Funds availability	
Strategy 2.8.6.2 (b)		Put in place appropriate Human resource Management system									
Output Description		Objectively Verifiable Indicator	Annual Output Targets						Risks and Assumptions	Responsibility	
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022					
		Existence of career progression plan	X					Plan	Director of Human Resource Development and Training	Capacity to develop plan	
Output 1	Develop a career progression plan	Existence of plan							Director of Human Resource Development and Training	Funds availability	
Output 2	Recruit consultant	Existence of consultants	X					Consultant contract	Director of Human Resource Development and Training	Funds availability	
Output 3	Job analysis workshops conducted	Number of workshops	-	X	-	-	-	Report	Director of Human Resource Development and Training	Funds availability	

PREFACE

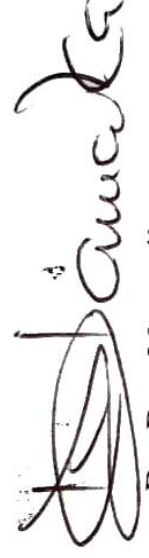
Public Health Institute of Malawi (PHIM) strategic plan for 2012-2017 wended up in December 2017. The Ministry of Health and Population (MoH&P) with support from stakeholders initiated the process of reviewing the strategic plan to make necessary updates that will reflect changes that occurred in health and other sectors in the last 5 years and develop a new strategic plan for year 2018-2022. The purpose of the review was to assess the functionality and effectiveness of the 2012-2017 plan through time, and to the degree that data is available, engage national expertise and the collaboration of partners, through a participatory approach to help understand the level to which the plan met its goals. The results provided stakeholders with a foundation for informed decision making regarding the future of public health in Malawi.

At the beginning of the process a collection of relevant materials in public health from MoH&P and other institutions were reviewed and appraised. Materials were processed and adapted in content and context to the nature and dynamics of health practice in Malawi. There were two stakeholders' workshops in which facilitators used a combination of different methods; PESTEL and SWOT analysis, presentations, group discussions and sharing of best practice while encouraging high level of participation from stakeholders.

Although the old strategic plan presented the MoH&P vision for improving public health responsiveness, the over-arching finding is that MoH&P and partners were unable to implement key elements of the 2012-2017 strategic plan resulting in provision of sub-optimal services to the public. The outcome of the review is this revised plan incorporating lessons learnt and contextual changes over the last five years.

In the updated plan functional components were streamlined into 5 major components namely: Public Health Reference Laboratories, Research and Development, Epidemiology & Surveillance, Governance & Management and Support Services. Each of the components was thoroughly evaluated to extract major activities, responsibilities and implementation framework.

While the review team recognized remarkable interest and commitment to PHIM on the part of Government and MoH&P, there is need to step up allocation of human and financial resources, increase attention to legal and permanent site matters, and approach implementation of the new plan with adequate support and sense of urgency.



Dr. Dan Namarika

SECRETARY FOR HEALTH AND POPULATION

ACKNOWLEDGEMENTS

The Public Health Institute of Malawi (PHIM) expresses its gratitude to various players whose effort and contributions culminated into the development of this Strategic Plan. While many actors played crucial roles, the following are specially mentioned: representatives of development partners; Ministry of Health and Population; representatives of College of Medicine and Kamuzu College of Nursing.

PHIM further extends sincere thanks to all participants for their contributions during the two-day Strategic Planning review workshop which was held from August 3rd to 4th, 2017; members of the Taskforce who dedicated their time to review the draft; departmental members including relevant stakeholders who worked on relevant objectives that have guided the review and development process; as well as the participants to the Strategic Plan validation meeting which was held on 14th December 2017.

Special thanks go to CDC for the financial and technical support provided to I-TECH which facilitated the review and development of this 2018-2022 Strategic Plan. Special thanks also go to PHIM Secretariat, PHIM Programme Manager Mr. Safari Mbewe and the Consultant Professor Maureen L. Chirwa for facilitating the review and development process. The above support would not have been possible without the continued commitment and guidance of the I-TECH Country Representative.

Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022			
Output 1 and supply system in place		x	x	x	x				
Output 2 Freight management system in place		x	x	x	x				
Output 3 Asset management system in place		x	x	x	x				
Strategy 2.6.1 (c) Strengthen information management systems									
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022			
Output 1 Information management system in place		x	x	x	x				
Strategy 2.6.1 (d) Strengthen communications and public relations									
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022			
Output 1 and completed research outputs	Number of research outputs	x	x	x	x		Newsletters/Documents	PHIM Executive Director	
Output 2 and Success stories	Frequency of dissemination	-	2	2	2	2	Dissemination to media	PHIM Executive Director	

Chapter: 1

Introduction

Public Health Institute of Malawi (PHIM) strategic plan for 2012-2017 wended up in December 2017. The Ministry of Health and Population (MoH&P) with support from stakeholders initiated the process of reviewing the strategic plan to make necessary updates that reflected changes that occurred in health and other sectors in the last 5 years and develop a new strategic plan for years 2018-2022. The purpose of the review was to assess the functionality and effectiveness of the 2012-2017 plan through time, and to the degree that data was available, engage national expertise and the collaboration of partners, through a participatory approach to help understand the level to which the plan met its goals. The results provided stakeholders with a foundation for informed decision making regarding the future of public health in Malawi.

At the beginning of the process a collection of relevant materials in public health from MoH&P and other institutions were reviewed and appraised. Materials were processed and adapted in content and context to the nature and dynamics of health practice in Malawi. There were two stakeholders' workshops in which facilitators used a combination of different methods; PESTEL and SWOT analysis, presentations, group discussions and sharing of best practice while encouraging high level participation from stakeholders.

Although the old strategic plan presented the MoH vision for improving public health responsiveness, the over-arching finding was that MoH&P and partners were unable to implement key elements of the 2012-2017 strategic plan resulting in provision of sub-optimal services to the public. The outcome of the review is this revised plan incorporating lessons learnt and contextual changes over the last five years.

In the updated plan functional components have been streamlined into five major categories namely: Public Health Reference Laboratories, Research & Development, Epidemiology & Surveillance, Governance & Management and Support Services. Each of the categories was thoroughly evaluated to extract major activities, responsibilities and implementation framework.

While the review team recognized remarkable interest and commitment to PHIM on the part of Government and MoH, there is desperate need to step up allocation of human and financial resources, increase attention to legal and permanent site matters, and approach implementation of the new plan with adequate support and sense of urgency.

Strategy 2.8.5.4 (d)		Ensure regular communication/coordination with within between PHIM and MoH&P/other sectors/stakeholders	
Output t1	Communication system within PHIM established	Existence of communication policy & procedures	x
Output t2	Communication system with partners established	Existence of communication strategy	x
Output Description		Verifiable indicator	2017 / 2018 / 2019 / 2020 / 2021 / 2022
Source and means of Verification	Staff commitment to adhere to system	System	-
Risks and Assumptions			
Responsibility	PHIM Executive Director		
Engage MOH&P and other government sectors for harmonization of efforts			
Output t1	Communication system with PHIM established	Existence of communication policy & procedures	x
Output t2	Communication system with partners established	Existence of communication strategy	x
Output Description		Verifiable indicator	2017 / 2018 / 2019 / 2020 / 2021 / 2022
Source and means of Verification	PHIM is recognized to be part of TWGs	Reports of participation	x
Risks and Assumptions			
Responsibility	All Directorates		
Provide administration and management support for the operations of the PHIM			
Establish national and international collaboration			
Output t1	Identify and maintain national and international collaborations	Level of vibrancy of PHIM	x
Output Description		Verifiable indicator	2017 / 2018 / 2019 / 2020 / 2021 / 2022
Source and means of Verification			
Risks and Assumptions			
Responsibility	PHIM Executive Director		
Provide appropriate logistical support to PHIM			

1.1 Background

According to HSSP II (2017-2022) Malawi has a three-tier healthcare delivery structure which responds to different stages of disease prevention, treatment and management. The primary level health care responds to primal and primary aspects of disease prevention and management. Secondary and tertiary levels of care respond to disease treatment and management. Below primary level of care is community which is assisted by health surveillance assistants, veterinary assistants and community health workers. For a country where poverty and under nutrition levels are high and with shortage of health care workers, healthcare infrastructure and inadequate financial resources for procuring medical equipment and supplies, interventions to prevent occurrence of diseases are supposed to weigh more than those that are curative. Poverty remains high at estimated 50.7 percent and income inequality is wide with gini coefficient of 0.45¹. With income per capita of US\$380² (World Bank, 2015 cited in draft MGDS III) and lack of employment, Malawi is classified as low-income country by the World Bank, least developed country by the Organisation for Economic Cooperation and Development (OECD), low human development (HDI 0.445) by the United Nations Development Program (UNDP). Income inequality transmits into inequality in social indicators. For example, of the children who are stunted, 46 percent are in lowest wealth quintile, 37 percent are in middle wealth quintile and 24 percent are in highest wealth quintile³.

The pattern of disease profiles for 2006 and 2011 show that major leading causes of DALY remain poverty related cases (HIV and AIDS, malaria, maternal complications due to teenage pregnancies, and under nutrition) but with increasing shift to affluence related cases (road injuries, hypertension, diabetes, obesity). Weak economy subjects the health system to situation of underfunding and increased household out of pocket expenditure on health. During the period 2012/13 to 2014/15 about 61.6 percent of total health expenditure (THE) came from development partners, 25.5 percent from government and 12.9 percent from households⁴. Considering majority of Malawians are not in formal employment where they would have chance of employer supported medical cover, the household expenditure results in high level of catastrophic expenditure. Given the persistent inadequate resources (financial, human and infrastructure) the need to emphasise on public health cannot be over emphasised.

Often, discussion regarding health focuses on human health even though animal health has causal linkage with human health. Coordination between Ministry of Health and Population (MoH&P) which is responsible for human health and Department of Animal Health and Livestock Development (DAHLD) has been nearly in-existent yet the coordination is important to detect and control zoonotic events. Emerging infectious diseases such as avian flu has necessitated the need for national policy or strategy with a One Health approach⁵.

¹ NSO and ICF Macro (2011), Integrated Household Survey

² World Bank (2015) cited in GoM (2017) draft MGDS III

³ NSO and ICF Macro (2016) Malawi Demographic and Health Survey

⁴ GoM (2017), Health Sector Strategic Plan II, Towards Universal Coverage

⁵ Njoka P.E.C (2015), One Health Concept, Malawi Perspective, Paper presented at the International Health Regulation Monitoring

Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022			
Output t1 Annual updates to stakeholders	Number of reports timely submitted	x	2	2	2	2	Reports	Funds availability	PHIM Executive Director
Output t2 Mechanisms put in place	Documented mechanisms	x	-	-	-	-	mechanisms	Commitment to implement mechanisms	PHIM Executive Director
Output t3 Monitored mechanisms for effectiveness	Number of reports on performance	x	2	2	2	2	Reports	Funds availability	PHIM Executive Director
Strategy 2.8.5.4 (b) Review and develop 5-year strategic plan									
Output t1 Terms of reference approved	Existence of TOR	-	-	-	x	-	TORs	Capacity to develop TORs	PHIM Executive Director
Output t2 Consultant recruited	Existence of consultant	-	-	-	-	x	Consultant contract	Funds availability	PHIM Executive Director
Output t3 Workshops conducted	Number of review workshops	-	-	-	-	x	Report	Funds availability	PHIM Executive Director
Strategy 2.8.5.4 (c) Determine roles and responsibilities between PHIM, MoH&P departments and other sectors									
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022			
Output t1 Roles and responsibilities shared	Document on roles and responsibilities	x	-	-	-	-	MoU	Acceptance by other actors to get into MoU	PHIM Executive Director

Strategy 2.8.5.3 (c)		Establish standard procedures for financial control and management		Annual Output Targets		Source and means of Verification		Risks and Assumptions		Responsibility		Output Description		
Output	Accounting staff trained in package use	Number of accounts staff trained	%	2017	2018	2019	2020	2021	2022	System	Treasury approval	PHIM Executive Director/Director of Finance and Administration	Output t1	Expenditure approval system developed
Output t3										System	Treasury approval	PHIM Executive Director/Director of Finance and Administration	Output t1	Expenditure approval system developed
Output t2										System	Treasury approval	PHIM Executive Director/Director of Finance and Administration	Output t2	Expenditure reporting system developed
Output t3										Document	Treasury approval	PHIM Executive Director/Director of Finance and Administration	Output t3	Auditing procedures developed
Strategy 2.8.5.3 (d)		Produce audited financial reports		Annual Output Targets		Source and means of Verification		Risks and Assumptions		Responsibility		Output Description		
Output	Verifiably	2017	2018	2019	2020	2021	2022	System	Treasury approval <th>PHIM Executive Director/Director of Finance and Administration</th> <th>Output t1</th> <th>Audited system in place</th>	PHIM Executive Director/Director of Finance and Administration	Output t1	Audited system in place		
Output t1	Existence of system	x	x	x	x	x	x	System	Treasury approval	PHIM Executive Director/Director of Finance and Administration	Output t1	Audited system in place		
Output t2	Frequency of audits	1	1	1	1	1	1	Audit reports	Government auditors regularly conducts audits	PHIM Executive Director/Director of Finance and Administration	Output t2	Government auditors and external auditors for donor funds		
Strategy 2.8.5.4 (a)		Sustain government oversight and management		Annual Output Targets		Source and means of Verification		Risks and Assumptions		Responsibility		Output Description		
Output	Verifiably	2017	2018	2019	2020	2021	2022	System	Treasury approval <th>PHIM Executive Director/Director of Finance and Administration</th> <th>Output t1</th> <th>Audited system in place</th>	PHIM Executive Director/Director of Finance and Administration	Output t1	Audited system in place		
Output t1	Existence of system	x	x	x	x	x	x	System	Treasury approval	PHIM Executive Director/Director of Finance and Administration	Output t1	Audited system in place		
Output t2	Frequency of audits	1	1	1	1	1	1	Audit reports	Government auditors regularly conducts audits	PHIM Executive Director/Director of Finance and Administration	Output t2	Government auditors and external auditors for donor funds		

1.1.2 Situation Analysis

Malawi has seen improvement in health outcomes in many areas. Life expectancy has increased from 39 years in 1960s to 54 years in 2016⁶. Maternal mortality per 100,000 has declined from 1,020 in 1992 to 439 in 2016. Similarly, under-five mortality per 1,000 has declined from 234 in 1992 to 64 in 2016 while infant mortality per 1,000 has declined from 135 in 1992 to 42 in 2016⁷. The disease profile or burden of disease has not changed pattern in the last decade especially when comparing 2006 and 2011 burden of disease profiles. HIV and AIDS accounts for 34.9 percent of total Disability Adjusted Life Years (DALY) followed by lower respiratory tract infection at 9.1 percent, malaria at 7.7 percent of total DALY and other disease conditions. Cases of Non-Communicable Diseases (NCD) are on the increase accounting for 16 percent of all adult deaths⁸. The 2018-2022 Health Sector Strategic Plan (HSSP II) thrusts on universal health coverage and has as one of the eight strategic objectives socio-economic determinants which gives prominence to the need to address environmental and social risk factors; such as behavioural and life style, water and sanitation, food and nutrition, housing, living and working conditions⁹.

Demographically, Malawi like many Sub Saharan countries has a predominantly youthful population which presents high economic dependency. It also has high number of women in reproductive age. The large youthful population just as the small elderly population has specific health needs which any health strategy needs to consider. Table 1 shows the demographic composition.

Table 1: Demographic Population in Malawi (2017)

Population	Number	Percentage
Children aged 0-59 months (under five years)	3,094,693	18%
Population that is under 15 years of age	7,790,744	46%
Population of adolescents (10-19 years of age)	3,954,332	23%
Women of reproductive age (15-49 years)	3,871,569	23%

Source: National Statistical Office Malawi

1.1.3 A Public Health Approach

Historically the contribution of Health care to the reduction of mortality rates is relatively small (smaller than one might think)¹⁰. Pruckner (2010) lists inputs in producing health stock as health care, diet, exercise, environment, income and time¹¹. The Public Health Institute of Malawi (PHIM) was established to provide a comprehensive response and leadership in disease surveillance, research, prevention and

⁶ See <http://www.who.int/countries/mwi/en/>

⁷ NSO and ICF Macro (2016) Malawi Demographic and Health Survey

⁸ GoM (2017), Ministry of Health, Health Sector Strategic Plan II, Towards Universal Health Coverage

⁹ Ibid

¹⁰ http://www.eco.uc3m.es/~mmachado/Teaching/Salud/2011_2012/1.2.%20Health%20production%20function_v2.pdf

¹¹ Pruckner, G.J. (2010), Demand for health capital, Health Economics lecture notes. Available at <http://www.econ.jku.at/members/pruckner/files/lehre/health/demand.pdf>

control as well as to generate information that informs policy and practice in public health service delivery¹². Its approach recognizes the need for collaboration and coordination among various actors within and outside mainstream health sector but contribute to health outcomes.

1.1.4 Background of the Strategic Plan

Public Health Institute of Malawi (PHIM) was established in 2012 and embarked on the development of its first 2012–2017 strategic plan. Performance assessment of the first strategic plan showed that the plan was not fully finalized, it was not costed, and some aspects of the plan were not implemented. Several changes have also taken place calling for a different response. These among other reasons necessitated the need to review the plan. The Public Health Institute of Malawi (PHIM) with technical support from I-TECH has developed the 2018-2022 Strategic Plan through a comprehensive collaborative process involving Senior Management of the Ministry of Health and Population (MoH&P), development partners, Ministry of Agriculture, Department of Veterinary, public service collaborators, academicians and other stakeholders, combined with extensive individual interviews with personnel in core functional components of PHIM. The three-core technical functional components of PHIM against which this strategic plan is developed are: Public Health Reference Laboratories (PHRL); Research and Development; Epidemiology and Surveillance; and two cross cutting functional components are Governance and Management; and Support Services. Each of the functional component is described below:

(i) Public Health Reference Laboratories (PHRL) Directorate

The Public Health Reference Laboratories (PHRL) are specialized laboratories that offer advanced essential public health laboratory leadership through science and services. Its main goal is to develop a robust and sustainable public health reference and central veterinary laboratory capacity to address national public health concerns. The laboratories perform specific activities that ensure that the PHRL goals and functions are successfully implemented.

(ii) Research and Development Directorate

The Research and Development Directorate aims at generating quality information and make it accessible to all intended users for evidence-based decision making, through standardized and harmonized tools across all programs. The goal is to improve capacity to conduct research and promote utilization of research findings for evidence-informed decision-making in practice and policy formulation.

This will be done through commissioning research projects in line with priority health interventions outlined in the HSSP II; reviewing and updating the National Health Research Agenda (NHRA) aligned to HSSP II; conducting continuous capacity building initiatives at all levels (National, Institutional, and Individual); promoting collaboration between international and local researchers; enforcing rigorous scientific and ethical conduct of research in line with local and international standards; promoting knowledge sharing through appropriate dissemination fora and functional library services; strengthening translation of research findings for policy and practice formulation through the Malawi Knowledge Translation Platform (www.malawikip.org); providing access to research conducted in the health sector through the MOH website and National Commission on Science and Technology (NCST) database; and establishing functional research infrastructure at National and District Levels.

(iii) Epidemiology and Surveillance Directorate

Epidemiology deals with determining the distribution, determinants, control of diseases and other health

¹² Public Health Institute of Malawi, accessed at <http://malawipublichealth.org/>

Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017 / 2018	2018 / 2019	2019 / 2020	2020 / 2021	2021 / 2022			
Output t 8 Some PHIM services are provided at a fee	Type of services for fee	-	X	X	X	X	Fee structure	Services seekers are able to pay	Director of Finance and Administration
Output t 9 Potential private sector engaged	Number of private sector engaged	-	X	X	X	X	Report	Sufficient private sector interest	PHIM Executive Director
Output t 10 Key funding partners are identified	List of funding partners	X	-	-	-	-	List	Partners are willing to fund PHIM	PHIM Executive Director
Strategic Objective 2.8.5.3									
Strategy 2.8.5.3 (a)									
Determine funding mechanism within PHIM									
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
Funding sources (Treasury, donors, fees) are identified	Existence of funding streams	X	X	X	X	X	Report	Favorable economic conditions	PHIM Executive Director/ Director of Finance and Administration
Strategy 2.8.5.3 (b)									
Procure accounting package and equipment									
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
Appropriate accounting determined	Occurrence of meeting to determine accounting package	X	-	-	-	-	Quotations from suppliers	Appropriate accounting package is available on the market	Director of Finance and Administration
Accounting package installed	Existence of accounting package	X	-	-	-	-	Package	Funds availability	Director of Finance and Administration

Output	Stakeholder meeting conducted	Occurrence of meeting	Annual implementation plan costed	Existence of implementation plan	Output t2	Annual implementation plan costed	Output t3	Strengthen resource mobilization in relation to financial for sustainable funding, human, material/supplies, equipment and infrastructure			
								Output t1	Output t3		
Output t1	PHIM Executive Director	Funds availability	Report	2	2	2	2	2	2		
Output t2	Director of Finance and Administration	Capacity to plan and cost	Plan	x	x	x	x	x	x		
Output t3											
Output Description	Resource mobilization developed	Presence of strategy	Number of officer designated	Funding proposals generated	Number of proposals developed	Number of funded projects implemented	Number of funded reports submitted	Number of engaged donors	Objective Indicator	Annual Output Targets	
										2017 / 2018 / 2019 / 2020 / 2021 / 2022	2021 / 2022
Output t1	Director of Finance and Administration	Funds availability	Strategy	-	-	-	-	-	2017 / 2018 / 2019 / 2020 / 2021 / 2022	2021 / 2022	
Output t2	Director of Human Resource Development and Training	Capacity within to assign resource mobilization function	Officer	x	x	x	x	x	2017 / 2018 / 2019 / 2020 / 2021 / 2022	2021 / 2022	
Output t3	PHIM Executive Director	Funds availability	Report	x	x	x	x	x	2017 / 2018 / 2019 / 2020 / 2021 / 2022	2021 / 2022	
Output t4	PHIM Executive Director	Capacity to write winning proposals	Proposals	x	x	x	x	x	2017 / 2018 / 2019 / 2020 / 2021 / 2022	2021 / 2022	
Output t5	PHIM Executive Director	Capacity to implement projects	Project reports	x	x	x	x	x	2017 / 2018 / 2019 / 2020 / 2021 / 2022	2021 / 2022	
Output t6	PHIM Executive Director	Staff adhere to reporting timelines	Reports	x	x	x	x	x	2017 / 2018 / 2019 / 2020 / 2021 / 2022	2021 / 2022	
Output t7	PHIM Executive Director	Donor willingness to be engaged	Report	x	x	x	x	x	2017 / 2018 / 2019 / 2020 / 2021 / 2022	2021 / 2022	

related events which is one of the core components of public health. On the other hand, surveillance is the ongoing and systematic collection, analysis, and interpretation of data on specific health events for planning, implementation and evaluation of public health programs. The Epidemiology and Surveillance Directorate's core function therefore is to promptly detect disease outbreaks and timely disseminate information for action against any epidemic and other diseases of public health concerns.

