



THE REPUBLIC OF THE UNION OF MYANMAR
Ministry of Health and Sports

**NATIONAL ACTION PLAN
FOR HEALTH SECURITY (NAPHS)
2018 ~ 2022**



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**THE REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF HEALTH AND SPORTS**

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2018-2022**

October 2018

Table of Contents

ACCRONYMS/ABBREVIATIONS	iv
FOREWORD	1
ACKNOWLEDGEMENT	3
EXECUTIVE SUMMARY	4
RECORD OF CHANGES	6
BACKGROUND/CONTEXT	7
Country Profile	7
Administrative, Socio-economic and Political context	7
Health Sector Analysis	8
IHR capacity analysis	9
VISION, MISSION, OBJECTIVES	14
GUIDING PRINCIPLES AND CORE VALUES	14
SUMMARY OF OUTPUTS USED IN THE DEVELOPMENT OF NAPHS	16
PRIORITY ELEMENTS OF THE NAPHS WITH COSTING	17
IMPLMENTATION OF ACTION PLAN WITH TIME FRAME	21
REFERENCES	22
Annexes	23
Annex i: Situation Analysis, summary of country assessment	23
Annex ii: Documentation of planning workshop	27
Annex iii: Terms of Reference of National Cross Government Steering Committee	35
Annex iv: Implementation with Monitoring and Evaluation Plan	38
Annex v: Advocacy and Communication Strategy	41
Annex vi: Country Planning Participants list	43
Annex vii: Completed Matrix of NAPHS with detailed Costing	47

LIST OF TABLE:

Table 1.	Myanmar Scores:	10
Table 2.	Total Cost and Cost for each Strategic Category by Year (in MMK):	20
Table 3.	Total Cost and Cost for each Strategic Category by Year (in USD):	20
Table 4.	Participants List in Workshops:	31
Table 5.	Activity Monitoring Table:	39
Table 5.a.	Activity Monitoring Table:	40
Table 6.	Key Technical Areas and Experts:	43

LIST OF FIGURE:

Figure 1.	Status of indicators:	13
Figure 2.	Milestones of NAHPS Development:	13
Figure 3.	Budget allocation by Technical Strategy Category of the NAPHS:	18
Figure 4.	Budget allocation by Technical Areas of the NAPHS:	19
Figure 5.	Distribution of Cost by Year and Category- NAPHS: (MMK)	19
Figure 6.	Distribution of Cost by Year and Category- NAPHS: (USD)	20

ACCRONYMS/ ABBREVIATIONS

AAR	After Action Review
ADB	Asia Development Bank
AFP	Acute Flaccid Paralysis
AMR	Antimicrobial Resistance
CBRN	Chemical, Biological, Radiological & Nuclear
CEU	Central Epidemiology Unit
CVDPV	Circulating Vaccine Derived Poliovirus
DAE	Division of Atomic Energy
DMR	Department of Medical Research
DSMR	Defence Services Medical Research
DoPH	Department of Public Health
EOC	Emergency Operation Centre
EPI	Expanded Programme on Immunization
EQA	External Quality Assessment
FAO	Food and Agriculture Organization of the United Nations
FDA	Food & Drug Administration
FETP	Field Epidemiology Training Programme
Gavi	The Vaccine Alliance
GMS	Greater Mekong Subregion
HCAI	Health Care Associated Infections
HLPU	Health Literacy Promotion Unit
IAEA	International Atomic Energy Agency
IHR	International Health Regulations (2005)
ILI	Influenza Like Illness
IPC	Infection Prevention and Control
IRD	International Relation Division
JEE	Joint External Evaluation
LBVD	Livestock Breeding & Veterinary Department
MBDS	Mekong Basin Disease Surveillance
M-HSCC	Myanmar Health Sector Coordination Committee
MoHS	Ministry of Health and Sports
Moi	Ministry of Information
MOU	Memorandum of Understanding

MPH	Master of Public Health
NAPHS	National Action Plan for Health Security
NDMC	National Disaster Management Committee
NGO	Non- governmental organization
NHL	National Health Laboratory
NIMU	National Health Plan Implementation Monitoring Unit
OEH	Occupational & Environmental Health
OIE	World Health Organization for Animal Health
PHE	Public Health England
PHEIC	Public Health Emergency of International Concern
PHEOC	Public Health Emergency Operation Center
PHL	Public Health Laboratory
POC	Points of Care
PTC	Poison Treatment Center
RRT	Rapid Response Team
SEAR	Southeast Asia Region
SOP	Standard Operating Procedures
UHC	Universal Health Coverage
UNICEF	United Nations International Children’s Emergency Fund
US CDC	United States Center for Disease Control
USD	US Dollar
VPD	Vaccine Preventable Diseases
WHO	World Health Organization

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

A Shared Opportunity for Sustainable IHR (2005) Implementation

FOREWORD

Myanmar, as a member state of World Health Organization, is mandatory to build up its capacity to fulfill core capacities of International Health Regulation (2005) assuring Health Security for citizens of Myanmar. It can lead to strengthening of the country's capacity to prevent, detect and protect against, control and provide response to public health risks, effects of diseases of potential international spread.