The Directorate aims at strengthening Integrated Disease Surveillance and Response (IDSR) and animal health/Disease surveillance through establishing effective integrated disease surveillance system to detect any changes in the occurrence of priority diseases; promoting evidence based epidemic control strategies for target diseases for prompt and appropriate public health action; timely disseminating information about disease outbreaks and other relevant epidemiological information to health services personnel and other interested agencies.

In collaboration with other departments under PHIM, the Directorate aims at strengthening IDSR through providing a public health response to the international spread of disease in accordance with International Health Regulations (IHR); conducting operational research to influence public health policies; and carry out monitoring and evaluations of disease prevention and control strategies and interventions. The Directorate will focus on eight main strategies: communicable disease (including HIV, Malaria and TB) surveillance and control; preparedness and response; non-communicable disease surveillance; Field Epidemiology and Laboratory Training programme (FELTP); Antimicrobial resistance (AMR); International Health Regulations and surveillance of zoonotic diseases and other events of public health concern.

(iv) Governance and Leadership

Governance in this Strategic Plan focuses on the establishment of policies, and continuous monitoring of their proper implementation within PHIM. It includes the mechanisms required to balance the powers of the Ministry of Health, its functional components, committees and secretariat with the associated accountability, and their primary duty of enhancing the prosperity and viability of the organization. The management on the other hand focuses on organizing and employing human and material resources to accomplish PHIM's vision, mission, goal and objectives. Administration within management focuses on execution of the plan and managerial functions which in this strategic plan include: Leadership, Finance; Legal Frame work; Human Resources; Monitoring and Evaluation; Land and Infrastructure.

(v) Support Services

Support services are cross cutting proactive functions to promote a strong Public Health Institute in Malawi that inspires public health excellence and transforms lives of all. The following have been isolated as key functions to start with: national and international networking and collaboration; logistics; capacity development; IT/Electronic Medical Record; and documentation and communication.

The revised strategic plan aims at addressing some of the challenges experienced with the implementation of the first plan. Challenges included weak internal systems, poor networking and collaboration between PHIM and its beneficiaries as well as with the public. The internal audit revealed inadequate governance structure for PHIM. It also revealed inadequate documented monitoring and evaluation systems; non-functional instituted committees to support the effective governance of PHIM; inadequate visibility of PHIM and mechanisms for measuring its public and professional expectations; inadequate capacity on technology, infrastructure and equipment, transport, legislation to effectively provide required leadership. The revised plan aims at strengthening the Institute's innovative leadership at Secretariat level for spearheading the implementation of the PHIM mandate by addressing key strategic challenges which came out in consultative meetings. These key challenges have informed the

current strategic objectives and outcomes. Governance structure through explicitly defining performance standards and operationalizing governing committees; transparency and accountability in resource management; legislation related to PHIM to be completed hence making its roles, stand, existence and expectations clear; institute a register system for the existing laboratories in the country.

The institute has inadequate governance structures to drive its mandate. At the establishment of PHIM, committees were set but have not been functional. There is need to review committees' terms of reference to support the effective governance of PHIM. It is therefore essential to ensure that the governance structure with proper committees be clearly constituted. PHIM secretariat is accessible. However, there is need for PHIM to have its own physical structures for visibility which will improve accessibility.

1.1.5 Policy Linkages

The 2018–2022 PHIM Strategic Plan will be implemented within a framework of International and national health goals, policies and strategies. Internationally, these include:

- The WHO's International Health Regulation (IHR) 2005 – to guide the country on key actions needed to efficiently and effectively respond to public health events of national and international concern and assure adherence to international regulations;
- The Ouagadougou declaration on Primary Health Care (PHC) and Health Systems—a re-iteration of and re-dedication to the principles of the PHC approach to improve the health of the people, within the context of an overall health system strengthening approach;
- The International Health Partnership (IHP+) on Aid Effectiveness which encourages inclusive health planning and joint assessment;
- The 17 United Nations' Sustainable Development Goals (SDG) which calls for all countries and all stakeholders to act in collaborative partnership in the implementation of the SDGs in order to achieve the Global Health Security Agenda ;
- The Global Strategy on Antimicrobial Resistance (AMR) whose strategic objectives include: (i) Education & Awareness; (ii) Surveillance & Research; (iii) Infection Prevention & Care; (iv) Optimal Use; and (v) Investment & Sustainability;
- The World Bank Regional Framework for Communicable Disease Control and Preparedness that focuses on the need to (a) develop regional integrated multi-disease surveillance, preparedness and response capacities, (b) strengthen regional capacities for laboratory diagnostics of infectious disease (c) Strengthen Regional Institutions and networks for inter-country collaboration;
- The African Health Strategy 2006-2030 which mandates member states and regional economic communities to strengthen their surveillance and response plans for health disasters in line with the IHR 2005;
- The World Bank Framework of Agreement (2018) which provides for discussion of mutual public health issues and required cross-border efforts;
- The African CDC which was established by African Union (The African Union Resolution AU/Dec 554 (XXIV) of January 2015) mandates member countries to establish dedicated National Public Health Institutes. There are 5 regional collaborating centres (RCCs) which acts as technical support institutions that work closely with member states especially public health institutes. Malawi is in the southern African RCC currently hosted by republic of Zambia.

Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017 / 2018	2019 / 2020	2020 / 2021	2021 / 2022	2022			
Strategy 2.8.5.2 (c)									
Output t 1 Treasury is engaged to PHIM direct fund	Amount of Treasury funds appropriated to PHIM	-	x	x	x	x	Resistance by MoH&P and Treasury	PHIM Director	
Output t 2 PHIM has budget vote	Existence of budget vote	-	x	x	x	x	Resistance by MoH&P and Treasury	PHIM Director	
Output t 3 Calendar of budget engagement is prepared	Existence of budget calendar	x	-	-	-	-	Budget calendar is available	Director of Human Resource Development and Training	
Develop joint costed annual implementation plan									
Strategy 2.8.5.2 (b)									
Output t 1 PHIM priorities are documented	Existence of PHIM priorities	x	x	x	x	x	No interference by donors and others in setting priorities	PHIM Executive Director	
Output t 2 Budget allocation formula is developed	Presence of budget allocation formula	x	x	x	x	x	Sufficient capacity to develop the formula	PHIM Executive Director/ Director of Finance and Administration	
Output t 3 Funding is aligned to national and international priorities	Extent of alignment of funding and public health priorities in HSSP and SDGs	-	x	x	x	x	Noninterference in priority setting	PHIM Executive Director	
Advocate for increased budget allocation to PHIM									
Output t 1 PHIM priorities are documented	Existence of PHIM priorities	x	x	x	x	x	No interference by donors and others in setting priorities	PHIM Executive Director	
Output t 2 Budget allocation formula is developed	Presence of budget allocation formula	x	x	x	x	x	Sufficient capacity to develop the formula	PHIM Executive Director/ Director of Finance and Administration	
Output t 3 Funding is aligned to national and international priorities	Extent of alignment of funding and public health priorities in HSSP and SDGs	-	x	x	x	x	Noninterference in priority setting	PHIM Executive Director	

Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017 / 2021	2018 / 2020	2019 / 2021	2020 / 2022	2021 / 2022			
Capacity development staff facilitated	Percent development secretariat staff trained	100	-	-	-	-	Trained secretariat staff	PHIM Executive Director	
Output t 3 Capacity development board members facilitated	Percent board members trained	100	-	-	-	-	Trained board members	PHIM Executive Director	
Output t 4 Leadership capacity development programme in place	Number of trainings attended	x	x	x	x	x	Capacity development programme	Director of Human Resource Development and Training	
Output t 5 Performance appraisals conducted	Number of appraisals reports	100	100	100	100	100	Appraisal reports	Director of Human Resource Development and Training	
Strategy 2.8.5.1 (d) Acquire land and infrastructure									
Output t 1 Land acquisition documents	Existing of all documents	x	-	-	-	-	Land application	Director of Finance and Administration	
Output t 1 PHIM engages appropriate authorities	Number of meetings	x	-	-	-	-	Cooperation from Lands office	Director of Finance and Administration	
Output t 2 Deed process completed	Existence of deed	-	x	-	-	-	Title deed	Director of Finance and Administration	
Strategic Objective 2.8.5.2 Establish financing mechanism and sustainability									
Ensure activities are aligned with national/international priorities									
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility

Nationally the following regulations apply:

- The Public Health Act (under review) which commissions the PHIM to operate as semi-autonomous in order to efficiently respond to disease and events outbreaks for the good of the majority's health.
- The PHIM Bill (under development) which provides for the establishment of the Public Health Institute of Malawi as a body corporate responsible for the promotion of public health on behalf of the Government; for the administration and enforcement of the laws relating to public health;
- The National Health Policy (2016) whose aims include disease prevention, promotion of good health through multi-sectoral collaboration, accessible technologies, developing human resources and encouraging Public- Private Partnerships to achieve synergies and leverage resources. PHIM's approach to ONE HEALTH global strategy require multi-sectoral cooperation and partnering with private sector.
- The Health Sector Strategic Plan (2017-2022) which provides for the establishment of PHIM as a semi-autonomous statutory body through a legislative bill. The plan has prioritized PHIM establishment, acquisition of land for construction of PHIM, implementation of the WHO's International Health Regulations (IHR 2005) and implementation of the Field Epidemiology Training Program (FETP) among others.

1.2 PESTEL and SWOT Analysis

To make progress against the five-year envisioned future, PHIM will constantly anticipate the strategic factors likely to affect its ability to succeed and to assess the implications of those factors. This process of building foresight about the future assists PHIM in constantly recalibrating its view of the relevant future, a basis upon which to review the strategic plan.

An important step in responding strategically and effectively to the rapidly changing environment facing the PHIM is developing an understanding of the external and internal context within which PHIM operates. This involved an analysis of the internal strengths and weaknesses of the PHIM as well as the opportunities and threats (SWOT) facing the Institute externally through political, economic, social, technological, legal, environmental and ethical analysis. This led to generation of ideas for strategic goals, objectives, strategies and activities that have helped structure and focus the institute strategic plan.

1.2.1 PESTELE analysis

PESTELE was used to analyze the external environment for the PHIM to assess itself on its strengths, weaknesses, opportunities to be grabbed for addressing the threats

(i) Political

PHIM operates in an environment of mixed characteristics. The political landscape presents mixed bag to public health delivery in Malawi. Health is a priority in development plans and strategies such as Vision 2020, Malawi Growth and Development Strategy (MDGS) I, II and III. There are also specific health sector strategies such as Program of Work which was succeeded by Health Sector Strategic Plan (HSSP) for the period 2011-2016¹³. This thrusts-on equity and quality of health care delivery. It has been replaced by another HSSP for the period 2017-2022 which thrusts on moving towards universal

¹³ GoM (2012), Health Sector Strategic Plan 2011-2016, Ministry of Health

health coverage¹⁴. National budget allocation puts health sector third largest after agriculture and education. The public service reforms currently underway have health sector as one of pioneer areas for doing reforms¹⁵.

Health is politically appealing to all political parties as evidenced in 2014 Campaign Manifestos for major parties. All political parties in Malawi contesting for the presidency as well as aspirants for Member of Parliament placed emphasis on health. However, except a few, majority look at health from more of medical issue than public health issue¹⁶.

Although the political economy tilts in favour of health, limited political will to address challenges whose effects contribute to poor health often counter the positive strides. Challenges include social determinants of health: poverty, inequality, waste management, water and sanitation among others.

(ii) Economic

Malawi economy has grown over the years although the potential positive gains of growth have been offset by rapid population growth which in net has made per capita income to remain low. Poverty remains high at estimated 50.7 percent and income inequality is wide with gini coefficient of 0.45¹⁷. With income per capita of US\$380¹⁸ (World Bank, 2015 cited in MGDS III), Malawi is classified as low-income country by the World Bank, least developed country by the Organisation for Economic Cooperation and Development (OECD), low human development (HDI 0.445) by the United Nations Development Program (UNDP). Income inequality transmits into inequality in social indicators. For example, of the children who are stunted, 46 percent are in lowest wealth quintile, 37 percent are in middle wealth quintile and 24 percent are in highest wealth quintile¹⁹.

The pattern of disease profiles for 2006 and 2011 show that major leading causes of DALY remain poverty related cases (HIV and AIDS, malaria, maternal complications due to short parity and teenage pregnancies, under nutrition) but with increasing shift to affluence related cases (road injuries, hypertension, diabetes, obesity). Weak economy subjects health system to situation of underfunding and increased household health expenditure. During the period 2012/13 to 2014/15 about 61.6 percent of total health expenditure (THE) came from development partners, 25.5 percent from government and 12.9 percent from households²⁰. Considering majority of Malawians are not in formal employment where they have employer supported medical cover, the household expenditure leads to high levels of catastrophic expenditure. Given the persistent inadequate resources (financial, human and infrastructure) the need to emphasise on public health cannot be over emphasised.

(iii) Social

Malawi population is largely youthful. The United Nations Population Fund (UNFPA) estimates that 70 percent of Malawi's population is under age 30. Other sources estimate youth dependency ratio at 87.9

¹⁴ GoM (2017), Health Sector Strategic Plan 2017-2022, Ministry of Health

¹⁵ GoM (2015), Public Service Reforms Report

¹⁶ Social Determinants for Health (2013). WHO

¹⁷ NSO and ICF Macro (2011), Integrated Household Survey

¹⁸ World Bank (2015) cited in GoM (2017) draft MGDS III

¹⁹ NSO and ICF Macro (2016) Malawi Demographic and Health Survey

²⁰ GoM (2017), Health Sector Strategic Plan II, Towards Universal Coverage

Output	Description	Objectively Verifiable Indicator	Annual Output Targets				Existence of assessment report	Capacity needs assessment conducted
			2017 / 2018	2019 / 2020	2020 / 2021	2021 / 2022		
Output t 1	MoH&P recruitment of board members engaged on board engagement	Level of engagement	-	-	x	-	PHIM Executive Director	
Output t 2	Composition of existing committees reviewed	Reviewed committee composition	x	-	-	-	PHIM Executive Director	
Output t 3	Recruitment process of sub-board committees established	Existence of sub-board committees recruitment guidelines	x	-	-	-	PHIM Executive Director	
Output t 4	ToRs for sub-committees developed	Existence of ToRs	x	-	-	-	PHIM Executive Director	
Output t 5	All positions in sub-committees filled	Percent positions filled	-	100	100	100	PHIM Executive Director	
Output t 6	PHIM Board recruits Executive Director	Existence of Executive Director	x	-	-	-	Board chair	
Output t 7	PHIM secretariat staff recruited	Existence of secretariat staff	x	-	-	-	Board chair	
Strategy 2.8.5.1 (c)								
Build leadership capacity of the Secretariat and the Board to effectively spearhead the PHIM's vision and mandate								
Output t 1	Capacity needs assessment	Existence of assessment report	x	-	-	-	PHIM Executive Director	
	Output Description	Objectively Verifiable Indicator	2017 / 2018	2019 / 2020	2020 / 2021	2021 / 2022	Capacity needs assessment report	
	Risks and Assumptions	Source and means of Verification					Funds availability	
	Responsibility						PHIM Executive Director	

reported to be at 10 percent²⁷ and this affects economic activities whose benefits include health. Firewood is main source of energy for cooking, subjecting women and children to smoke and related diseases.

(vi) Legal

The Public Health Act (1948) could be obsolete to address current challenges but it remains alive. Weak penalties to wrong doers such as those involved in drug pilferage have perpetuated the problems. The Constitution of the Republic of Malawi tilts on rights without adequate balance with responsibilities. For that reason, anyone can get court injunction on nearly anything. The banning of liquor sachets which met stiff resistance is a case in point. Disciplining unethical healthcare workers has also been a challenge and there are several cases to validate this claim from professional regulatory bodies. All the same, regulatory institutions are in place to enforce standards. These include Medical Council of Malawi, Nurses and Midwives Council of Malawi, Pharmacy, Poisons and Medicine Board, and Malawi Bureau of Standards. The World Health Organisation (WHO) has developed Stepwise Laboratory Quality Improvement Process towards Accreditation (SLIPTA) Checklist. This checklist specifies requirements for quality and competency aimed to develop and improve laboratory services to raise quality to established national standards²⁸. Establishing public health legislation to govern its practice is critical.

(vii) Ethical

Public-health in Malawi regularly encounters serious ethical dilemmas such as rationing scarce resources, health care costings, influencing individuals to change their behaviour, limiting freedoms to diminish disease transmission and spread, protecting the public over business interests, limiting population growth, dealing with disclosure against confidentiality in managing key populations, allowing abortion, disciplining incompetent personnel versus shortage of staff, providing contraception to underage girls, and use of 'strong language' in life skills among others. Unlike medical, nursing and midwifery ethics, there is no agreed-upon framework public health ethics and its establishment is critical. It is essential for public health to explore the existing cultural and traditional variations to identify practical problems that arise in addressing the ethical dimensions of health policy and practice. Health professionals need enhanced skills to improve the coherence, transparency, and quality of public deliberations over ethical issues inherent in health policy and practice.

1.2.2 SWOT analysis

The Strengths Weaknesses Opportunities and Threats (SWOT) analysis was undertaken to take stock of and analyze current resources of the organization including availability of key competences, the services rendered by and performance by PHIM. The SWOT analysis was used to understand the internal environment of the institute; its capabilities and deficiencies. These are summarized in Tables 2 below.

²⁷ NSO (2011) Integrated Household Survey

²⁸ WHO (2015), Stepwise Laboratory Quality Improvement Process Towards Accreditation (SLIPTA) Checklist Version 2:2015. For Clinical and Public Health Reference Laboratories

Output Description		Objectively Verifiable Indicator	Annual Output Targets				Source and means of Verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021			
Output 3 Capacitate staff in zoonotic disease surveillance		number of trained staff			100%	100%	100%	Trained staff	Director epidemiology
Output 1 Form a multisectoral working group on zoonotic disease surveillance	Existence of work group	-	x					Funds availability	Director epidemiology
Output 2 TORs for the multisectoral working group	Existence of TORs	-	x					Capacity to develop TORs	Director epidemiology
Output 3 Conduct multisectoral meetings on zoonotic disease surveillance	number of meetings	x						meeting report	Director epidemiology
Enhance multisectoral collaboration under one health approach									

Output Description	Vertically Verifiable Indicator	Annual Output Targets						Source and means of Verification	Risks and Assumptions	Responsibility
		2018/2019	2019/2020	2020/2021	2021/2022	2020/2021	2021/2022			
Dissemination of zoonotic disease surveillance data to public (website, brochures, conferences)	Existence of mechanisms for dissemination of zoonotic disease surveillance data to public (website, brochures, conferences)	-	4	4	4	4	4	Functional website and funds availability for dissemination conference	Director Epidemiology	
Develop zoonotic disease profiles for the country	Frequency of dissemination of zoonotic disease profiles for the country	-	4	4	4	4	Copies of profiles for dissemination conference	Functional website and funds availability for dissemination conference	Director Epidemiology	
Build capacity of personnel in zoonotic disease surveillance implementation										
Output 1 Dissemination of zoonotic disease surveillance data to public (website, brochures, conferences)	Existence of mechanisms for dissemination of zoonotic disease surveillance data to public (website, brochures, conferences)	-	4	4	4	4	Guidelines for dissemination conference	Functional website and funds availability for dissemination conference	Director Epidemiology	
Output 2 Develop zoonotic disease profiles for the country	Frequency of dissemination of zoonotic disease profiles for the country	-	4	4	4	4	Copies of profiles for dissemination conference	Functional website and funds availability for dissemination conference	Director Epidemiology	
Output Description	Vertically Verifiable Indicator	Annual Output Targets						Source and means of Verification	Risks and Assumptions	Responsibility
Output 1 Assess the capacity needs of personnel on zoonotic disease surveillance	Existence of an assessment of zoonotic disease surveillance	-	1	1	1	1	Guidelines	Funds availability	Director epidemiology	
Output 2 Develop a training plan in zoonotic disease surveillance	Existence of a training plan of zoonotic disease surveillance	-	1	1	1	1	Training Plan	availability of experts	Director epidemiology	

Table 2: SWOT Analysis

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> - Availability of well-established disease control programs - Availability of electronic medical records systems that will support surveillance - Community participation and mobilization in the control of diseases. - Supervision systems available from central to district level. - Availability of human resources for public health at community level; Health Surveillance Assistants (HSAa), Community Nurses, Environmental Health Officers (EHOs). - Availability of well-structured health promotion systems e.g. Water, sanitation and hygiene, launch of community health strategy. - Availability of plans for mitigating the impact of climate change - Availability of IHR self assessment results - Availability of National Emergency Preparedness and response Plans - Capacity building in field epidemiology through FETP - Existence of IDSR system - Available nationwide laboratory systems and networks. - Availability of Knowledge Translation platform to promote translation of research findings for decision making - Existence of collaboration with local and international partners. - Existence of well qualified health work force. - Availability of health system management structures. - Well-structured health care system. - Availability of supporting systems and structures to deliver health services. - Availability of the HSSP II which incorporates the establishment of PHIM. 	<ul style="list-style-type: none"> - The public health Act does not provide the mandate to deal with emerging outbreaks - PHIM Legislation not available - Lack of crosscutting technical and financial support-public health labs with limited human and technical capacity - Inadequate influence on incorporation of public health issues in legal instruments, frameworks and policies - Weak delivery systems for public health services. - Inadequate capacity to respond to emerging health threats. - Duplication and poor coordination of efforts by vertical disease control programs. - Weak data management systems particularly in animal health. - Inadequate collaboration with other sectors such as animal health, Environmental Affairs, Occupation Safety and Health - Inadequate laboratory capacity and facilities at primary, secondary and tertiary levels for public health - Lack of land and physical infrastructure for PHIM - Inadequate resources (financial, human, material/supplies, equipment, Infrastructure etc.). - Policy development and implementation not always based on evidence. - Multiple and uncoordinated monitoring and evaluation structures in different programs. - Lack of implementation of performance management systems. - Lack of accreditation and standardization of health systems. 	<ul style="list-style-type: none"> - Existence of well-structured health promotion systems e.g. Water, sanitation and hygiene, launch of community health strategy. - Availability of plans for mitigating the impact of climate change - Availability of IHR self assessment results - Availability of National Emergency Preparedness and response Plans - Capacity building in field epidemiology through FETP - Existence of IDSR system - Available nationwide laboratory systems and networks. - Availability of Knowledge Translation platform to promote translation of research findings for decision making - Existence of collaboration with local and international partners. - Existence of well qualified health work force. - Availability of health system management structures. - Well-structured health care system. - Availability of supporting systems and structures to deliver health services. - Availability of the HSSP II which incorporates the establishment of PHIM. 	<ul style="list-style-type: none"> - The public health Act does not provide the mandate to deal with emerging outbreaks - PHIM Legislation not available - Lack of crosscutting technical and financial support-public health labs with limited human and technical capacity - Inadequate influence on incorporation of public health issues in legal instruments, frameworks and policies - Weak delivery systems for public health services. - Inadequate capacity to respond to emerging health threats. - Duplication and poor coordination of efforts by vertical disease control programs. - Weak data management systems particularly in animal health. - Inadequate collaboration with other sectors such as animal health, Environmental Affairs, Occupation Safety and Health - Inadequate laboratory capacity and facilities at primary, secondary and tertiary levels for public health - Lack of land and physical infrastructure for PHIM - Inadequate resources (financial, human, material/supplies, equipment, Infrastructure etc.). - Policy development and implementation not always based on evidence. - Multiple and uncoordinated monitoring and evaluation structures in different programs. - Lack of implementation of performance management systems. - Lack of accreditation and standardization of health systems.

<ul style="list-style-type: none"> - There is growing Demand for better and resilient disease surveillance and response capacity due to increased health threats - Strategic and conducive environment for global strategies e.g. Africa CDC, Africa health strategy, global health security agenda, IHR etc - Existence of training institutions and programmes in public health field such as FELTP - Increased global priorities for strengthening public health institutes and public health preparedness - Novel methods for surveillance e.g. event based surveillance, animal health surveillance, community based surveillance - Government/political commitment and leadership/oversight e.g. Decentralisation - Availability of specialized Public Health Reference Laboratories (Central Veterinary Laboratory, Health reference laboratory) - Availability of WHO's IHR which mandates health sector to lead multi sectoral dissemination and collaboration in addressing Public Health Emergency of International Concern under I health 	<ul style="list-style-type: none"> - Low confidence in PHIM capacity resulting in resistance to change from existing programs. - Competing priorities (e.g. agendas driven by partners) - Emerging diseases/natural disasters diverts attention - Lack of sustainable funding - Increased population and changes in epidemiology/burden of disease - Staff establishment, deployment and retention
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Strategy 4.8.3.7 (c)		Improve zoonotic disease surveillance data quality to inform policy																				
Output	Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility	Output 1	Output 2	Output 3									
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022															
4	Develop an operational plan for the zoonotic disease surveillance and control strategy	draft plan								Director epidemiology	operational plan document	stakeholders availability	Director epidemiology	operational plan document	Funds availability	Director epidemiology	strategy launch and control strategy	5	launch the zoonotic disease surveillance strategy			
4	Develop an operational plan for the zoonotic disease surveillance and control strategy	draft plan								Director epidemiology	operational plan document	stakeholders availability	Director epidemiology	operational plan document	Funds availability	Director epidemiology	strategy launch and control strategy	5	launch the zoonotic disease surveillance strategy			
Strategy 4.8.3.7 (d)													Improve access and use of zoonotic disease surveillance data									
1	Document a list of zoonotic disease of public health importance	Existence of zoonotic disease list	-							Director Epidemiology	document	Funds availability	Director Epidemiology	document						1	Document a list of zoonotic disease of public health importance	
2	Map the epidemiological distribution of zoonotic diseases	existence of a map								Director Epidemiology	maps	availability of experts and funds	Director Epidemiology	maps						2	Map the epidemiological distribution of zoonotic diseases	
3	Incorporate zoonotic disease into national surveillance system	Frequency of dissemination	-							Director Epidemiology	database	availability of database	Director Epidemiology	database						3	Incorporate zoonotic disease into national surveillance system	

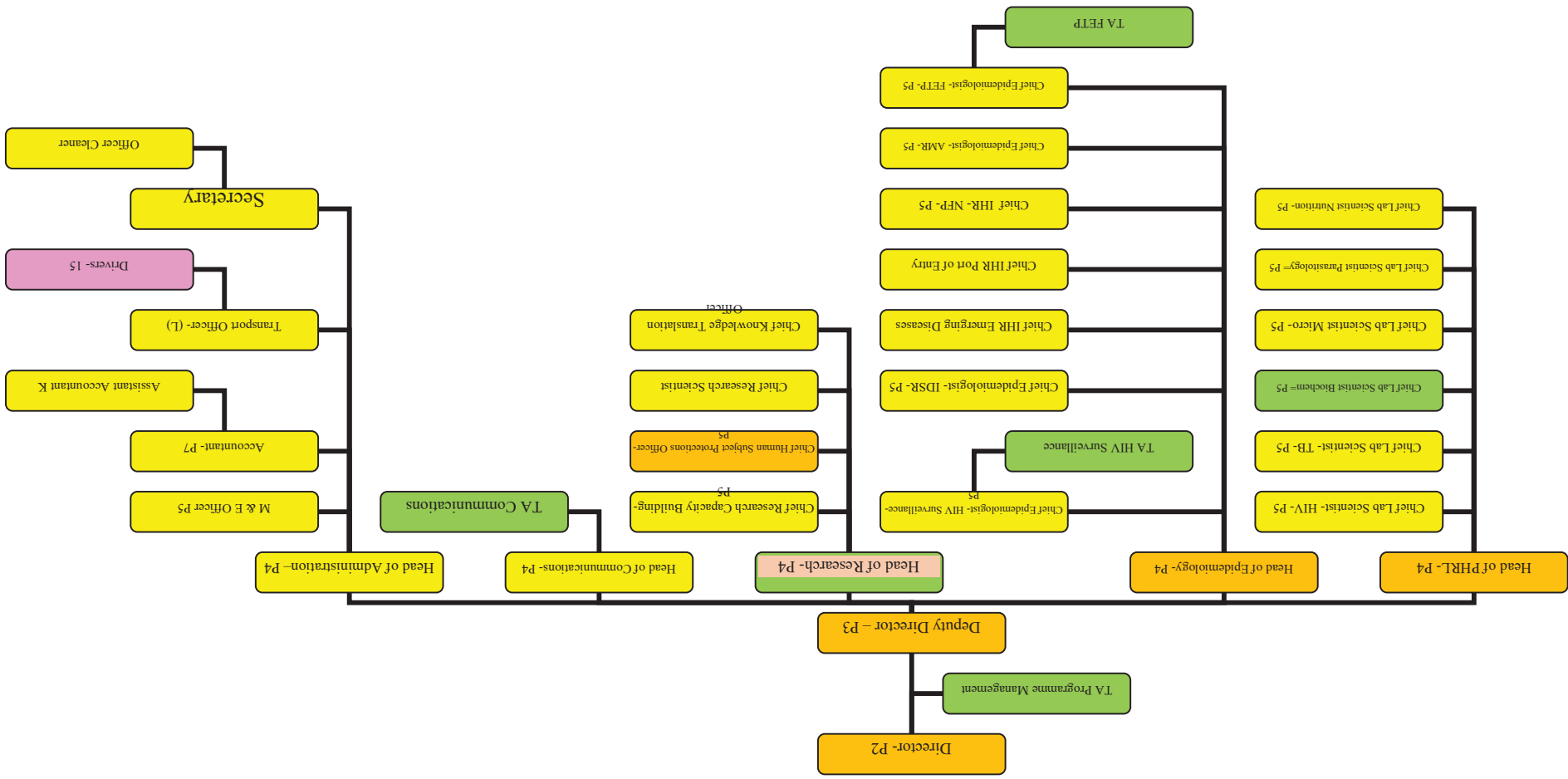
Strategy 4.8.3.7 (b)		Develop strategy and operational plan for strengthening zoonotic diseases surveillance and control											
Output	Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility	Director Epidemiology		
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022						
7	Set up and availability of internet connections	availability of internet						x	x	x	x	x	Director Epidemiology
1	Develop concept note for the zoonotic diseases surveillance and control strategy	Existence of concept note	-	x									Director epidemiology
	Develop TORs for the zoonotic diseases surveillance and control strategy	existence of TORs		x									Director epidemiology
2	Consultant hired to draft a national zoonotic disease surveillance and control strategy	existence of draft strategy		x	x								Director epidemiology
3	Conduct a stakeholder meetings to zoonotic disease strategy development	Number of meetings	-	4	4	4	4	4					Director epidemiology

The PHIM's future stands in its public health excellence it needs to create. An essential element toward ensuring that the PHIM's future is "brilliant" and builds on its past and present demands have been the focus for development of the current practical strategic plan. The plan will enable PHIM adapt to and take advantage of the existing opportunities emanating from an expanding demand for improved public health and efficiency, responsive services with social and financial risk protection considerations. PHIM has analyzed and addressed the related challenges in contexts of politics, economics, social, technology, environment, legislation and ethics including funding and other resources.

The political change has presented both challenges and opportunities in which the PHIM will operate. Creative and innovative strategies have been developed through a consultative strategic planning process that will enable it to successfully provide direction to public health education; practice and professionalism in the dynamic environment and to manage the strategic issues that are critical to achieving its vision. These strategies have been developed within a cohesive conceptual construct that recognizes and capitalizes on political stability, good governance that has promoted regional and international relations and promising economic growth. These provide an enabling environment for the PHIM to exercise its professional voice, rights and responsibilities in accordance to the 2018-2022 Health Sector Strategic Plan (HSSP II) in which its establishment is provided for as a semi-autonomous institution²⁹.

To drive the PHIM agenda to become a Statutory Corporation, the following structure is proposed to spearhead the process. This will facilitate staff retention as members will occupy existing posts working on full time basis.

PHIM MANAGEMENT ORGANOGRAM



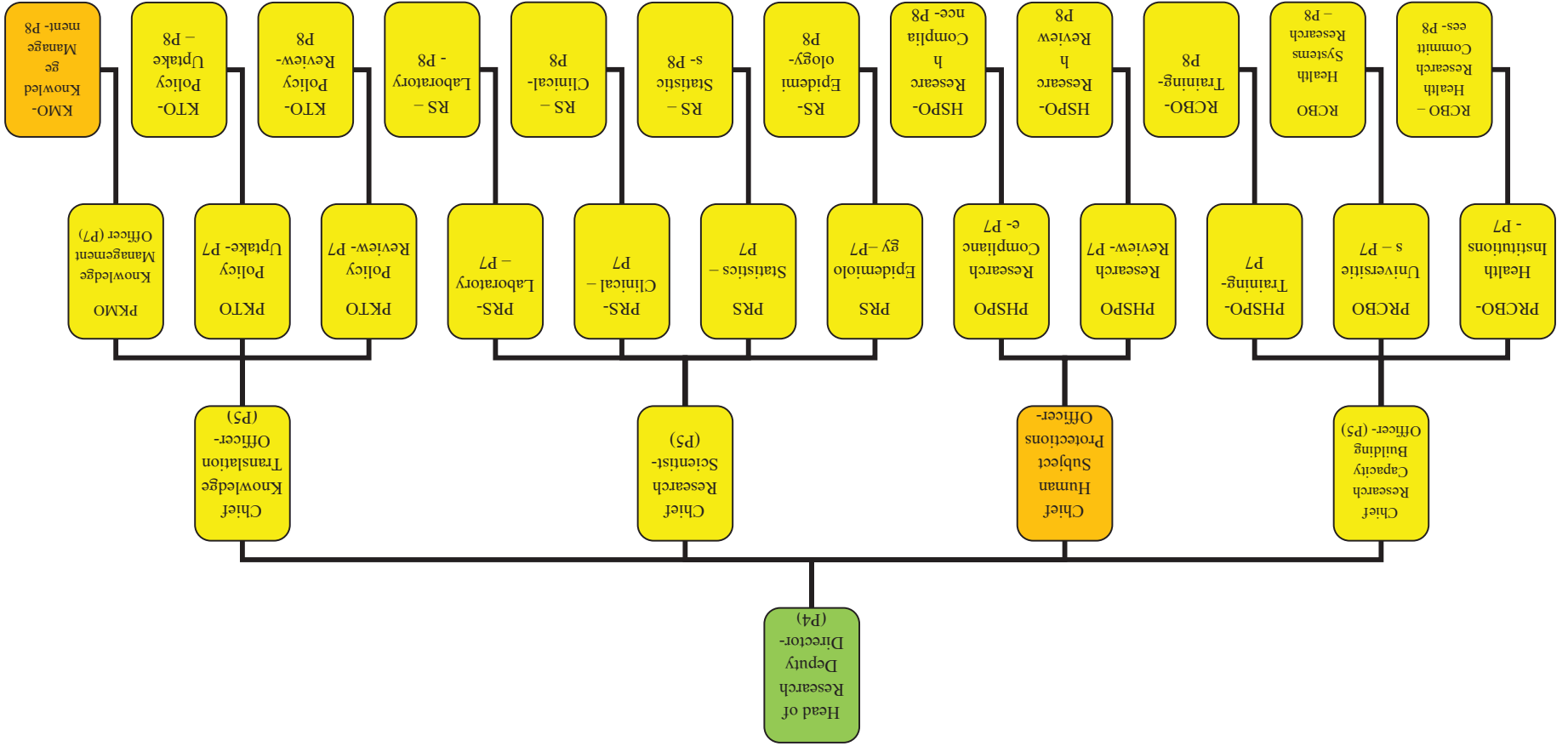
KEY

- Position filled
- Acting Position
- Vacant Position
- Positions partially filled

Strategic Objective	4.8.3.7	Strategy 4.8.3.7 (a)	Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
					2018/2019	2020/2021	2021/2022	2020	2021			
1	Output	Develop concept note for the design of electronic surveillance system	presence of concept note	x						concept note	capacity to develop concept note	Director Epidemiology
2	Output	TORs for the design of electronic surveillance system	Presence of TORs	x						TORs	Capacity to develop TORs	Director Epidemiology
3	Output	Consultant hired to design and develop an electronic surveillance system	electronic surveillance in place						x	Consultant	Funds availability	Director Epidemiology
4	Output	Procure and install an electronic surveillance system	electronic surveillance in place	-	x	x	x			electronic system	Funds availability	Director Epidemiology
5	Output	Procure computers and accessories	computers				10			computers	Funds availability	Director Epidemiology
6	Output	Train staff in electronic surveillance system	Existence of consultant	-			x	x		Consultant	Funds availability	Director Epidemiology

Output	Description	Indicator	Annual Output Targets					Source and Means of Verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Output 1	IHR self evaluation conducted	Existence of report	0	0	0	0	1	Evaluation report	Funds availability	Director of Planning, Monitoring and Evaluation
Output 2	IHR Joint External evaluation conducted	Existence of evaluation report	0	0	0	1	1	Evaluation report	Funds availability	Director of Disease Prevention and Control
Strategy d Conduct simulation or tabletop exercises on selected IHR or GHS A core capacities										
Output 1	Simulation or tabletop exercises training conducted	Number of trainings	-	1	1	1	1	Training report	Funds availability	Director of Planning, Monitoring and Evaluation
Output 2	Simulation or tabletop exercises conducted	Number of simulation exercises	-	1	1	1	1	Simulation exercise report	Funds availability	Director of Disease Prevention and Control

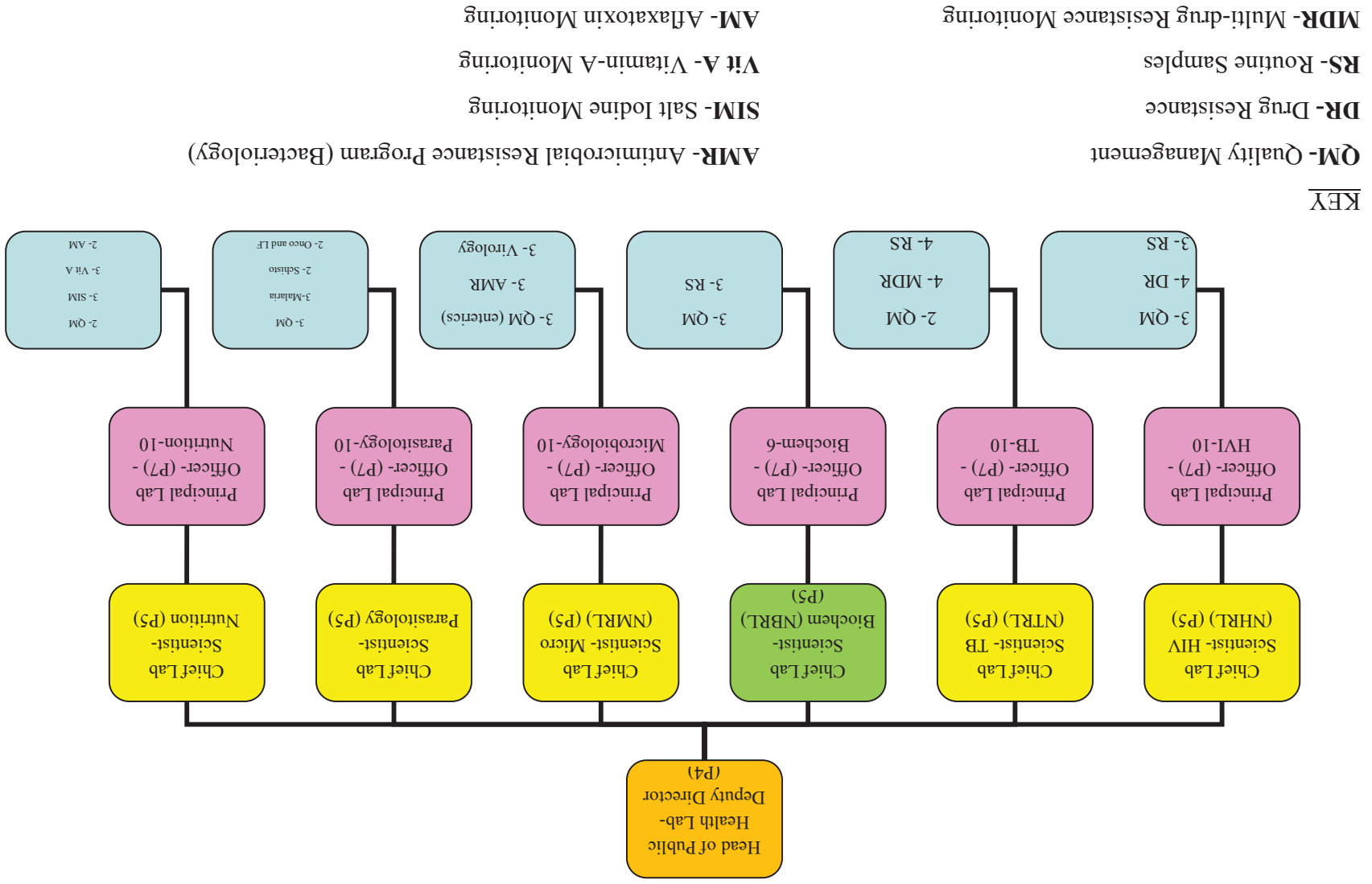
RESEARCH AND DEVELOPMENT DEPARTMENT ORGANGRAM



Support Staff

- 1. Secretary- x1
- 2. Messenger- x2
- 3. Drivers- x4

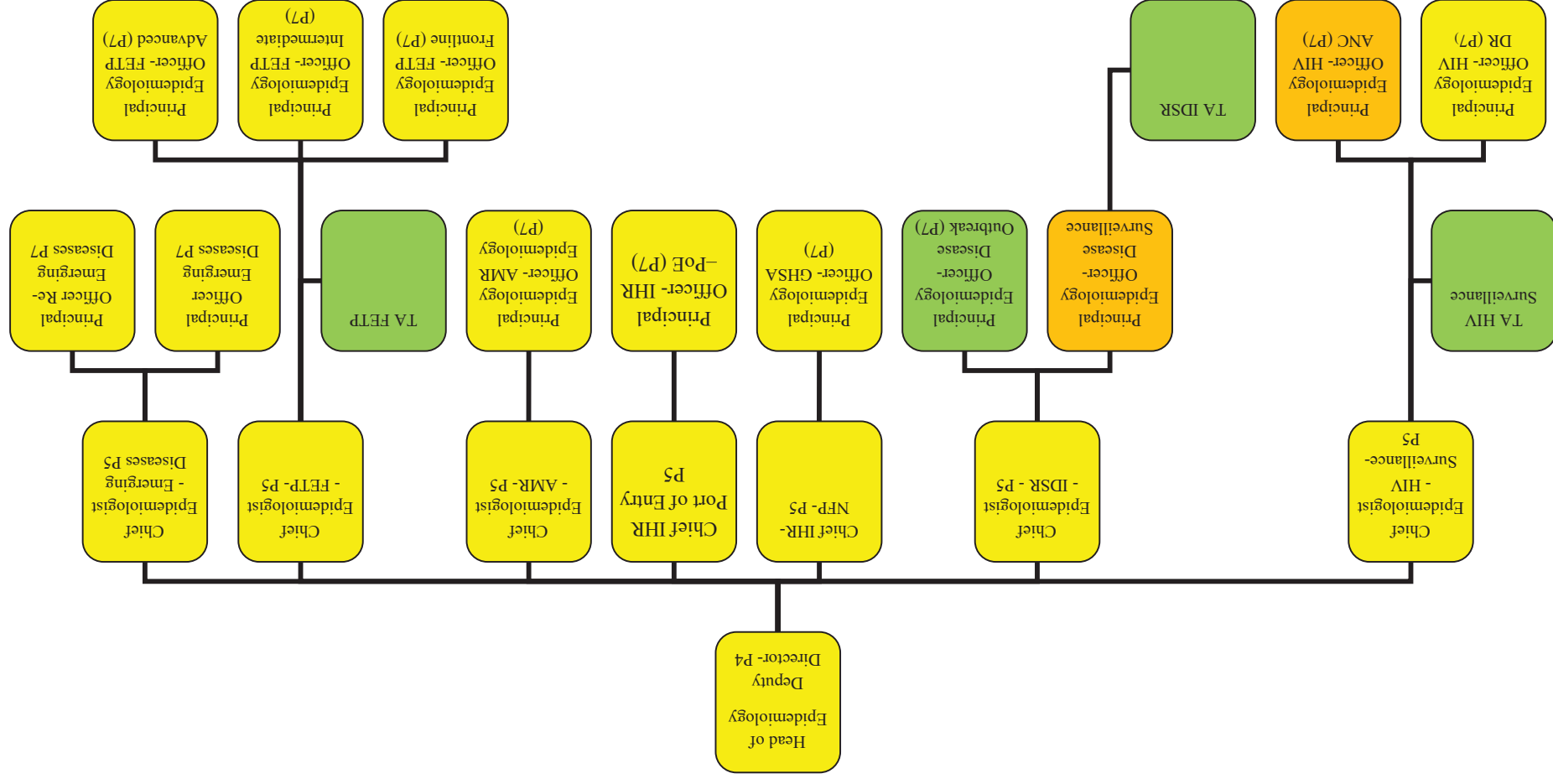
NATIONAL REFERENCE LABORATORY DEPARTMENT ORGANOGRAM



Strategy	Output Description	Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Strategy b	Coordinate the implementation of International Health Regulations and Global Health Security Agenda	Objectively Verifiable	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Source and means of Verification	Risks and Assumptions	Responsibility
	Output 2: Port officers trained in screening	Number of officers trained	0	0	1	0	0	Training report	Funds availability	Director of Disease Prevention and Control
	Output 3: Screening done at port of entry	Number of entry ports with screening service	0	0	12	12	12	Screening reports	Funds availability	Director of Disease Prevention and Control
Strategy a	Implement post-JEE action points	Objectively Verifiable	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Source and means of Verification	Risks and Assumptions	Responsibility
	Output 1: Training institutions are lobbied to include critical content in pre-service training	Number of institutions lobbied	1	0	0	0	0	Reports	Willingness of training institution to add critical content	Director of Disease Prevention and Control
	Output 2: Critical content is added in pre-service training curriculum	Availability of critical content in curriculum	0	1	0	0	0	Curriculum	Training institutions accept to add critical content	Director of Disease Prevention and Control
	Output 3: Relevant officers and academicians trained on IHR and Global Health Security agenda	Number of staff trained	0	1	0	0	0	Trained staff	Funds availability	Director of Disease Prevention and Control

Output	Description	Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Output 1	High risk population groups mapped	Existence of list of high-risk population group	-	1	1	0	0	List/Survey	Funds availability	Director of Planning, Monitoring and Evaluation
Output 2	ToRs for high risk population surveys developed	Existence of ToRs	0	1	1	0	0	ToRs	Funds availability	Director of Planning, Monitoring and Evaluation
Output 3	High risk population groups surveyed resourced and implemented	Frequency of surveys	0	1	1	0	0	Survey reports	Funds availability	Director of Planning, Monitoring and Evaluation
Strategy f										
Conduct birth defects surveillance to monitor the safety of drugs used during pregnancy										
Output 1	Survey protocol developed	Existence of protocol	1	0	0	0	0	Protocol	Funds availability	Director of Research and Development
Output 2	Relevant staff trained	Number of staff trained	40	0	0	0	0	Trained staff	Funds availability	Director of Research and Development
Output 3	Survey resourced and implemented	Frequency of conducting the survey	1	0	0	0	0	Survey reports	Funds availability	Director of Research and Development
Strategic Objective 6										
Strengthen the International Health Regulations implementation										
Build capacity of Disease Surveillance Officers in IHR										
Output Description		Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
Output 1	On the job training curriculum developed	Existence of curriculum	0	0	1	0	0		Funds availability	Director of Disease

EPIDEMIOLOGY AND SURVEILLANCE DEPARTMENT ORGANOGRAM



Chapter: 2

PHIM Strategic Direction

The PHIM vision and mission are preceded by the HSSP II vision and mission. This is done so because the PHIM Strategic Plan revolves around the HSSP II as the overall sector strategy.

2.1 HSSP II vision

The Vision of the health sector is to achieve a state of health for all the people of Malawi that would enable them to lead a quality and productive life.

2.2 HSSP II mission

The Mission of the Ministry of health is to provide strategic leadership for the delivery of a comprehensive range of quality, accessible, and efficient health services to all Malawians through the creation and sustenance of a strong health system.

2.3 PHIM Vision

A center of excellence in public health that contributes towards high quality and productive life of all people in Malawi.

2.4 PHIM Mission

To provide national leadership and coordination in multidisciplinary and multi-sectoral surveillance, prevention and control of diseases, health conditions and threats as well as to generate information that informs policy and practice in public health.

2.5 PHIM Core Values

PHIM will create a welcoming environment; interacting with all partners and stakeholders regardless of gender, religion, sexual orientation and other individual characteristics. Within the varied professions, PHIM will promote participation of all in working towards achievement of the strategic goals and objectives. PHIM's reputation is entrenched in its core values. The Institute will be consistent with these values and will not waiver due to contrary internal and external influences but will stand strong in what it believes should be done to realise its vision and mission. PHIM will be ethical in all its undertakings and will do the right thing, in the right way, at the right time and for the right reason (s). The values are implied in the mission statement above and are hereby summarized:

- *Excellence:* Strive for evidence-based practice, competency, continuous improvement
- Adaptability and flexibility in all functions and activities

Strategy c	Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
			2018/2017	2019/2018	2020/2019	2021/2020	2022/2021			
Strategy c	Output 1	Drug resistance monitoring guidelines developed	0	1	0	0	0	Guidelines	Funds availability	Director of Planning, Monitoring and Evaluation
	Output 2	Relevant staff trained in drug resistance monitoring	0	1	0	0	0	Trained staff	Funds availability	Director of Planning, Monitoring and Evaluation
	Output 3	Drug resistance monitoring resourced and implemented	0	1	0	1	0	Survey reports	Funds availability	Director of Planning, Monitoring and Evaluation
Strategy d	Output 1	Survey implementation coordinated	-	-	1	1	-	Implementation	Funds availability	Director of Research and Development
	Output 2	Supervision during survey implementation	-	-	1	1	-	Report	Supervisory capacity	Director of Research and Development
	Output 3									
Strategy e	Output 1	Drug resistance monitoring guidelines developed	0	1	0	0	0	Guidelines	Funds availability	Director of Planning, Monitoring and Evaluation
	Output 2	Relevant staff trained in drug resistance monitoring	0	1	0	0	0	Trained staff	Funds availability	Director of Planning, Monitoring and Evaluation
	Output 3	Drug resistance monitoring resourced and implemented	0	1	0	1	0	Survey reports	Funds availability	Director of Planning, Monitoring and Evaluation
Implement Biological and Behavioral Surveillance Survey (BBS) to monitor prevalence of high risk behaviors										
Strategy e	Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
			2018/2017	2019/2018	2020/2019	2021/2020	2022/2021			
Conduct HIV drug resistance monitoring surveys										
Conduct periodic STI surveillance among high risk population groups through BBS										

Prevention and Control	Strategy b									
	the ANC, DHS and MPHA surveys based HIV incidence and prevalence surveys through the ANC, DHS and MPHA surveys									
Responsibility	Output Description		Objective Verifiable Indicator	Annual Output Targets			Source and means of Verification	Risks and Assumptions	Director of Disease Prevention and Control	Director of Public Health Services
	2017/2018	2018/2019		2019/2020	2020/2021	2021/2022				
	Output 1	Protocol developed	Existence of protocol	1	1	1	Protocol	Funds availability	Director of Disease Prevention and Control	Director of Disease Prevention and Control
	Output 2	Site selection and inspection conducted	Number of sites selected and inspected	1	1	1	Progress report	Funds availability	Director of Disease Prevention and Control	Director of Public Health Services
	Output 3	Lab supplies procured	Amount of supplies	1	1	1	Supplies inventory	Funds availability	Director of Public Health Services	Director of Public Health Services
	Output 4	Supervision conducted	Frequency of supervision	4	4	4	Report	Funds availability	Director of Disease Prevention and Control	Director of Disease Prevention and Control
	Output 5	Surveyors trained and samples collected	Number of surveyors trained	160	160	160	Training report	Funds availability	Director of Disease Prevention and Control	Director of Disease Prevention and Control
	Output 6	Samples tested	Frequency of testing samples	2400	2400	2400	Report	Functional testing equipment	Director of Public Health Services	Director of Public Health Services
	Output 7	Survey implementation coordinated	Existence of implementation framework	-	-	1	Implementation framework	Funds availability	Director of Research and Development	Director of Research and Development

- **Integrity:** Strive for honesty, truthfulness, credibility, and sincerity
- **Accountability and Transparency:** Endeavour for openness, liability, in fiscal and social responsibility
- **Confidentiality:** Believe in privacy and discretion in the performance of duty, in accordance with applicable regulations and laws of the country
- **Professionalism:** Demonstrate expertise, proficiency, and promote team work
- **Equity and equality:** Believe in justice and fairness to all
- **Efficiency:** Having the capacity to produce results at a minimum cost and in a timely manner

2.6 Overall Goal

A well-equipped, resourced and staffed Public Health Institute that effectively responds to pandemics and emerging disease conditions thereby improving health and wellbeing of all people in Malawi.

Broad Outcomes of the PHIM Strategy

- 2.7.1 An effective and efficient mechanisms for surveillance, emergency preparedness and response to diseases, conditions and threats of public health importance.
- 2.7.2 Reliable and timely evidence to inform policies, practices and programmes
- 2.7.3 An effective and efficient national public health reference laboratory system
- 2.7.4 Established and functional Public Health Institute of Malawi
- 2.7.5 Strong networking and collaboration in-country and internationally on matters of public health importance under ONE HEALTH principle
- 2.7.6 A robust national capacity for public health practice and research in private, and public sectors.
- 2.7.7 Public health standards and protocols that are in line with existing legislation.

2.8 Detailed Objectives and Strategies

The strategies and major activities of the PHIM have been organized according to its five functional components which are: National Public Health Reference Laboratory; Research and Development; Epidemiology and Surveillance; Communication and Administration (Support Services) Governance and Management; and Support Services. Outputs and corresponding indicators for all the strategies under each functional component have been detailed in the Annexed work plans.

The work plan developed provides a sequence of activities that must be performed, for a strategy to succeed. The Institute recognizes that strategies can change or be modified based on circumstances and results. Thus, PHIM strategies are designed to provide a flexible overall framework. PHIM initiatives will be reviewed, designed and implemented based on annual priorities and their action plans. It is expected that many more strategies will need to be developed for specific initiatives in its Functional Components' plans.

The work plan is organized showing direct link of goals, strategic objectives, strategies, and major activities. The resources required to carry out the identified major activities have been detailed and costed.

2.8.1 Functional Component: Public Health Reference Laboratories

The Public Health Reference Laboratories (PHRL) are specialized laboratories that offer advanced essential public health laboratory leadership through science and services. Its main goal is to develop a robust and sustainable public health reference laboratory capacity to address national public health concerns. The laboratories perform specific activities that ensure that the PHRL goals and functions are successfully implemented.

Objective 1: Strengthen performance of the national public health reference laboratory

Strategies

- a. Map all laboratories in Malawi in line with one health including medical and public health laboratories for human and animal health
- b. Determine and organize sections in Public Health Reference Laboratory including Central Veterinary laboratory
- c. Establish appropriate infrastructure for all PHRL
- d. health reference laboratories
- e. Establish appropriate human resource requirements for national public and animal health reference laboratories to function and offer services efficiently through specialized training, mentorship and exchange placements.

Objective 2: Strengthen Laboratory biosecurity, biosafety and bio-risk management system

Strategies

- a. Establish an efficient integrated sample transportation system
- b. Organize the laboratory network to strengthen linkages and networking of various laboratories at different tiers of service delivery and with the external laboratories
- c. Establish efficient Laboratory Information Management System (LIMS)
- d. Establish a bio-bank system for collection and storage of human and animal biological and chemical materials and animal data
- e. Establish an efficient system of transportation of biological and chemical samples for storage
- f. Develop human resource capacity in biosafety and biosecurity

Objective 3: Develop network and collaboration with other national and regional public health reference laboratories

Strategies

- a. Collaborate with regional and international laboratory-based surveillance system networks
- b. Maintain subscription to membership with the network of regional and international public and animal health research laboratories
- c. Strengthen collaboration of specialized Public Health Reference Laboratories (Central Veterinary Laboratory, public health reference Laboratory)

Conduct evaluation of FELTP program to demonstrate impact																			
Source and Risks and Assumptions	Annual Output Targets	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Verification	Source and Risks and Assumptions		Responsibility									
								Report	Availability of Funds	FETP program	Manager								
Output 1	Review meetings conducted	1	1	1	1	1	1	Number of	conferences	1	1	1	1	1	1	1	Number of conferences	Hold scientific conferences	Output 1
Output 2																			Output 2
Output 3																			Output 3
Strategy d																			
Establish network for FELTP graduates																			
Objectively Verifiable indicator		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Verification	Source and Risks and Assumptions	Responsibility	Output Description		Annual Output Targets							
Output 1	Frequency of meetings	1	0	0	0	0	0	Minutes of meetings	Funds availability	Director of Disease Prevention and Control	Output 1	Planning meeting conducted	Frequency of meetings						
Output 2	Existence of surveillance plan	0	1	0	0	0	0	Surveillance Plan	Funds availability	Director of Disease Prevention and Control	Output 2	Surveillance Plan developed	Existence of surveillance plan						
Output 3	Annual reviews of surveillance plan conducted	0	1	1	1	1	1	Reviewed Plan	Funds availability	Director of Disease Prevention and Control	Output 3	Annual reviews of surveillance plan conducted	Frequency of review						
Strategy a																			
Develop HIV and STI surveillance plan																			
Strategic Objective 5																			
Build capacity in national HIV and STI Surveillance systems																			

Strategic Objective 4.8.3.3		Implement the Frontline, Intermediate and Advance FELTP																		
Strategic Objective 4.8.3.3		Build the capacity in Field Epidemiology																		
Strategic Objective 4.8.3.3		Implement the Frontline, Intermediate and Advance FELTP																		
Output 2 Adequately equipped point of entry Number of points of entry adequately equipped	Output 2 Adequately equipped point of entry	Output Description		Objectively Verifiable Indicator				Annual Output Targets				Source and means of Verification		Risks and Assumptions		Responsibility				
		Output 1 Evaluation of FELTP program to demonstrate impact conducted	Output 2 Network for FELTP graduates established	Output 3 FELTP supervision systems available from central to district level	Occurrence of evaluation	Existence of network	Existence of systems	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Evaluation report	List of graduates	Progress report	Funds availability	Director of Disease Prevention and Control	Funds availability	Director of Disease Prevention and Control	
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	13	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Objective 4: Strengthen public health laboratory quality management system

Strategies

- Establish accreditation mechanisms for the public and animal health laboratories
- Establish a periodic assessment exercise of the performance of the national public and animal health reference laboratory
- Adapt and disseminate the standards and protocols for laboratory accreditation of public and animal health laboratories
- Strengthen national proficiency system for laboratory tests by establishing a unit within Public Health reference laboratory for preparing and distribution of EQA/PT materials
- Apply for international assessment for accreditation of all NPRRLs using appropriate international standards
- Develop performance standard tools and systems to be followed for accreditation of laboratories in line with global requirements such as WHO AFRO SLIPTA and International ISO and OIE standards.

2.8.2 Functional Component: Research and Development

The Research and Development Department aims at generating quality information and make it accessible to all intended users for evidence-based decision making, through standardized and harmonized tools across all programs. The goal is to improve capacity to conduct research and promote utilization of research findings for evidence-informed decision-making in practice and policy formulation

Objective 1: Strengthen surveillance of Public Health Emergencies of both national and international importance under ONE HEALTH Principle

Strategies:

- Improve surveillance system to transmit surveillance data at all levels and to all relevant sectors
- Improve surveillance data quality
- Strengthen monitoring of antimicrobial resistance
- Strengthen Preparedness and response of PHEIC under ONE HEALTH principle
- Strengthen national health cluster, and district epidemic management committees and rapid response teams
- Strengthen community participation and mobilization in the control of diseases and other public health events
- Build capacity of personnel in conducting PHEIC surveillance
- Strengthen health promotion activities in the workplaces, academic institutions and communities
- Strengthen the capacity in Field Epidemiology
- Build capacity in national HIV and STI Surveillance systems
- Strengthen the Implementation of International Health Regulations
- Strengthen zoonotic disease surveillance and control –
- Strengthen and monitor antimicrobial resistance
- Develop an MOU with key stakeholders
- Establish an emergency operating centre for the collaboration of PHEI C and information sharing

Objective 3: Dissemination and utilization of research findings

Strategies

- Reinforce dissemination of research findings of all approved proposals
- Convene periodic public health research dissemination conferences in collaboration with partners
- Strengthen library services

Objective 4: Strengthen the ethical conduct of research

Strategies

- Strengthen the functioning of ethical review boards
- Review research proposals regularly
- Strengthen the monitoring of the approved research proposal's implementation and completion
- Strengthen mechanism of addressing ethical issues that arise in the conduct of research
- Set up database for capturing and retrieval of health-related research documents
- Maintain a website on proposal submission procedures, forms and dates for submission and reviews
- Set up community research advisory boards

Objective 5: Build research capacity at individual, institutional and national levels

Strategies

- Develop mentorship programme
- Develop research skills training programmes
- Develop training programme in research grant writing and paper for publication skills
- Liaise with training institutions to train in research synthesis and knowledge translation
- Provide a trust funds for financing Malawian researchers

2.8.3 Functional Component: Epidemiology and Surveillance

Epidemiology deals with determining the distribution, determinants, control of diseases and other health related events which is one of the core components of public health. On the other hand, surveillance is the ongoing and systematic collection, analysis, and interpretation of data on specific health events for planning, implementation and evaluation of public health programs. The Epidemiology and Surveillance Department's core function therefore is to promptly detect disease outbreaks and timely disseminate information for action against any epidemic and other diseases of public health concerns. The Department aims at strengthening Integrated Disease Surveillance and Response (IDSR) through establishing effective integrated disease surveillance system to detect any changes in the occurrence of priority diseases; promoting evidence based epidemic control strategies for target diseases for prompt and appropriate public health action; timely disseminating information about disease outbreaks and other relevant epidemiological information to health services personnel and other interested agencies.

Responsibility	Risks and Assumptions	Source and means of Verification	Annual Output Targets					Objectively Verifiable Indicator	Output Description	Strategy e	Output 1	Capacity at district level is available	Director of Disease Prevention and Control
			2021/2022	2020/2021	2019/2020	2018/2019	2017/2018						
		DEMOC	1	1	1	1	1	Existence of DEMC	District Epidemic Management Committee (DEMOC) re-instituted	Output 1	Health cluster meetings regularly done	Director of Disease Prevention and Control	
		Reports	12	12	12	12	12	Frequency of cluster meetings	Health cluster meetings regularly done	Output 2	Frequency of cluster meetings	Director of Disease Prevention and Control	
		Training report	1	1	1	1	1	Number of districts with officers trained	District rapid response teams in outbreak investigation and reporting trained	Output 3	Number of districts with officers trained	Director of Disease Prevention and Control	
Establish national IHR and/or One Health committee to guide multi-sectoral preparedness													
		Source and means of Verification	Annual Output Targets					Objectively Verifiable Indicator	Strategy f	Strengthen cross-border surveillance and emergency preparedness with countries neighboring Malawi with enhanced services at Points of entry (port health services)	Output 1	National IHR and One Health Committee stakeholder meeting conducted	Director of Disease Prevention and Control
		2021/2022	2020/2021	2019/2020	2018/2019	2017/2018							
		Report	4	4	4	4	4	Frequency of meetings	National IHR and One Health Committee stakeholder meeting conducted	Output 1	Frequency of meetings	Director of Disease Prevention and Control	
		Report	2	2	2	2	2	Number of meetings	Conduct cross border meeting neighboring countries	Output 1	Number of meetings	Director of Disease Prevention and Control	

Strategy	Output	Output Description	Objective	Annual Output Targets	Source and Risks and Assumptions	Responsibility	Director of Disease Prevention and Control
Strategy b			Resource mobilization for outbreak contingency			Control	
Strategy c	Output 1	Outbreak Contingency Plan developed	Objective	Annual Output Targets			Director of Disease Prevention and Control
				2017/2018/2019/2020/2021/2022	2020/2021/2022	Verification	
Strategy d	Output 1	Biannual zonal review meetings conducted	Objective	Annual Output Targets			Director of Disease Prevention and Control
				2017/2018/2019/2020/2021/2022	2020/2021/2022	Verification	
Strategy c	Output 2	Fundraising meetings with partners conducted	Objective	Annual Output Targets			Director of Disease Prevention and Control
				2017/2018/2019/2020/2021/2022	2020/2021/2022	Verification	
Strategy d	Output 2	Annual external outbreak/public health response evaluation conducted	Objective	Annual Output Targets			Director of Disease Prevention and Control
				2017/2018/2019/2020/2021/2022	2020/2021/2022	Verification	
Output 3	Multidisciplinary and multi-sectoral National Preparedness Plan developed	Existence of the Plan	-	1	1	1	Director of Disease Prevention and Control
Output 4	Simulation or table-top exercises on selected IHR or GHSa core capacities conducted	Frequency of doing the exercise	-	1	1	1	Director of Disease Prevention and Control
Output 1	Outbreak Contingency Plan developed	Presence of Contingency Plan	1	1	1	1	Director of Disease Prevention and Control
Output 2	Fundraising meetings with partners conducted	Amount of funds raised	2	2	2	2	Director of Disease Prevention and Control
Output 1	Biannual zonal review meetings conducted	Number of review meetings	2	2	2	2	Director of Disease Prevention and Control
Output 2	Annual external outbreak/public health response evaluation conducted	Frequency of evaluation	1	1	1	1	Director of Disease Prevention and Control

Objective 1: Strengthen surveillance and control of communicable and non-communicable diseases and events of public health importance

Strategies:

- a. Develop and implement standardized electronic surveillance system to transmit surveillance data at all levels
- b. Develop strategy and operational plan for strengthening IDSR and IHR
- c. Improve surveillance data quality
- d. Improve access and use of disease and events of public health importance surveillance data and publish disease and events surveillance and FELTP bulletins/abstract books
- e. Build capacity of personnel in IDSR and IHR implementation
- f. Enhance capacity for community participation in disease intelligence and response through community based surveillance and events based surveillance
- g. Strengthen health promotion activities in the workplaces, academic institutions, places of worship and communities
- h. Collaborate with NCD department to address priority NCDs
- i. Strengthen surveillance of Pandemic Influenza
- j. Strengthen surveillance of merging and re-emerging diseases

Objective 2: Strengthen Preparedness and response

Strategies

- a. Develop and implement multidisciplinary and multi-sectoral emergency preparedness and response plans
- b. Identify funding for outbreak contingency
- c. Conduct regular evaluation of response to outbreaks/public health events
- d. Strengthen national health cluster, and district epidemic management committees and rapid response teams
- e. Establish national IHR and/or One Health committee to guide multi-sectoral preparedness
- f. Strengthen community participation and mobilization in the control of diseases
- g. Strengthen cross-border surveillance and emergency preparedness with countries neighboring Malawi with enhanced services at Points of entry (port health services)

Objective 3: Build the capacity in Field Epidemiology

Strategies

- a. Incorporate Laboratory Field epidemiology to enhance the role of laboratory in surveillance, emergency response and surveillance (expand FELTP to FELTP)
- b. Implement the Frontline, intermediate and advance FELTP
- c. Conduct evaluation of FELTP program to demonstrate impact
- d. Establish network for FELTP graduates

Objective 4: Build capacity in national HIV and STI Surveillance systems

Strategies

- a. Develop HIV and STI surveillance plan

- b. Coordinate the implementation of International Health Regulations and Global Health Security Agenda (GHSA)
- c. Conduct periodic joint external evaluation (JEE) of IHR core capacities and implement the NAPHS
- d. Conduct simulation or tabletop exercises on selected IHR or GHSA core capacities
- e. Strengthen the capacity of designated port of entries

Objective 7: Strengthen zoonotic disease surveillance and control Strategies

- a. Develop and implement standardized electronic surveillance system to transmit zoonotic disease surveillance data at all levels
- b. Develop strategy and operational plan for strengthening zoonotic diseases surveillance and control
- c. Improve zoonotic disease surveillance data quality to inform policy
- d. Improve access and use of zoonotic disease surveillance data
- e. Build capacity of personnel in zoonotic disease surveillance implementation
- f. Enhance multisectoral collaboration under one health approach

Objective 8: Strengthen the National AMR Surveillance System

Strategies:

- a. Increase National Awareness of Antimicrobial Resistance (AMR)
- b. Capacity building for health care workers in AMR
- c. Improve knowledge of AMR and related topics for human and animal health, agriculture & environmental professionals under ONE HEALTH
- d. Establish mechanism for regular sharing of AMR data across human, animal health, agriculture and environmental sectors.
- e. Prevent and control Infection at all levels under ONE HEALTH
- f. Reduce impacts of AMR on the environment
- g. Establish a national coordinating centre for surveillance of AMR;
- h. Promote workers safety during use of chemicals
- i. Ensure uninterrupted access to high-quality antimicrobial medicines

To improve appropriate use of antimicrobials in health systems

Strengthen National collaboration to address AMR containment in disease control programs

2.8.5 Governance and Management

Objective 2.8.5.1: Establish a governance structure and system for operationalization and sustainability of PHIM

Strategies

- a. Provide a legal framework for the establishment and functioning of PHIM
- b. Set up an institutional structure to carry out functions of PHIM Build leadership capacity of the Secretariat and the Board to effectively spearhead the PHIM's vision and mandate
- c. Acquire land and develop infrastructure for PHIM

Strategy e	Output Description	Objectively Verifiable Indicator	Annual Output Targets	Source and means of Verification	Risks and Assumptions	Responsibility
	Output 1	Trainings conducted on IDSR and IHR	Number of trainings of 4	4	4	IDSR program manager
	Output 2	Learning visits	Number of 1	1	1	IDSR program manager
Strategy f						
	Output 1	Collaborate with NCD department to address priority NCDs				
	Output 2	Collaborate with NCD department to address priority NCDs				
Strategy f						
	Output 1	Conduct collaboration and data sharing meetings	Number of meetings -	2	2	Director of Planning, Monitoring and Evaluation
Strategic Objective 2.8.3.2						
Strategy 2.1						
	Output 1	National Emergency Management Committee (NEMC) re-instituted	Existence of NEMC	0	0	Director of Disease Prevention and Control
	Output 2	Quarterly NEMC meetings conducted	Frequency of NEMC meetings -	4	4	Director of Disease Prevention and Control
	Output 1	Annual Output Targets	2017/2018/2019/2020/2021/2022	0	0	Director of Disease Prevention and Control
	Output 2	Annual Output Targets	2017/2018/2019/2020/2021/2022	4	4	Director of Disease Prevention and Control

Output	Description	Objective				Annual Output Targets	Source and means of Verification	Risks and Assumptions	Responsibility
		2017/2018/2019/2020/2021/2022	2018/2019/2020/2021/2022	2019/2020/2021/2022	2020/2021/2022				
Output 3	Implementation of Operational Plan monitored	Frequency of monitoring	4	4	4	4	Monitoring report	Funds availability	Director of Planning, Monitoring and Evaluation
Output 1	Quarterly supervision conducted	Number of supervisions	4	4	4	4	Supervision report	Funds availability	Director of Planning, Monitoring and Evaluation
Output 2	Training in IDRS data management conducted	Number of training sessions on IDRS data management conducted	1	1	1	1	Training report	Funds availability	Director of Planning, Monitoring and Evaluation
Output 4	Periodic feedback to surveillance officers given	Frequency of giving feedback	4	4	4	4	Report	Funds availability	Director of Planning, Monitoring and Evaluation
Strategy d	Objectively Verifiable indicator	Annual Output Targets	2017/2018/2019/2020/2021/2022	2018/2019/2020/2021/2022	2019/2020/2021/2022	2020/2021/2022	Source and means of Verification	Risks and Assumptions	Responsibility
Output 1	Publish surveillance bulletin	Number of bulletins	4	4	4	4	Bulletin	Capacity to produce bulletin	IDSR program manager
Output 2	Biannual FETP bulletin produced	Frequency of producing bulletin	-	2	2	2	Bulletin	Capacity to produce bulletin	FETP program manager
Strategy C	Improve quality of surveillance data	Annual Output Targets	2017/2018/2019/2020/2021/2022	2018/2019/2020/2021/2022	2019/2020/2021/2022	2020/2021/2022	Source and means of Verification	Risks and Assumptions	Responsibility
Output 3	Improve access and use of surveillance data	Annual Output Targets	2017/2018/2019/2020/2021/2022	2018/2019/2020/2021/2022	2019/2020/2021/2022	2020/2021/2022	Source and means of Verification	Risks and Assumptions	Responsibility

Ensure uninterrupted access to high-quality antimicrobial medicines

To improve appropriate use of antimicrobials in health systems

Strengthen National collaboration to address AMR containment in disease control programs

2.8.5 Governance and Management

Objective 2.8.5.1: Establish a governance structure and system for operationalization and sustainability of PHIM

Strategies

- Provide a legal framework for the establishment and functioning of PHIM
- Set up an institutional structure to carry out functions of PHIM Build leadership capacity of the Secretariat and the Board to effectively spearhead the PHIM's vision and mandate
- Acquire land and develop infrastructure for PHIM

Finance Component

Objective 2.8.5.2: Establish financing mechanisms and sustainability

Strategies

- Ensure activities are aligned with national/international priorities
- Advocate for increased budget allocation to PHIM
- Develop joint costed annual implementation plan
- Strengthen resource mobilization for sustainable financing of PHIM

Objective 2.8.5.3: Establish a financial management system

Strategies

- Determine funding mechanism within PHIM
- Procure accounting package and equipment
- Establish standard procedures for financial control and management
- Produce audited financial reports

Administration Component

Objective 2.8.5.4: Sustain government oversight

Strategies

- Provide regular updates to relevant stakeholders on PHIM progress, activities and deliverables
- Review and develop 5-year strategic plan
- Determine roles and responsibilities between PHIM, MoH&P departments and other sectors
- Ensure regular communication/coordination within and between PHIM and MoH&P/other sectors/stakeholders
- Engage MOH&P and other government sectors for harmonization of efforts

2.8.6 Support Services

Objective 2.8.6.1: Provide administration and management support for the operations of PHIM

Strategies

- Establish national and international collaboration
- Provide appropriate logistical support to PHIM
- Strengthen information management systems
- Strengthen communications and public relations

Objective 2.8.6.2: Develop Human Resource capacity

Strategies

- Determine the staffing needs for PHIM
- Put in place appropriate Human Resource Management system
- Institute HR performance management system
- Develop staff capacity development system
- Provide safe and conducive working and learning environment

Objective 2.8.6.3: Develop a robust monitoring and evaluation system

Strategies

- Develop a framework for monitoring and evaluation
- Conduct periodic performance reviews
- Invest in electronic monitoring tools and equipment
- Ensure periodic reporting on PHIM performance

Annex 3: Epidemiology and Surveillance Services

Strategic Objective 2.8.3.1		Strengthen surveillance and control of communicable and non-communicable diseases and events of public health importance							
Strategy a		Develop and implement standardized electronic surveillance system to transmit surveillance data at all levels							
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Output 1	Reporting forms developed	1	1	1	1	1	Forms	Staff	Director for Disease Prevention and Control
Output 2	Surveillance system review meetings conducted	4	4	4	4	4	Meeting report	Funds availability	Director for Disease Prevention and Control
Output 3	Surveillance data quality improved	1	1	1	1	1	Report	Funds availability	Director for Disease Prevention and Control
Strategy b		Develop strategy and operational plan for strengthening IDSR and IHR							
Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Output 1	Stakeholders meeting conducted	4	4	4	4	4	Meeting report	Funds availability	Director of Planning, Monitoring and Evaluation
Output 2	Strategy and Operational Plan printed and distributed	-	1	1	1	1	Copies of Plan	Funds availability	Director of Planning, Monitoring and Evaluation

Chapter: 3

Finance

The Public Health Institute of Malawi (PHIM) Strategic Plan 2018-2022 will be financed through the following revenue streams:

1) Treasury Appropriation

PHIM has been financed through Ministry of Health and Population. Through this strategic plan, it seeks to gain funding autonomy and be a cost center by managing its own budget vote. PHIM will cost its annual budget and submit to Treasury for funding.

2) Service Fees

PHIM will charge fees for some of its services especially when the consumer is a profit-making private entity. PHIM will conduct trainings at a fee, conduct laboratory tests at a fee among others

3) Donor support

PHIM will engage various partners to support some of its strategic interventions. PHIM will submit funding requests to various partners in response to calls for proposals as well as submit unsolicited proposals to potential donors to finance the interventions. PHIM will also accept donations in cash and kind. Research

PHIM will apply and bid for short and long-term grants and engage in research with national, regional and international partners. PHIM will also provide in research services at a fee.

5). Consultancy

PHIM will provide consultancy services at a fee according to the needs of the client.

6) Public/Private Partnerships

PHIM will engage various private companies to support some of its strategic programs/projects and interventions. PHIM will submit partnership requests to various private companies to finance certain projects/programs/interventions on a win-win arrangement.

Director of Research and Development	Availability of funds	Internet connection	Number of internet literates with connections	5	5	5	5	5	5	5	5
Director of Research and Development	Availability of funds	Subscribed electronic databases	Number of databases subscribed	5	5	5	5	5	5	5	5
Director of Research and Development	Availability of funds	Supervision reports	Number of supportive supervisions	4	4	4	4	4	4	4	4
Director of Research and Development	Availability of funds	List of organizations subscribed to	Number of organizations subscribed to	5	5	5	5	5	5	5	5
Director of Research and Development	Availability of funds		Subscription to local and regional bodies								
Director of Research and Development	Availability of funds		Supportive supervision is conducted								
Director of Research and Development	Availability of funds		Electronic databases are subscribed								
Director of Research and Development	Availability of funds		Internet connection is subscribed								

Chapter: 4

4

Cost Estimate

This chapter therefore presents detailed cost estimates for the various strategies and major activities according to its five functional components which are: National Public Health Reference Laboratory; Research and Development; Epidemiology and Surveillance; Governance and Management; and Support Services. Outputs and corresponding indicators for all the strategies under each functional component have been detailed in the Annexed work plans, these have formed the basis for the strategic plan costing.

Output Description	Objectively Verifiable Indicator	Annual Output Targets					Source and means of Verification	Risks and Assumptions	Responsibility
		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Output 7 Local and international conferences of public health interest explored	Number of local and international conferences attended	x	1	2	2	2	Report	Funds availability	PHM Executive Director
Strategy c		Strengthen Library services							
Establish health libraries in all public institutions such as hospitals	Number of libraries established	5	15	25	33		Willingness of institutions to establish libraries	Director of Research and Development	
Library guidelines are developed	Availability of guidelines	1					Capacity to develop guidelines and availability of funds	Director of Research and Development	
Librarians are nominated	Number of libraries with librarians	5	15	25	33		Availability of human resources and willingness of institutions	Director of Research and Development	
TORS for librarians are developed	Availability of TORS	1					TORS	Director of Research and Development	
Librarians are oriented on TORS	Orientation meetings conducted	3	3	3	3		Meeting minutes	Director of Research and Development	
Computers procured and installed	Number of libraries with computers	20	40	40	40		Availability of funds	Director of Research and Development	

Strategy b	Convене Annual Research Dissemination Conferences in Collaboration with Partners									
	Output Description	Objectively Verifiable Indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)					Source and means of verification	Risks and Assumptions	Responsibility
2017/2018			2018/2019	2019/2020	2020/2021	2021/2022				
Output 1	Annual dissemination meetings convened	Frequency of dissemination meetings	1	1	1	1	Report of dissemination meetings	Funds availability	Director of Research and Development	
Output 2	Concept note and terms of reference for the conference developed	Availability of concept note and ToRs	1	1	1	1	Concept note and ToRs	Capacity to develop concept note and ToRs	Director of Research and Development	
Output 3	Funding for the conferences solicited	Percent of available funds to total budget	-	75%	80%	85%	Report Conference	Funders are willing to support	Director of Research and Development	
Output 4	Abstract review team in different thematic areas for each dissemination conference established	Presence of review team	-	1	1	1	List of team members	Funds availability	Director of Research and Development	
Output 5	Research abstracts and papers presented at the conference compiled and published	Presence of publication	-	1	1	1	Conference Publication	Functional website	Director of Research and Development	
Output 6	Feedback sessions with districts to work with communities in developing programmes informed by research in which it had participated	Number of sessions at district level	-	2	2	2	Report	Funds availability	Director of Research and Development	

1. PUBLIC HEALTH RESEARCH REFERENCE LABORATORY		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Total Cost (US\$)
Public Health Reference Lab		3,961,574	851,979	3,890,892	1,493,923	1,438,469	11,636,839
Objective Strengthen performance of the Public Health Reference Lab		3,636,259	531,906	3,079,304	1,394,773	1,323,095	9,965,339
Activities							
1.1 Map all labs in Malawi in line with one health		26,889	-	-	-	-	26,889
1.2 Determine and organize departments in Public Health reference lab		1,006	-	-	-	-	1,006
1.3 Determine infrastructure for all PHRL		3,476,220	-	2,547,398	868,881	797,202	7,689,702
1.4 Determine human resource requirements for national public health reference lab		1,762,844	452,884	452,884	452,884	452,884	1,813,300
1.5 Establish an efficient sample transportation system		73,501	58,529	58,529	58,529	58,529	307,142
1.6 Organize the laboratory network		12,170	20,492	20,492	14,716	14,716	82,588
1.7 Establish efficient LIMS		44,707	-	-	-	-	44,707
Objective 2: Strengthen Laboratory biosecurity and bio-risk management system		161,297	117,958	701,108	5,034	21,258	1,006,657
Activities							
2.1 Establish a bio-bank system for collection and storage of human biological materials and data		117,958	117,958	657,769	5,034	21,258	919,979
2.2 Establish an efficient system of transportation of biological samples for storage		43,339	-	43,339	-	-	86,678

Strategy a		OUTPUT TARGETS (PER FINANCIAL YEAR)										Objectively Verifiable Indicator	
Output Description		2017/2018	2018/2019	2020/2021	2021/2022	Source and means of verification		Assumptions		Risks and Responsibility			
Supportive supervisions are conducted	Number of supervisions conducted	4	4	4	4	Supervision report	Availability of funds	Director of Research and Development	Supportive supervisions are conducted	Number of supervisions conducted	Director of Research and Development		
Supportive supervisions are conducted	Supportive supervisions checklist is developed					Checklist	Ability to develop checklist	Director of Research and Development	Supportive supervisions checklist is developed	Supportive supervisions checklist	Director of Research and Development		
The inventory of all ongoing and completed studies is maintained	Availability of updated inventory of all research studies in progress and those completed	Ongoing	Ongoing	Ongoing	Ongoing	Inventory	Availability of functional electronic system	Director of Research and Development	The inventory of all ongoing and completed studies is maintained	Availability of updated inventory of all health research stakeholders	Director of Research and Development		
The inventory of all research stakeholders is maintained	Availability of updated inventory of all health research stakeholders	Ongoing	Ongoing	Ongoing	Ongoing	Inventory	Availability of functional electronic system	Director of Research and Development	The inventory of all research stakeholders is maintained	Availability of updated inventory of all health research stakeholders	Director of Research and Development		

2. RESEARCH AND DEVELOPMENT		Annual COSTS (US\$)					Total Cost (US\$)
		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	
Activities							
Objective 3: Develop network and collaboration with other national and regional public health reference labs		42,10	53,40	32,562	32,562	32,562	193,19
3.1 Collaborate with regional and international laboratory-based surveillance system networks	26,05	37,36	16,520	16,520	16,520	16,520	112,98
3.2 Maintain subscription to membership with the network of regional and international public health research laboratories	139	139	139	139	139	139	699
3.3 Strengthen collaboration of specialized national reference laboratories (Central vet Lab, CHSU Lab)	15,90	15,90	15,902	15,902	15,902	15,902	79,510
Objective 4: Strengthen public health laboratory quality management system		121,9	148,7	77,916	61,552	61,552	471,65
Activities							
4.1 Establish accreditation mechanisms for the lab	105,6	115,7	70,503	54,139	54,139	54,139	400,18
4.2 Establish an annual assessment exercise of the performance of the national public health reference lab	8,811	0	0	0	0	0	8,811
4.3 Adapt and disseminate the standards, protocols and guidelines for laboratory accreditation of public health labs (Consider as an activity)	7,412	7,412	7,412	7,412	7,412	7,412	37,062
4.4 Strengthen national proficiency system for laboratory tests	0	25,594	0	0	0	0	25,594
Research and development		128,7	305,010	357,624	233,260	350,155	1,374,8
Objective 1: Strengthen the implementation of the National Health Research agenda		14,05	90,265	223,832	106,279	223,832	658,26
Activities							
1.1 Identify priority research areas/questions of public health importance for Malawi	4,965	9,650	26,783	26,783	26,783	26,783	94,965
1.2 Mobilize resources for research	9,090	9,090	9,090	9,090	9,090	9,090	45,454
1.3 Facilitate the implementation of research	-	5	10	15	20	20	268,47
Output 1	Training institutions lobbied to include special skills for institutionalizing research competencies	Number of institutions with institutionalized research competencies	5	10	15	20	20
Dissemination and utilization of research findings		Reinforce Dissemination of Research Findings of All Approved Proposals					
Strategic Objective 2.8.2.3		Dissemination and utilization of research findings					

Output Description	Objectively Verifiable Indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)						Source and means of verification	Risks and Assumptions	Responsibility
		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022				
Output 1 Training institutions lobbied to include special skills for institutionalizing research competences	Number of institutions with institutionalized research competences	-	5	10	15	20	MoUs with training institutions	Williingness of PHIM Executive Director		
Strategy e										
Provide a trust funds for financing Malawian researchers										
Proposals to identify funds for financing Malawian researchers are developed	Funding sources identified	Ongo ing	Ongo ing	Ongo ing	Ongo ing	Ongo ing	MoUs with funding sources	Williingness of Director of Research and Development		
Call for study proposals are advertised	Number of research proposals received	Ongo ing	Ongo ing	Ongo ing	Ongo ing	Ongo ing	Proposals	Availability of funds	Director of Research and Development	
Research proposals are evaluated	Number of proposals evaluated	Ongo ing	Ongo ing	Ongo ing	Ongo ing	Ongo ing	Evaluation reports	Availability of funds	Director of Research and Development	
Excellent proposals are selected	Number of proposals selected	Ongo ing	Ongo ing	Ongo ing	Ongo ing	Ongo ing	Evaluation reports	Availability of funds	Director of Research and Development	
Successful candidates are awarded grants	Grants awarded	10	10	10	10	10	Meeting reports		Director of Research and Development	
Supervision checklist is developed	Availability of checklist	1					Checklist	Capacity to develop checklist tool	Director of Research and Development	

1.4 Review and update the health research agenda	-	-	117,552	-	117,552	-	235,104
1.5 Ensure partners research is in line with the research agenda of the country through publication of such research findings	-	3,566	3,566	3,566	3,566	3,566	14,265
Objective 2: Evidence based practice and policy formulation							
Activities							
2.1 Develop evidence briefs for policy makers to ensure evidence-based policies	-	50,804	50,832	8,496	8,496	8,496	202,546
2.2 Strengthen national guidelines on use of evidence for decision making	-	12,447	12,447	12,447	12,447	12,447	49,790
2.3 Strengthen the Knowledge Translation platform to promote translation of research findings for decision making	-	19,265	-	-	-	-	19,265
2.4 Coordinate knowledge translation platforms	-	8,586	-	-	-	-	8,586
2.5 Review boards implementation and compliance to bioethical principles	657	-	657	657	657	-	1,972
Objective 3: Strengthen the functioning of the scientific and ethical conduct of research							
Activities							
2.1 Establish functional ethical board review	10,461	-	-	-	-	-	10,461
2.2 Review research proposals regularly	3,076	3,286	3,286	3,286	3,286	3,286	16,223
2.3 Strengthen the monitoring of the approved proposal implementation and completion	5,510	5,314	3,636	3,636	3,636	3,636	21,734
2.4 Set up electronic system for capturing and retrieval documents	-	14,835	-	-	-	-	14,835
2.5 Maintain a website on proposal submission procedures, forms and dates for submission and reviews	25,174	-	-	-	-	-	25,174
2.7 Set up community research advisory boards	13,524	895	-	-	-	-	14,419
Objective 4: Build research capacity							
Activities							
2.1 Develop mentorship programme	-	39,062	-	-	-	-	39,062

Strategy d		Liaise with training institutions to train in research synthesis and knowledge translation								
Output 2	Capacity of trainers built	Number of trainers trained	-	2	5	10	15	Director of Research and Development		
Output 1	Grants writing programme developed	Existence of grants writing program	x	1	1	1	1	Director of Research and Development		
Output Description		Objectively Verifiable indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)					Source and means of verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Strategy c		Develop training programme in research grant writing and paper for publication skills								
Output 3	Regular training programme developed	Existence of training programme	-	1	1	1	1	Director of Research and Development		
Output 2	Research fellowship programmes developed	Existence of programme	-	1	1	1	1	Director of Research and Development		
Output 1	Programmes for critical skills developed	Existence of Training program	-	1	1	1	1	Director of Research and Development		
		Objectively Verifiable indicator	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Source and means of verification		

3. EPIDEMIOLOGY AND SURVEILLANCE		Annual COSTS (US\$)					Total Cost (US\$)
	2017/2018	2018/2019	2019/2020	2020/21	2021/2022	2021/2022	
2.1 Develop research skills training programmes	-	3,748	-	-	-	3,748	
2.1 Develop training programme in research grant writing skills	11,608	-	6,433	-	-	18,041	
2.1 Liaise with training institutions to train in research synthesis and knowledge translation	811	811	811	811	811	4,055	
Objective 5: Ensure dissemination of research findings	43,916	55,686	55,686	55,686	55,686	266,662	
Activities							
2.1 Reinforce dissemination of research findings of all approved proposals	-	11,770	11,770	11,770	11,770	47,082	
2.1 Convene annual research dissemination conferences in collaboration with partners	43,916	43,916	43,916	43,916	43,916	219,558	
3. EPIDEMIOLOGY AND SURVEILLANCE		Annual COSTS (US\$)					Total Cost (US\$)
	2017/2018	2018/2019	2019/2020	2020/21	2021/2022	2021/2022	
1.1 Incorporate AMR into the existing surveillance system (consider issues of one health concept when developing activities)	58,699	5,412	5,412	5,412	5,412	80,349	
1.2 Establish a national coordinating center for surveillance of AMR	20,865	20,865	3,818	3,818	3,818	52,825	
1.3 Strengthen the national epidemiological surveillance system on AMR in Human Health, Animal Health, Agriculture and Environment	45,419	39,923	39,923	39,923	39,923	205,111	
1.4 Establish mechanism for regular sharing of AMR data across human, animal health, agriculture and environmental sectors	17,678	-	-	-	-	17,678	
Objective 2 Strengthen Preparedness and response	166,558	134,616	160,404	134,616	128,323	724,518	
Activities							
Objective 1: Strengthen Disease surveillance and control	142,482	66,020	49,153	49,153	49,153	355,965	
EPIDEMIOLOGY AND SURVEILLANCE							
	740,279	703,716	592,298	472,866	504,588	3,013,748	

Activities						
109,300	22,209	22,209	22,209	22,209	20,461	2.1 Strengthen multisectoral emergency preparedness and response plans
63,461	12,692	12,692	12,692	12,692	2	2.2 Identify funding for outbreak contingency
52,027	7,258	13,552	7,258	13,552	10,405	2.3 Conduct regular evaluation of response to outbreaks/public health events
89,337	4,195	4,195	36,276	4,195	40,472	2.4 Strengthen national health cluster, and district epidemic management committees and rapid response teams
410,251	81,966	81,966	81,966	81,966	82,386	2.5 Establish national IHR and/or One Health committee to guide multisectoral preparedness
139	-	-	-	-	139	2.6 Strengthen community participation and mobilization in the control of diseases
365,558	63,213	63,213	63,213	98,550	77,368	Objective 3: Strengthen the surveillance of non-communicable diseases
63,398	12,679	12,679	12,679	12,679	12,679	3.1 Develop strategy and operational plan for NCDs surveillance
263,444	42,790	42,790	42,790	78,127	56,945	3.2 Build capacity of personnel in conducting NCD surveillance
21,513	4,302	4,302	4,302	4,302	4,302	3.3 Strengthen surveillance of non-communicable diseases (NCDs)
17,202	3,440	3,440	3,440	3,440	3,440	3.4 Improve NCD surveillance data quality to inform policy
262,198	57,139	1,195	1,195	110,988	91,678	Objective 4: Build the capacity in Field Epidemiology
76,251	1,195	1,195	1,195	36,930	35,734	4.1 Implement the Frontline, Intermediate and Advance FETP
167,832	55,944	-	-	55,944	55,944	4.2 Evaluate FETP program to demonstrate impact
9,057	-	-	-	9,057	-	4.3 Establish network for FETP graduates
9,057	-	-	-	9,057	-	4.4 Strengthen FETP supervision systems available from central to district level
444,220	131,211	37,986	131,630	68,405	74,987	Objective 5: Build capacity in national HIV and STI Surveillance systems

Output Description		OUTPUT TARGETS (PER FINANCIAL YEAR)							Risks and Assumptions	Responsibility
Output 7	Institutional research committees are established	33	33	33	1	1	1	3	Availability of health research committee	Director of Planning, Monitoring and Evaluation
Output 7	Orientation of coordinators on TORs is conducted	3	3	3	1	1	1	3	Availability of funds	Director of Planning, Monitoring and Evaluation
Output 8	Orientation of committees on TORs is conducted	33	33	33	3	3	3	33	Availability of funds	Director of Planning, Monitoring and Evaluation
Output 9	Research committees are trained on various subjects (initial and refresher)	33	33	33	3	3	3	33	Availability of funds	Director of Planning, Monitoring and Evaluation
Develop research skills training programs										
Strategy b										

Output Description	Strategy	Indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)					Source and means of verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Training module for the NHSRC members on the use of website to review proposals is developed		Availability of training module	1					Capacity to develop the tutorial and availability of funds	Director of Research and Development	
Website is launched		Launching conference is conducted	1					Availability of funds	Director of Research and Development	
NHSRC members are trained		Number of trainings (Initial and refresher)	2	2	2	2		Availability of funds	Director of Research and Development	
Laptops for NHSRC members are procured		Number of laptops procured	25					Availability of funds	Director of Research and Development	
Researchers and web users are oriented to the tutorial		Number of meetings conducted to orient users	2	2	2	2		Availability of funds	Director of Research and Development	
Set up community research advisory boards										

3.1 Determine funding mechanism within PHIM									
3.2 Procure accounting package and equipment		9,972			9,972				18,895
3.3 Establish standard procedures for financial control and management		11,545			11,545				23,091
3.4 Produce audited financial reports and system									
Objective 4: Enhance financial base for PHIM		13,111	15,734	10,489	10,489	10,489	10,489	10,489	60,314
Activities									
4.1 Strengthen resource mobilization in relation to financial for sustainable funding, human, material/supplies, equipment and infrastructure		7	7						14
4.2 Develop proposals for funding for PHIM priority activities		5,244	5,244	5,244	5,244	5,244	5,244	5,244	26,223
4.3 Establish public health training programme as income generation		2,622	5,244	5,244	5,244	5,244	5,244	5,244	23,601
Objective 5: Sustain government oversight and management		12,742	8,993	8,993	8,993	10,868	36,798	78,397	
Activities									
5.1 Provide regular updates to relevant stakeholders on PHIM progress, activities and deliverables		7,119	7,119	7,119	7,119	7,119	7,119	7,119	35,596
5.2 Review and develop 5-year strategic plan						1,874	27,804	29,679	
5.3 Determine roles and responsibilities between PHIM, MOH & P&P departments and other sectors		1,874	1,874	1,874	1,874	1,874	1,874	9,372	
5.4 Ensure regular communication/coordination within and between PHIM and MOH/other sectors/stakeholders		3,749						3,749	
Objective 6: Establish PHIM organogram		10,170	8,391	-	-	-	-	18,562	
Activities									
6.1 Assign suitable personnel for leadership within PHIM		1,779	8,391						10,170
6.2 Develop clear job descriptions		8,391							8,391
Objective 7: Enhance transparency and accountability		10,266	-	-	-	10,266	-	20,532	

Strategy d		Output Description		Objectively Verifiable Indicator		OUTPUT TARGETS (PER FINANCIAL YEAR)		Source and means of verification		Risks and Assumptions		Responsibility		
						2017/2018	2018/2019	2019/2020	2020/2021	2021/2022				
Strengthen mechanism of addressing ethical issues that arise in the conduct of research		Safety committee established		Existence of team		1					List of team members		Capacity to develop TOR	
Terms of references (TORs) developed		Copy of TOR				1					TORs		Director of Research and Development	
Training for committee members developed or adopted		Number of trainings				1					Training curricular		Director of Research and Development	
Training of committee members is conducted		Number of trainings conducted				1	1	1	1	1	Training reports		Director of Research and Development	
Meetings conducted (routine and ad hoc)		Number of meetings				2	4	4	4	4			Director of Research and Development	
Strategy e		Set up database for capturing and retrieval of health-related research documents												
Output Description		Objectively Verifiable Indicator		OUTPUT TARGETS (PER FINANCIAL YEAR)		Source and means of verification		Risks and Assumptions		Responsibility				
Electronic system for receiving, reviewing and generating reports established		Existence of guidelines				1	1	1	1	1	Staff adhere to procedure		Director of Research and Development	
NHSRC Guidelines for conducting research in the country reviewed		Availability of Research guidelines				1	1	1	1	1	Guidelines		Director of Research and Development	

Activities	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	TOTAL COSTS (US\$)
12.1 Complete land allocation agreement	244	314	-	-	-	559
Objective 13: Identifying resources for infrastructure development	-	-	-	-	-	-
13.1 Secure funding for construction	-	-	-	-	-	-
Objective 14: Develop PHIM infrastructure	24,64	1,119	1,119	1,119	1,119	4,476,3
14.1 Build the physical structure and place fixtures	-	1,119,090	1,119,090	1,119,090	1,119,090	4,476,3
Objective 15: Integrate monitoring and evaluation framework	24,64	6,090	-	-	-	30,732
15.1 Integrate monitoring and evaluation framework	24,64	6,090	-	-	-	30,732
15.2 Ensure availability of learning resource materials and recreation facilities	-	-	-	-	-	-
Objective 16: Take on total authority over public health	16,20	16,202	16,202	16,202	16,202	81,010
16.1 Take on total authority over public health	16,20	16,202	16,202	16,202	16,202	81,010
5. SUPPORT SERVICES	Annual COSTS (US\$)					
2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	TOTAL COSTS (US\$)	
307,7	252,404	150,516	213,243	143,011	1,066,9	
67	252,404	150,516	213,243	143,011	1,066,9	
168,1	82,574	82,574	82,574	82,574	498,40	
06	82,574	82,574	82,574	82,574	498,40	
Strategic Objective 1: Establish national and international collaboration						
Activities						

186,83	9	25,174	25,174	25,174	25,174	86,13	9	11,81	8	11,818	1.2 Develop a collaboration framework								
126,41	9	25,300	25,300	25,300	25,300	25,30	0	25,30	0	126,41	1.3 Join international professional networks e.g. IANPHI, Africa CDC, etc.								
173,32	8	32,120	32,120	32,120	32,120	44,84	7	32,120	7	173,32	1.4 Build synergies in supporting the health agenda of the government								
77,655		11,093	16,640	16,640	16,640	16,64	0	16,640	0	77,655	Strategic Objective 2: Provide appropriate logistical support								
											Activities								
77,655		11,093	16,640	16,640	16,640	16,64	0	16,640	0	77,655	2.1 Set up of Logistics & Procurement unit								
											Activities								
28,713		5,594	5,594	5,594	5,594	6,335		5,594		28,713	Objective 3: Develop staff development systems								
											Activities								
5,636		-	-	-	-	5,636		-		5,636	3.1 Develop a capacity development plan								
23,076		5,594	5,594	5,594	5,594	699		5,594		23,076	3.2 Develop HR management system								
											Activities								
25,034		-	-	-	-	-		-		25,034	Strategic Objective 4: Strengthen Electronic Medical Record systems								
											Activities								
25,034		-	-	-	-	-		-		25,034	4.1 Participate in existing collaborations on IT groups at MOH								
											Activities								
290,97	9	22,657	87,342	22,657	103,426	54,89	5	103,426	5	290,97	Strategic Objective 5: Strengthen connectivity with internal and external partners and stakeholders								
											Activities								
128,32	1	22,657	22,657	22,657	22,657	32,09	7	28,251	7	128,32	5.1 Develop a data base for public health activities								
4,195		-	-	-	-	2,097		2,097		4,195	5.2 Build capacity of Secretariat staff on use of website and information management								
16,783		-	-	-	-	8,391		8,391		16,783	5.3 Strengthen electronic infrastructure								

Output	Description	Objectively Verifiable indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)					Source and means of verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Output 2	Position of Compliance Officer (essential documents of a clinical trials and safety reports) created	Availability of position in program	x	10	10	10	10	10	10	Director of Human Resource Development and Training
Output 3	Position for Vaccinologist created	Availability of position in program	x	10	10	10	10	10	10	Director of Human Resource Development and Training
Strategy b										
Review Research Proposals Regularly										
Output 1	Bimonthly review meetings convened	Number of meetings month	-	6	6	6	6	6	6	Director of Research and Development
Output 2	Proposals to reviewers dispatched	Number of proposals	-	70	75	80	85	85	85	Director of Research and Development
Strategy c										
Strengthen the Monitoring of the Approved Proposal Implementation and Completion										
Output 1	Job description for the compliance officers developed	Availability of job description	x	10	10	10	10	10	10	Director of Capacity to develop job description
Output 2	Teams to monitor implementation of approved research established	Existence of team	-	2	2	2	2	2	2	Director of Research and Development
Output 3	GCP inspection visits (routine and ad hoc) conducted	Number of inspection visits	-	4	4	4	4	4	4	Director of Research and Development

Output	Output Description	Objectively Verifiable Indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)					Source and means of verification	Risks and Assumptions	Responsibility
Output 1	Positions for National Health Sciences Research Committee (NHSRC) Administrator established	Availability of position in program	10	10	10	10	10	10	Director of Human Resource Development and Training	
Output 2	Forum to develop guidelines on how to operate established	Presence of forum	-	1	1	1	1	1	Director of Research and Development	
Output 3	ToRs developed	Availability of ToRs	-	1	1	1	1	1	Director of Research and Development	
Output 1	All the available KT platforms listed	Existence of list of KT platforms	-	1	1	1	1	1	Director of Research and Development	
Output 2	Forum to develop guidelines on how to operate established	Presence of forum	-	1	1	1	1	1	Director of Research and Development	
Output 3	ToRs developed	Availability of ToRs	-	1	1	1	1	1	Director of Research and Development	
Output 1	All the available KT platforms listed	Existence of list of KT platforms	-	1	1	1	1	1	Director of Research and Development	
Output 2	Forum to develop guidelines on how to operate established	Presence of forum	-	1	1	1	1	1	Director of Research and Development	
Output 3	ToRs developed	Availability of ToRs	-	1	1	1	1	1	Director of Research and Development	
Strategic Objective 2.8.2.4										
Strengthen the ethical conduct of research										
Strengthen the functioning of ethical review boards										
Strategy a										
Output 3	Trained individuals are mentored	Number mentored	-	20	20	20	20	20	Director of Human Resource Development and Training	
Strategy c										
Strengthen coordination of health knowledge translation platforms										
Output 1	All the available KT platforms listed	Existence of list of KT platforms	-	1	1	1	1	1	Director of Research and Development	
Output 2	Forum to develop guidelines on how to operate established	Presence of forum	-	1	1	1	1	1	Director of Research and Development	
Output 3	ToRs developed	Availability of ToRs	-	1	1	1	1	1	Director of Research and Development	
Strategic Objective 2.8.2.4										
Strengthen the ethical conduct of research										
Strengthen the functioning of ethical review boards										
Strategy a										

Activities	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	7,3	7,39	40,843
5.4 Solicit resources for information technology	-	64,685	-	64,685	-	-	-	129,370
5.5 Develop procedures, processes and policies on management of the information system	12,307	-	-	-	-	-	-	12,307
Strategic Objective 6: Strengthen documentation and communications	61,790	21,090	21,090	21,090	21,090	21,090	21,090	146,153
5.1 Develop a communications strategy	13,426	-	-	-	-	-	-	13,426
5.2 Disseminate PHIM products	7,804	2,209	2,209	2,209	2,209	2,209	2,209	16,643
5.3 Create library and documentation center	26,573	18,881	18,881	18,881	18,881	18,881	18,881	102,097
5.4 Compile a manual on procedures and policies on management of the information system	13,986	-	-	-	-	-	-	13,986
SUB TOTAL (US\$)	5,927,526	3,380,773	6,240,275	3,633,377	3,682,237	3,682,237	3,682,237	22,839,548
1. EDUCATION & RESEARCH								
EDUCATION & RESEARCH								
1.1 Establishment of an evidence-based awareness programme targeting audiences in general public, policy makers and health care providers, veterinarians and other animal health providers, environmental practitioners and farmers	12,028	6,685	-	-	-	-	-	18,713
Objective 1: To Increase National Awareness of AMR	55,944	44,671	48,164	51,066	49,593	49,593	49,593	249,434
Strategies								
1.1 Establishment of an evidence-based awareness programme targeting audiences in general public, policy makers and health care providers, veterinarians and other animal health providers, environmental practitioners and farmers	12,028	6,685	-	-	-	-	-	18,713

Output	Description	Indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)					Source and means of verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022			
Output 4	Systematic reviews on priority research areas and topics conducted	Number of reviews	2	2	2	2	2	2	Director of Research and Development	
Output 5	Community of practice group is put together	Number and diversity of group members	4	4	4	4	4	4	Director of Research and Development	
Output 6	Training on SURE guidelines	Number of authors trained	20	20	20	20	20	20	Director of Research and Development	
Output 7	Policy briefs developed using SURE guides	Number of policy briefs	-	5	5	5	5	5	Director of Research and Development	
Output 6	Policy dialogues	Number of dialogue sessions	-	2	4	4	4	4	Director of Research and Development	
Output 7	Policy brief is disseminated	Frequency of dissemination	-	2	4	4	4	4	Director of Research and Development	
Strategy b		Strengthen adherence to national guidelines on use of evidence for decision making								
Output Description		Objectively Verifiable Indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)					Source and means of verification	Risks and Assumptions	Responsibility
Output 1	Critical mass to promote use of evidence for decision making created	Number of policy briefs referred to in Strategic documents	-	5	5	5	5	5	Director of Research and Development	
Output 2	Identified individuals from various departments are trained on appraising and synthesizing	Number of people trained	-	20	20	20	20	20	Director of Human Resource Development and Training	

1.2 Educate and engage with media, pharmaceutical industries, CSOs, NGOs, politicians, community leaders and other relevant stakeholders	21,46	22,54	2	9	23,66	24,85	26,09	118,62	7
1.3 Conduct an assessment on socio behavioral drivers and determinants	5,594	2,797	4,8	95	1,119	18,601			
1.4 Establish a formal multi-sectoral and multi-disciplinary Advocacy, Communication, and Social Mobilization (ACSM) Working group.	5,524	5,087	5,6	09	5,889	27,452			
1.5 Plan, launch and implement a series of media and public communication events every 2 months, each focused separately on Objectives 1 to 5 of the GAP/NAP	2,937	3,084	3,4	00	3,570	16,229			
1.6 Develop a mechanism and digital platform that links social behavioral practices to the GLAS AMR surveillance network.	8,392	4,476	4,9	34	5,181	27,682			
Objective 2: To impart knowledge of AMR and related topics for human and animal health, agriculture and environmental professionals through pre-service training	9,371	10,66	6	11,82	12,45	55,542			
Strategies									
2.1 Lobbying with training institutions, regulatory bodies and other relevant stakeholders on AMR pre-service training	2,937	3,113	3,4	98	3,708	16,556			
2.2 Strengthen and consolidate AMR and related topics as a core component of professional education, training, certification and development for human and animal health and environmental professionals	6,434	7,552	8,3	27	8,743	38,986			
Objective 3: To Improve knowledge of AMR and related topics for human and animal health, agriculture and environmental professionals through in-service training	20,69	21,18	23,36	24,52	24,52	112,02			
Strategies									
3.1 Plan and implement in-service trainings.	19,58	20,14	22,20	23,31	23,31	106,38			
3.2 Development of monitoring and evaluation plan and tools for the in-service training	1,119	1,049	1,1	56	1,214	5,640			
Objective 4: To Impart knowledge of AMR and related topics through formal education system at primary and secondary school level	2,238	2,297	2,5	33	2,659	12,139			
Strategies									
4.1 Introduce and strengthen concept of AMR and appropriate use of antimicrobials as part of school curriculum.	1,049	1,049	1,1	56	1,214	5,570			

Strategy											
Objective 1: To strengthen the national AMR surveillance system											
55,	12	57,88	331,94	0							
1,1	56	1,214	10,815								
17,	34	18,21	138,37	6							
25,	05	26,31	121,45	4							
11,	56	12,14	61,295								
4	7	0									
1.1	1,1	56	1,214	10,815							
1.2	7,622	1	78,67	1							
1.3	23,49	22,72	7	7							
1.4	16,08	10,49	4	0							
Objective 2 To identify key stakeholders and resources in AMR research											
4,196	-	-	-	-							
4,196	-	-	-	-							
Strategy											
Objective 3: To develop and incorporate AMR research priorities into the National (Health) Research Agenda											
23,07	7	2,203									
2,097	9	2,203									
3.1	20,97	2,203									
3.2	2,098	-									
4. INFECTION, PREVENTION & CONTROL											
INFECTION, PREVENTION & CONTROL											
1,4	16,	70	1,559,	6,646,3	70						
1,4	16,	70	1,559,	6,646,3	70						
3,5	183,6	07	862,32	8							
60,21	279,7	10									
165,2	69										
3,5	183,6	07	862,32	8							
60,21	279,7	10									
165,2	69										
3,5	183,6	07	862,32	8							

Strategy d												
Review and update the health research agenda												
Output	Description	Indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)					Source and means of verification	Risks and Assumptions	Responsibility	Output 1	Output 2
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022					
Output 2	Detailed Terms of reference for each commissioned research developed	Number of Terms for research	1	1	1	1	1	1	There is capacity to conduct research quality	Director of Research and Development	Output 2	Output 2
Output 3	Training in research design, development of data collection tools, data analysis and report writing	Number of people trained	-	20	20	20	20	20	Trainers are available	Director of Research and Development	Output 3	Output 3
Output 4	Implementation of each commissioned research is monitored	Frequency of monitoring	-	1	1	1	1	1	Monitoring reports	Director of Research and Development	Output 4	Output 4
	An enabling environment in accordance to ethics, Regulations and Public Health Act (legislative and regulatory environment) is created	Availability of protocols, laws and policies	-	1	1	1	1	1	Enacting and approving laws and policies	Principal Secretary-MoH&P		
									PHIM Executive Director			
Strategy e												
Ensure partners research is in line with the research agenda of the country												
Output 1	Mid-term and End-term evaluation conducted	Number of mid and end term evaluation	-	1	-	1	1	1	Evaluation reports	Director of Research and Development	Output 1	Output 1
Output 2	Terms of reference developed	Existence of Terms	-	1	-	1	1	1	Copies of Terms	Director of Research and Development	Output 2	Output 2

Output	Description	Objectively Verifiable Indicator	Annual Output Targets						Source and means of verification	Risks and Assumptions	Responsibility
			2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022			
Output 7	National Health Research Agenda II 2018-2022 published	Existence of publication	1	1	1	1	1	Publication of national agenda	Funds availability	Director of Research and Development	
Output 8	National and regional dissemination conducted	Number of dissemination conferences	-	4				Conference report	Funds availability	Director of Research and Development	
Strategy b											
Mobilize Resources for Research											
Output 1	Research proposals submitted	Number of proposals submitted	x	2	4	4	4	Copies of submitted proposals	Sufficient institutional expertise to write winning proposals	Director of Research and Development	
Output 2	Research interest called for	Number and frequency of research calls	x	2	2	2	2	Compendium of research calls	Funds availability	Director of Research and Development	
Facilitate the Implementation of Research											
Strategy c											
Output Description											
Output 1	Research in prioritized thematic areas commissioned	Number of thematic research	-	2	2	2	2	Research reports	Funds available	Director of Research and Development	

Strategy										
Objective 2: To prevent and control infection at community level										
1.1	Establish systems and processes for IPC	17,62	18,32	2	2	2,350	2,4	67	3,989	44,750
1.2	Develop appropriate infrastructure for IPC implementation	27,97	260,1	40	2	161,6	9,6	178,1	797,58	2
1.3	Reintroduce Health Promotion week	14,61	1,248	5	1,3	1,311	76	1,445	19,996	11
Strategy										
Objective 3: To prevent and control infection at health care and animal health setting										
2.1	Promote personal hygiene and sanitation through behaviour change activities in the communities	54,82	89,10	5	98,	117,3	23	128,1	487,62	0
2.2	Promote safe disposal of antimicrobials	14,26	14,97	6	16,	15,72	4	17,34	78,827	0
Objective 4: To prevent & control Infection in Agriculture										
3.1	Strengthen hand hygiene in health care and animal waste	31,18	31,97	9	35,	33,57	25	37,02	169,02	2
3.2	Ensure safety of health care and animal health workers	216,0	256,3	84	28	289,5	1,4	316,0	1,359,4	69
3.3	Strengthen availability of IPC supplies in health care and animal health settings	97,90	102,7	2	11	107,9	3,3	119,0	540,97	1
Strategy										
Objective 4: To prevent & control Infection in Agriculture										
		72,02	62,93	7	69,	89,86	38	97,82	392,03	6

Strategic Objective 2.8.2.1	Strengthen the implementation of the National Health Research Agenda (NHRA)	Strategy a	Identify priority research areas/questions of public health importance for Malawi	Objectively Verifiable Indicator					Output Description		
				2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Source and means of Verification	Risks and Assumptions	Responsibility
Output 1	Stakeholder meeting convened	Number of meetings	X	1	1	1	1	1	Meeting minutes/reports	Funds availability	Director of Research and Development
Output 2	Thematic working groups formed	Number of functional groups	X	1	1	1	1	1	Minutes of group meetings	Funds availability	Director of Research and Development
Output 3	Gap analysis for each thematic area conducted	Number of analyses done	X	1	1	1	1	1	Analyses reports	Funds availability	Director of Research and Development
Output 4	Thematic group priority areas consolidated	Existence of consolidated group reports	-	1	1	1	1	1	Group Reports	Funds availability	Director of Research and Development
Output 5	One consolidated report	Existence of one report	-	1	1	1	1	1	One report	Funds availability	Director of Research and Development
Output 6	Team to produce a draft research agenda established	Presence of Team	-	1	1	1	1	1	List of team members	Willingness of members to accept	Director of Research and Development

INVESTMENT & SUSTAINABILITY										
4.1 Promote good agriculture practices	41,95	44,05	6	8	48,	57	75,96	5	280,58	6
4.2 Ensure workers safety during use of chemicals	30,07	18,88	1	0	20,	81	21,85	7	111,45	0
Objective 5: To reduce impacts of AMR on the environment	334,3	533,2	34	36	62	9,0	660,4	60	2,756,0	97
Strategy										
5.1 Promote safe management of waste from health care, animal health, industry and Agriculture	334,3	533,2	34	36	62	9,0	660,4	60	2,756,0	97
5. INVESTMENT & SUSTAINABILITY										
Strategic Objective 1: To Develop the economic case for investment that address the country's AMR needs	192,5	37,76	2	87	238,74	-	-	-	1	1
Strategy										
1.1 Develop an all-inclusive plan used for securing and lobbying funding for AMR implementation	192,5	37,76	2	87	238,74	-	-	-	1	1
Strategic Objective 2: To develop an effective mechanism for a sustainable AMR implementation	158,8	6,434	81	158,8	165,31	-	-	-	5	5
Strategy										
2.1 Develop an all-inclusive effective plan for sustainable AMR implementation	13,42	7	6,434	13,42	19,860	-	-	-	5	5
2.2 Organization capacity for a sustainable AMR implementation	145,4	55	-	145,4	145,45	-	-	-	5	5
2.3 Monitoring and Evaluation										
Objective 3: Identify operational research priorities for participation in international collaborative research to support the development of new medicines, diagnostic tools and vaccines	5,245	3,304		5,245	19,486		3,825	43	3,6	3,6
Strategy										

Verifica	2017/	2018/	2019/	2020/	2020/	2021/	2022/	2022/	2022/	2022/	2022/	2022/	2022/	2022/	2022/	2022/	2022/	2022/	2022/	
Enroll all PHRL labs in EQA	5	10	15	25	35	EQA provision contract	Availability of funds	Director of Public Health Laboratory Services	1	1	1	1	1	1	1	1	1	1	1	1
Develop a strategy/plan for EQA support to tier laboratories in Malawi	1	1	1	1	1	EQA strategy	Availability of funds and technical expertise	Director of Public Health Laboratory Services	1	1	1	1	1	1	1	1	1	1	1	1
Set up a unit to prepare and distribute EQA panels to tier laboratories	1	1	1	1	1	EQA unit in structure	Availability of funds and technical expertise	Director of Public Health Laboratory Services	1	1	1	1	1	1	1	1	1	1	1	1
Train officers in EQA unit on preparation of various proficiency testing materials	10	10	10	15	20	Training report	Availability of funds and technical expertise	Director of Public Health Laboratory Services	1	1	1	1	1	1	1	1	1	1	1	1
Procure equipment and necessary reagents for the EQA unit	1	1	1	1	1	Laboratory reagents and equipment Inventory	Availability of funds	Director of Public Health Laboratory Services	1	1	1	1	1	1	1	1	1	1	1	1

3.1 Establish procedures for participation in international collaborative research to support the development of new medicine, diagnostic tool and vaccines	5,245	3,304				3,469		3,6	43	3,825	19,486
Strategic Objective 4: Identify operational research priorities for participation in international collaborative research to support the development of new medicines, diagnostic tools and vaccines	8,392	9,406				6,939		7,2	86	7,650	39,672
Strategy											
4.1 Strengthen and streamline international collaboration on AMR	4,196	7,203				4,626		4,8	57	5,100	25,982
4.2 Strengthen inter-sectoral coordination of AMR activities	4,196	2,203				2,313		2,4	29	2,550	13,690
Strategic Objective 5: Strengthen National collaboration to address AMR containment in disease control programs	4,545	-				-		-	-	-	4,545
Strategy											
5.1 Strengthen drug resistance containment activities of disease control programs with AMR program	4,545	-				-		-	-	-	4,545
SUB TOTAL (US\$)	1,457,133	1,721,931				1,631,692		8,147,013			
Grand total	7,384,659	5,102,704				5,265,069		30,986,561			

Chapter: 5

Monitoring and Evaluation

The Strategic Plan will be anchored on a robust Monitoring and Evaluation (M&E) framework that will have high level indicators at institutional level and specific indicators for each strategic objective. A detailed M&E framework will be developed. It will have target indicators for each functional component in a strategic objective. Indicators will be at output, outcome/result and impact/goal levels. The PHIM Board will be responsible for impact level indicators.

Examples of high level impact indicators are:

- i) Existence of sustainable, effective and efficient public health reference laboratory system
- ii) Evidence based policies implemented
- iii) Existence of efficient systems in detecting and controlling emerging infectious and zoonotic disease outbreaks including Public health events of national and international concern
- iv) External quality assurance system in place
- v) Existence and functionality of governance and management structures
- vi) AMR surveillance system established

Examples of output level indicators

- i) Number and type of partnerships established
- ii) Number of research studies completed
- iii) Number of standards and guidelines developed
- iv) Multi-sectoral, multi-hazard emergency preparedness and response plan developed
Proportion of outbreaks investigated

Output Description	Objectively Measurable Indicators (PER FINANCIAL YEAR)	Source and means of verification	Risks and Assumptions	Responsibility	
Number of Laboratory mentors	3	Availability of funds and willingness to take us in	Director of Public Health Laboratory Services	Apply for international accreditation in PHRL through appropriate accrediting entity	
Number of Labs in accreditation through PHRL	6	Accreditation certificate and assessment report	Director of Public Health Laboratory Services	Develop performance standard tools and systems to be followed for accreditation of laboratories in line with global requirements such as WHO AFRO SLIPTA and International ISO and OIE standards	
Output 1: Develop/adapt standard guidelines for accreditation	1	Standard tools/guidelines	Availability of funds and technical expertise	Director of Public Health Laboratory Services	Strengthen national proficiency system for laboratory tests by establishing a unit within Public Health reference laboratory for preparing and distribution of EQA/PT materials
Output 2: Share experience with other PHLS through visits.	3	Exchange visit reports	Availability of funds	Director of Public Health Laboratory Services	
Output Targets (PER FINANCIAL YEAR)	2017/2018	2019/2020	2020/2021	2021/2022	

- v) Number (Percentage) of staff members trained in specific areas
- vi) Number of board meetings in a year
- vii) Availability of finance and M&E systems
- viii) Number of reference laboratories accredited

Annex 1 provides a detailed M and E matrix

The approach to monitoring and evaluation for the period 2018-2022 for PHIM Strategic Plan is based on the proposed framework that ensures systematic approach. The explicit definition of strategic objectives and strategies in the strategic plan increases the necessity for a correspondingly clear and robust monitoring and evaluation system. Indicators have been proposed at the start of the period to form the basis for the development and achievement of the strategic objectives and its major activities. This being the second strategic plan for the PHIM with well-established three technical functional components and having gone through a rigorous analysis of its internal and external environment, a baseline is not a necessity for definition of the indicators.

The achievement of the performance indicators will be monitored on the expected outputs. The aggregation of expected outputs at functional component levels will help to assess progress and achievement at Secretariat level. The evaluation of activities on an ongoing basis will ensure better preparation for formal quarterly and annual reporting. The monitoring and evaluation framework will be detailed for the 2018-2022 periods at development of its implementation plan. This arrangement will provide a single framework for monitoring and evaluation of all PHIM interventions related to this strategic plan.

The Board will review progress on its strategic plan quarterly using several key performance indicators. The monitoring and evaluation framework will establish several indicators corresponding to the strategic objectives, strategies and major activities. The indicators will be used as tools to assess how far the expected objectives would have been achieved. The assessment of the extent to which an activity has achieved its strategic objectives, will be built up from the expected outputs. The indicators will therefore be specific, measurable, realistic and time bound (SMART) and they will be both quantitative and qualitative.

The monitoring and evaluation shall be the responsibility of the PHIM Executive Director and the Secretariat. At the beginning of each financial year, Secretariat management will set their performance indicators as part of their annual work plans in line with the cascaded functional component strategic plans.

5.1 Reporting frequency

Reporting frequency will vary by level of control. Functional Components will produce monthly work plans and reports. The PHIM Executive Director will produce consolidated quarterly reports with inputs from all functional components including from administrative department will be presented to the governing Board. Annual reports will be submitted to Ministry of Health and Population, development partners and other relevant stakeholders and disseminated at an Annual Review Workshop (ARW). The ARW will help in collective ownership of progress or lack of it

Responsibility	Risks and Assumptions	Source and means of verification	OUTPUT TARGETS (PER FINANCIAL YEAR)					Output Description
			2020	2019/2020	2018/2019	2018	2017/2018	
Director of Public Health Laboratory Services	Availability of funds and technical expertise	Accreditation plan	2	2	2	1	2	Develop accreditation plan for the PHRL labs and guidelines, tools etc.
Director of Public Health Laboratory Services	Availability of funds	Training report	20	20	20	20	20	Conduct internal quality audits for PHRL staff
Director of Public Health Laboratory Services	Availability of expertise	Baseline audit report				1		Conduct baseline assessment
Director of Public Health Laboratory Services	Availability of funds	Training report	20	20	20	20	20	Conduct SLMTA of participants trained
Director of Public Health Laboratory Services	Availability of funds and technical expertise	Mentorship report	25	25	25	25	25	Conduct mentorship on QMS and professional ethics and

Indicator	Strategy 2.8.1.3 (c): Strengthen collaboration of specialized Public Health Reference Laboratories (Central Veterinary Laboratory, Public Health Reference Laboratory)		OUTPUT TARGETS (PER FINANCIAL YEAR)							Output Description	
	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Verification	Source and means of verification	Risks and Assumptions	Responsibility	Number of collaborative framework signed among specialized Public Health Laboratories	Establish number of collaborative framework among specialized Public Health Laboratories
	70	70	70	70	70		Payment receipts/subscription certificates	Availability of funds	Director of Public Health Laboratory Services	Output 1: Pay subscription fees for membership with Regulatory bodies, networks of regional and international	
	70	70	70	70	70				Director of Public Health Laboratory Services	Output 1: Establish number of collaborative framework among specialized Public Health Laboratories	

Strategy 2.8.1.4 (a): Establish accreditation mechanisms for the public health laboratories; - (i) establish a periodic assessment exercise of the performance of the national public health reference laboratory; (ii) adapt and disseminate the standards and protocols for laboratory accreditation of public health laboratories; (iii) Apply for international assessment for accreditation of all NPRs using appropriate international standards

Strategic Objective 2.8.1.4: Strengthen public health laboratory quality management system

and designing of appropriate remedial measures to ensure the Strategic Plan 2018-2022 takes PHIM to the intended vision.

5.2 PHIM Strategic Plan 2018-2022 Evaluation

A mid-term evaluation will be conducted to inform necessary changes for the last half of implementation of 2018-2022 SP. At the end of the period, an end line evaluation will be conducted to shape the successor Strategic Plan. The evaluations will be conducted through a consultative process.

To ensure M and E is functional, an Monitoring and Evaluation Manager will be recruited with relevant expertise.

Chapter: 6

Implementation

The effectiveness in implementing this Strategic Plan is a function of collaboration and coordination as well as ownership among various stakeholders. Public health has wide coverage and includes actors outside the mainstream healthcare delivery. Understanding of public health from social determinants of health perspective is key in mapping relevant actors and raising their consciousness that their actions contribute to public health. For example, officers in Directorate of Road Traffic and Safety Services should be aware of public health consequences of licensing unqualified drivers, allowing unroadworthy vehicles to operate on the roads. The Directorate of Fisheries should be aware of health consequences of over fishing for future nutrition needs. The local councils should be conscious of health consequences of poor waste management and so on.

The Strategic Plan also recognizes the interaction between animal and human health and its development has involved animal health experts. This is a strength in the new Strategic Plan. The involvement of animal health experts should continue in all activities of PHIM. To ensure optimal delivery of the Strategic Plan, a proper sequencing of activities is necessary to make resource mobilization relatively easier. Costing therefore needs to be broken down in years. The positive difference between this Strategic Plan and previous one is not in the components but in how it will be implemented. For that reason, PHIM should prioritize filling of vacant positions and motivate staff so that there is human resource to get the rest of strategic objectives done. The legislation and protocols, finance systems, M and E system all work when there are competent and motivated people to manage the office.

5.1 Human Resource

PHIM proposes a staff establishment based on its vision, mission and activities to be headed by the Executive Director who is responsible for the implementation of policy and activities of the PHIM. PHIM directorates will include:

5.1.1 Directorate of Public Health Reference Laboratory Services

This directorate will be headed by Director and appropriately qualified personnel in the following divisions:

- a. HIV Laboratory
- b. TB laboratory

Strategy 2.8.1.3 (a): Collaborate with national, regional and international laboratory-based surveillance system networks																
Output Description	Output	Attend laboratory-based networking activities (e.g. conferences)	Number of laboratory-based participants	Meeting held/conference/symposia	Number of laboratory-based participants trained	OUTPUT TARGETS (PER FINANCIAL YEAR)						Objectively Verifiable				
						2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023					
						2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023					
Hold periodic National laboratory held/conference/symposia	2			1	1	1	1	1	1	1	1	Director of Public Health Laboratory Services	Availability of Funds	Conference report		Source and means of verification
Attend laboratory-based networking activities (e.g. conferences)	1			1	1	1	1	1	1	1	1	Director of Public Health Laboratory Services	Funds availability	Meeting participation report		Source and means of verification
Conduct laboratory-based participants training	3							25	25	25	25	Director of Public Health Laboratory Services	Availability of Funds	Training report		Source and means of verification
Strategy 2.8.1.3 (b): Collaborate with national, regional and international laboratory-based surveillance system networks																
Output Description	Output	Source and means of verification	Risks and Assumptions	Responsibility	OUTPUT TARGETS (PER FINANCIAL YEAR)						Objectively Verifiable					
					2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023						
					2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023						

Director of Public Health Laboratory Services		Strategy 2.8.1.2 (e): Develop human resource capacity in biosafety and biosecurity									
Output 4 essential equipment types of support equipment (freezers and refrigerators (cooler boxes))	Number and types of equipment support (freezers and refrigerators (cooler boxes))	Output Description		Verification		Source and means of verification		Risks and Assumptions		Responsibility	
		2017/2018	2018/2019	2019/2020	2020/2021	2020/2021	2021/2022	Availability of funds	Availability of suitable technical assistance for TOT training	Director of Public Health Laboratory Services	Director of Public Health Laboratory Services
3	3	10	15	15	20	Training reports	Availability of funds	Availability of suitable technical assistance for TOT training	Director of Public Health Laboratory Services	Director of Public Health Laboratory Services	
3	3	10	15	15	20	Training reports	Availability of funds	Availability of suitable technical assistance for TOT training	Director of Public Health Laboratory Services	Director of Public Health Laboratory Services	

- c. Parasitology and Vector Biology
- d. Microbiology
- e. Biochemistry
- f. Hematology and Immunology
- g. Nutrition laboratory

All divisions will contribute to quality management and bio-banking activities, every division will appoint a representative member to sit on the relevant committees that are working together on common issues (e.g. SLMTA or bio-banking procedures).

The following additional laboratories will be established in future based on the availability of funds

- a. Pathology
- b. Food safety and environment

There is need to establish strong linkage between human and animal health laboratories

5.1.2 Directorate of Research and Development

The directorate shall be headed by a Director with the liaison officers to facilitate the following key functions:

- a. Surveillance (routine, special studies and outbreak investigations)
- b. Bioethics
- c. Biostatistics
- d. Health Policy Analysis
- e. Protocol Development
- f. Animal Health

5.1.3 Directorate of Epidemiology and Surveillance

This directorate will be headed by Director and appropriately qualified personnel in the following divisions:

- a. Communicable Diseases
- b. Zoonotic Diseases
- c. Non Communicable Diseases
- d. Occupational Health Safety and Trauma
- e. Health promotion
- f. Nutrition Food Safety and Hygiene
- g. Water Sanitation and Hygiene
- h. Waste Management
- i. Vector and Vermin Control
- j. Other public health events

5.1.4 Directorate of Planning, Monitoring and Evaluation

The directorate shall be responsible for health informatics and data repository

5.1.5 Directorate of Finance and Administration

Director of Finance and Administration shall head the directorate of well qualified personnel including:

- a. Accountant
- b. Logistics and Procurement
- c. Public Relations
- d. Internal auditing

5.1.6 Directorate of Human Resources, Development and Training

This directorate will be headed by Director and appropriately qualified personnel in human resource and management with the following divisions:

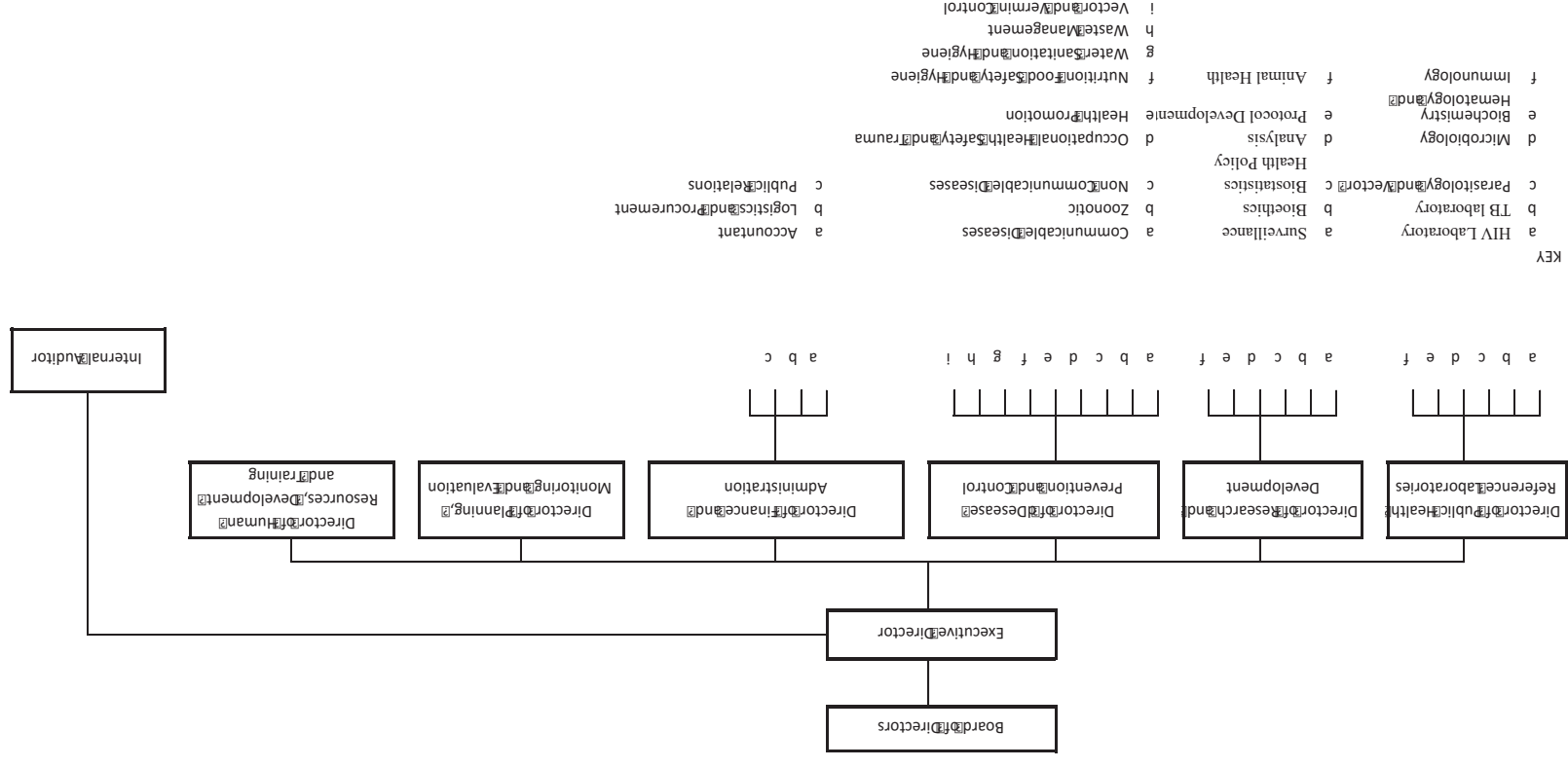
- a. Recruitment
- b. Capacity building
- c. Retention
- d. Performance appraisal
- e. Promotion

Below is the proposed organogram for PHIM's optimum performance.

Strategy 2.8.1.2 (d): Establish a bio-bank system for collection and storage of human biological materials and data													
Output	Software is procured	Staff are trained on use of the software	Output 3 of the software	Output Description	Objectively Verifiable Indicators	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Source and means of verification	Risks and Assumptions	Responsibility
Output 2	Software is procured	Staff are trained on use of the software	Number of staffs trained	Software is procured	Existence of software	1	1	1	1	1	Progress report	Funds availability	Director of Finance and Administration
Output 3	Staff are trained on use of the software	Number of staffs trained	Number of staffs trained	Software is procured	Existence of software	10	15	15	10	15	Training report	Software procurement contract includes staff training on use of software	Director of Human Resource Development and Training
Output 1	Assessment of capacity of national assessment public reference labs conducted for storage of human biological samples done	Assessment of capacity of national assessment public reference labs conducted for storage of human biological samples done	Assessment of capacity of national assessment public reference labs conducted for storage of human biological samples done	Assessment of capacity of national assessment public reference labs conducted for storage of human biological samples done	Laboratory assessment of capacity of national assessment public reference labs conducted for storage of human biological samples done	1	1	-	-	-	Assessment report	Funds availability	Director of Public Health Laboratory Services
Output 2	Development of guidelines and SOPs on biobanking	Development of guidelines and SOPs on biobanking	SOPs on biobanking	Development of guidelines and SOPs on biobanking	SOPs on biobanking	1	1	1	1	1	SOP manual	Availability of suitable technical assistance	Director of Public Health Laboratory Services
Output 3	Train personnel on bio-banking	Train personnel on bio-banking	Number of personnel on bio-banking	Train personnel on bio-banking	Number of personnel on bio-banking	15	15	15	20	20	Training report	Availability of funds	Director of Public Health Laboratory Services

Indicator	Output Description	Strategy 2.8.1.2 (c): Establish efficient Laboratory Information Management System (LIMS)									
		2017/2018	2018/2019	2019/2020	2020/21	2021/22	2022	Verification			
Output 1: SOPS and SOPs developed	Existence of SOP and guidelines	-	-	-	-	-	-	Inspection report	Funds availability	Director of Public Health Laboratory Services	
Output 2: Mentorship conducted	Number of staff mentored	-	10	15	15	10	10	Report	Funds availability	Director of Human Resource Development and Training	
Output 3: Supervision done	Number of supervision activities	-	1	1	1	1	1	Report		Director of Public Health Laboratory Services	
Output 4: Orientation and training done	Number of staff oriented and trained	x	10	15	15	10	10	Training report	Funds availability	Director of Human Resource Development and Training	
OUTPUT TARGETS (PER FINANCIAL YEAR)									Source and means of verification	Risks and Assumptions	Responsibility
Output Review of Existing data on of tools	Proportion of data on of tools	-	100%	100%	100%	100%	100%	Assessment Report	Competency to do assessment	Director of Planning, Monitoring and Evaluation	

Proposed PHIM Organogram



5.2 Governance, Management and Partnership Structures in PHIM

PHIM shall have an Executive Board appointed through open advertisement and interviews guided by a predetermined criterion. The Secretary for Health and Population will be Ex-officio. The PHIM Executive Director shall be the Board's secretary. The Board shall be responsible for policy direction of the PHIM. The Board shall have subcommittees: Appointments and Promotion Committee; Finance Committee; Research and Surveillance Committee; Laboratory Service Committee; and Quality Management Committee. Specialists and partners will be co-opted members as appropriate.

5.3 Management Structures for Stewardship

The Executive Director (ED) shall provide leadership to PHIM operations, directing the implementation of policies and ensuring adherence to the legislation. PHIM shall initially operate with five directorates: Public Health Reference Laboratory; Research and Development; Epidemiology and Surveillance; Monitoring and Evaluation; and Finance and Administration. The latter shall have the following sections: Human Resources; Procurement; Internal Audit. The set-up of PHIM from its governance to management structures is meant to enhance performance by facilitating quick response to matters of public emergencies; resource mobilization; and accountability.

Table 3: Stakeholders and their roles and responsibilities

Stakeholder	Roles and responsibilities in PHIM
Ministry of Health	<ul style="list-style-type: none"> Provide overall stewardship to implementation of PHIM strategic plan
Department of HIV and Nutrition	<ul style="list-style-type: none"> Through Department of Nutrition and HIV/AIDS, ensure nutrition education is promoted. Through Nutrition Rehabilitation Units, put all malnourished children on rehabilitation
Ministry of Agriculture (Department of Animal Health and Livestock Development)	<ul style="list-style-type: none"> Development and implementation of policies and plans relating to public health activities in animal health
Nutrition and Food Security	<ul style="list-style-type: none"> Through the Department of Animal Health and Livestock Development, ensure surveillance and early detection of zoonotic infectious diseases. Ensure veterinary officers regularly conduct meat inspection in markets and other meat selling centers. Through nutrition officers and extension officers, train households in proper preparation of food and the six food groups

Output Description	Output	Sample hubs are established e of sample hubs	Existence	-	1	1	100%	Percent e.g. cooler boxes of enablers are procured	Tools for sample transportation e.g. SOPs are developed	Contract for sample transportation is procured	Existence of tracking system is procured	Number of staff trained on sample packaging and transportation	OUTPUT TARGETS (PER FINANCIAL YEAR)				Objective Verification	Risks and Assumptions	Responsibility	
													2017/2018	2018/2019	2019/2020	2020/2021				2021/2022
Strategy 2.8.1.2 (b): Organize the laboratory network to strengthen linkages and networking of various laboratories at different tiers of service delivery and with the external laboratories																				
Sample hubs are established e of sample hubs	Output 3	Sample hubs are established e of sample hubs	Existence	-	1	1	100%	Percent e.g. cooler boxes of enablers are procured	Tools for sample transportation e.g. SOPs are developed	Contract for sample transportation is procured	Existence of tracking system is procured	Number of staff trained on sample packaging and transportation	200	200	200	200	200	200	200	Director of Public Health Laboratory Services
Enablers e.g. cooler boxes of enablers are procured	Output 4	Enablers e.g. cooler boxes of enablers are procured	Percent	100%	100%	100%	100%	Percent e.g. cooler boxes of enablers are procured	Tools for sample transportation e.g. SOPs are developed	Contract for sample transportation is procured	Existence of tracking system is procured	Number of staff trained on sample packaging and transportation	100%	100%	100%	100%	100%	100%	100%	Director of Public Health Laboratory Services
Tools for sample transportation e.g. SOPs are developed	Output 5	Tools for sample transportation e.g. SOPs are developed	Existence of tools	100%	100%	100%	100%	Existence of tools	Tools for sample transportation e.g. SOPs are developed	Contract for sample transportation is procured	Existence of tracking system is procured	Number of staff trained on sample packaging and transportation	100%	100%	100%	100%	100%	100%	100%	Director of Public Health Laboratory Services
Contract for sample transportation is procured	Output 6	Contract for sample transportation is procured	Presence of contract	-	1	-	-	Presence of contract	Contract document	Contract document	Existence of tracking system is procured	Number of staff trained on sample packaging and transportation	-	-	-	-	-	-	-	Director of Finance and Administration
Electronic sample tracking system is procured	Output 7	Electronic sample tracking system is procured	Existence of tracking system is procured	-	1	-	-	Existence of tracking system is procured	Contract document	Contract document	Existence of tracking system is procured	Number of staff trained on sample packaging and transportation	-	-	-	-	-	-	-	Director of Finance and Administration
Staff trained on sample packaging and transportation	Output 8	Staff trained on sample packaging and transportation	Number of staff trained	200	200	200	200	Number of staff trained	Funds availability	Training report	Existence of tracking system is procured	Number of staff trained on sample packaging and transportation	200	200	200	200	200	200	200	Director of Human Resource Development and Training

PHIM Executive Director		Availability of funds		Availability of specialized laboratories for placement		Exchange visit reports		Exchange of staff laboratory mentors		Type of mentorship	
Output 2	Exchange placements	Number of laboratory staff mentors	1	3	5	5	5	5	3	5	5
Output 1	Sample transportation of mapped system	Status of mapped system	1	1	-	-	-	-	1	1	1
Output 2	Design/strength of sample transportation system	Existence of efficient sample transportation system	1	1	1	1	1	1	1	1	1
Strategy 2.8.1.2(a): Establish an efficient integrated sample transportation system											
Strategic Objective 2.8.1.2: Strengthen Laboratory biosecurity, biosafety and bio-risk management system											
Output Description		Verifiably	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Source and means of verification	Risks and Assumptions	Responsibility	Director of Public Health Laboratory Services
Output 1	Sample transportation of mapped system	Status of mapped system	1	1	-	-	-	Assessment report	Funds availability	Director of Public Health Laboratory Services	Director of Public Health Laboratory Services
Output 2	Design/strength of sample transportation system	Existence of efficient sample transportation system	1	1	1	1	1	Specimen transportation system guide	Funds availability	Director of Public Health Laboratory Services	Director of Public Health Laboratory Services

Ministry of Civic Education and Culture HEU	<ul style="list-style-type: none"> In liaison with communication officer at PHIM, the ministry will conduct mass awareness of PHIM strategic plan and its components
Ministry of Natural Resources, Energy and Mining/ (Environmental Affairs Department)	<ul style="list-style-type: none"> Ensure mining and quarrying activities are informed by environmental impact assessment and that precautionary measures are put in place to mitigate against potential negative health hazards that come through mining, quarrying and oil exploration. Collaborates with MoH&P on the safe management of waste disposal to avoid contaminating the environment Conduct environmental monitoring of activities to ensure compliance with national/International guidelines
Ministry of Local Government	Through local councils (city, municipal, town and district), ensure improved sanitation and waste management
Ministry of Finance, Economic Planning and Development	<ul style="list-style-type: none"> Financing the Strategic Plan through budget appropriation
National Statistical Office	<ul style="list-style-type: none"> Administering demographic and health survey, Multiple Indicators Cluster Survey and other health related surveys
Partner Institutions (including Health Development Partners)	<ul style="list-style-type: none"> Financing the PHIM Strategic Plan, Implementing some components or activities of the plan Provide technical support to PHIM secretariat Participate in joint sector monitoring
Pharmacy, Medicines and Poisons Board	<ul style="list-style-type: none"> Certify vaccines, oversee dispose of expired drugs and medical supplies
Nurses and Midwives Council of Malawi	<ul style="list-style-type: none"> Through its regulatory function of nurses and midwives, it will enforce ethics in nurses and midwives' discharge of their duties
Medical Council of Malawi	<ul style="list-style-type: none"> Through its regulatory function of physicians, it will enforce ethics in physicians' discharge of their duties
Malawi Bureau of Standards	<ul style="list-style-type: none"> Ensure local and imported food stuffs available on the market meet safety and nutrition requirements.
Civil Society Organizations	<ul style="list-style-type: none"> Evidence generation and advocacy Localizing PHIM strategic plan at local level through community awareness

5.4 Operationalization of the PHIM Strategic Plan 2018-2022

A Strategic Plan Implementation Committee shall be established and shall ensure that each Directorate has annual and quarterly plans. Annual Work Plans (AWPs) shall be developed to guide the implementation of this strategic plan. These will be implemented following the government of Malawi financial year. Quarterly plan will detail activities of the annual work plan. To ensure consistent implementation of the quarterly plans monthly plan shall be developed at individual level against which weekly internal update meetings shall take place regularly on specified days of the month.

Quarterly performance shall take place with stakeholders and partners to review performance. Best performing Directorate shall be awarded non-financial incentive accordingly. Annually, outstanding performance of the directorates and individuals shall be awarded accordingly.

Quarterly reports will be compiled and shared with relevant stakeholder and partners.

Output	Orientation and training of staff:	Number	Post	Post grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go	OUTPUT TARGETS (PER FINANCIAL YEAR)							Description	Objectively Verifiable Indicator	Number of (on-the-job) laboratory staff mentored	Type of mentors
								2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Source and means of verification	Risks and Assumptions				
4	and training of staff:	-	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	Source and means of verification	Risks and Assumptions	Responsibility			
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go	8	8	8	8	8	Mentorship reports	Availability of funds	PHIM Executive Director			
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											
15	Post	15	Post	grad.	diploma	Short term (15 Long term (15 Post grad diploma (10 to go in 2nd year)	Diploma (% each year from 2nd year and 5 year) and PhD (All to go											

Strategy 2.8.1.1 (d) Establish appropriate human resource requirements for PHRL in PHIM												
Output	Description	Verify 2017/2018	Verify 2018/2019	Verify 2019/2020	Verify 2020/2021	Verify 2021/2022	Source and means of verification	Risks and Assumptions	Responsibility	Output 1	Output 2	Output 3
Staff needs assessment	Needs assessment report	Number of positions	Percent of established positions filled	Percent of established positions filled	Percent of established positions filled	Percent of established positions filled	Percent of established positions filled	Percent of established positions filled	Percent of established positions filled	Needs assessment	Staff establishment	Recruitment/Deployment
Output 6	User Training is conducted on various equipment	1	3	3	3	3	3	3	Director of Public Health Laboratory Services	Training report	Training report	Funds availability
Output 6	Service contracts for equipment are produced	-	1	1	1	1	1	1	PHIM Executive Director	Existence of service contracts	Service contracts for equipment are produced	Funds are available
Output 7	Procure reagents and supplies for all the established units/sections								PHIM Executive Director	Availability of reagents and supplies	Availability of reagents and supplies	Availability of funds
Output 6	Service contracts for equipment are produced								PHIM Executive Director	Existence of service contracts	Service contracts for equipment are produced	Funds are available
Output 1	Needs assessment	1	1	1	1	1	Organization Needs assessment report	Timely execution of the activity	PHIM Executive Director	Needs assessment	Needs assessment report	Timely execution of the activity
Output 2	Staff establishment	x	x	x	x	x	Organization	Timely functional review	PHIM Executive Director	Number of positions	Staff establishment	Timely functional review
Output 3	Recruitment/Deployment	-	50%	100%	100%	100%		Required competence is available and attracted to work at PHIM	PHIM Executive Director	Percent of established positions filled	Recruitment/Deployment	Required competence is available and attracted to work at PHIM

ANNEXES

Strategic Objective 2.8.1.1: Strengthen performance of the national public health reference lab												
Strategy 2.8.1.1 (a): Map all laboratories in Malawi in line with one health including medical and public health laboratories for human and animal health												
Output Description	Objectively Verifiable Indicator	Annual Output Targets						Source and means of verification	Risks and Assumptions	Responsibility		
		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022						
		Annual Output Targets										
Output 1 Checklist for mapping developed	Existence of checklist	x	1	-	-	-	Report	Funds are available	Director of Public Health Laboratory Services			
Output 2 Mapping exercises conducted	Number of mapping exercises	x	1	1	1	1	Report	Funds are available	Director of Public Health Laboratory Services			
Output 3 Category of all laboratories in the tiered network	Existence of lab category report	x	1	1	1	1	Document	Funds are available	Director of Public Health Laboratory Services			
Strategy 2.8.1.1 (b): Determine and organize sections in Public Health Reference Laboratory												
Output Description	Objectively Verifiable Indicator	Annual Output Targets						Source and means of verification	Risks and Assumptions	Responsibility		
		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022						
		Annual Output Targets										
Output 1 Section within the public health labs in PHIM are established	Number of departments	x	-	-	-	-	Functional Review report	Funds are available	Director of Public Health Laboratory Services			
Output 2 Organogram and TORs for depts. are developed	Existence of organogram and TORs	x	-	-	-	-	Organogram and TORs	DHRMD and MoH&P timely support PHIM	Director of Public Health Laboratory Services			
Output 3 A system to coordinate the depts. is developed.	Existence of internal coordinating system	x	-	-	-	-	Procedures and processes document	Transparency and accountability	Director of Public Health Laboratory Services			

Output Description	Objectively Verifiable Indicator	OUTPUT TARGETS (PER FINANCIAL YEAR)						Source and means of verification	Risks and Assumptions	Responsibility
		2017/2018	2018/2019	2019/2020	2020/2021	2021/2022				
		OUTPUT TARGETS (PER FINANCIAL YEAR)								
Output 1 3 new labs are constructed and 5 existence labs are refurbished	Number of new labs	-	1	1	1	-	MoH&P inspection report	Donor confidence	PHIM Executive Director	
Output 2 Procurement plan is developed	Existence of procurement plan	1	1	1	1	1	Procurement Plan	Functional Internal Procurement Committee	Director of Finance and Administration	
Output 3 Equipment is procured	Amount of equipment	-	5	1	1	1	Inspection report	Funds availability	Director of Finance and Administration	
Output 4 Equipment is installed	Percent equipment installed	-	100%	100%	100%	100%	Consultant Report	Funds availability	Director of Public Health Laboratory Services	
Output 5 User Training manuals is produced	Existence of User Training manual	1	3	3	3	3	Training manuals	Funds availability	Director of Public Health Laboratory Services	