Now, Myanmar is on track of political, social and economic transition, there is a real opportunity for the country to live up to its full potential. The growths in international travel and trade give spaces for emergence or re-emergence of international disease threats and other public health risks for Myanmar.

Five years National Action Plan for Health Security (NAPHS) Myanmar (2018-2022) was developed to fulfill the purpose and scope to prevent, protect, control and provide response to spread of disease internationally and within Myanmar, in line with IHR. In the formulation process, multi-sectoral stakeholders, relevant ministries and development partners were actively involved for resulting strong, cohesive, compact and comprehensive plan. Development of the plan are under strategy of Myanmar National Health Plan (2017-2021), pave ways towards UHC in order to be as a sustainable development plan.

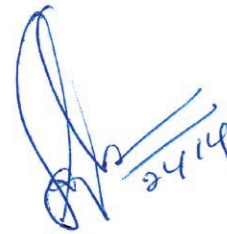
This plan will cover nineteen key technical areas under four strategic categories of prevent, detect, respond and other IHR related hazards and points of entry. The NAPHS will help in intensifying and maintaining the capacity for prevention, rapid detection, verification and responding to health risks, both diseases and other events. It will also help in effectively utilizing WHO tools and directives on implementing the National Action Plan that support to develop core capacities for surveillance, preparedness and response towards all public health emergencies. Furthermore, it will help in identifying the priorities that are needed to meet the IHR commitments and obligations.

Changing interactions among human, animal and the environment in recent years has resulted in increasing emergence and re-emergence of infectious diseases, natural disasters and other public health emergencies of international concerns across the world. Thus, health security not only requires strong alliance among nations, but also strong partnerships, cooperation and collaborations among the different sectors, especially between the sectors of human health, animal health and Environment, as "One Health" Approach.

Not only in development but also in implementation and evaluation, cooperation, coordination and collaboration among inter-ministries, multi-sectoral stakeholders, and development partners, and working with and promoting young professionals in country as

future generation responsible for effective and sustainable implementation of the health and health-related programmes, are essential for fulfilling the purposes of plan. Existing Technical Strategy Group for Public Health Emergencies & Preparedness under guidance of Cross Government Steering Committee in Myanmar Health Sector Coordination Committee will be a good platform and core body of NAPHS for overseeing the implementation steps.

Finally, I would like to strongly endorse this National Action Plan for Health Security (2018-2022) and all that is required to ensure its efficient implementation. We are confident that the plan would provide key framework to ensure health security nationally, regionally and globally resulting in fulfillment of sustainable development goals.



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The development team for the National Action Plan for Health Security (2018-2022) would like to thank HE Dr. Myint Htwe, Union Minister of Health and Sports (MoHS), for initiating, guiding and supporting the process of developing the Plan.

The team's sincere gratitude goes to:

- All the participants who attended the different and frequent workshops, meetings, individual discussion and assessments for sharing thoughts, generating ideas and contributing to the development and finalization of the Plan
- Representatives from MoHS's various Departments and Programs
- Representatives from other Ministries who provided valuable inputs
- Different agencies and individuals that were consulted while preparing this plan and report for the information they shared
- The following WHO entities: the JEE team, WHO country office in the Republic of the Union of Myanmar, WHO Regional Office for South East Asia (WHE department), WHO HQ (Country Health Emergencies Preparedness and IHR department, and Emergency Operations department, in the WHE programme)
- The Government and national experts of the Republic of the Union of Myanmar for their support of, and work in, preparing for the JEE mission
- Food and Agriculture Organization of the United Nations (FAO), and World Bank, JICA, US CDC, DFID, PHE, ADB and relevant development partners for their contribution of experts and expertise
- The United States Agency for International Development (USAID) and PIP Framework, Infectious Hazard Management, WHO Health Emergencies Programme for their kind financial contribution to this important development.

EXECUTIVE SUMMARY

A World Health Assembly (WHA)'s decision in May 2016 requested WHO to develop a global implementation plan that included immediate planning to improve delivery of the International Health Regulations (2005). The Global Action Plan recommends that Member States, with the support of WHO and development partners, develop and implement five year national action plans. Member States have agreed to work towards Universal Health Coverage and to build resilient health systems which can adapt and respond to challenges posed by outbreaks and other emergencies in country and internationally. Myanmar also agreed to work together to strengthen prevention, detection and response to public health emergencies under the International Health Regulations (2005).

As a Member State, Myanmar has carried out Joint External Evaluation of IHR core capacities to assess the country's capacity under the IHR to prevent, detect, and rapidly respond to public health threats. Myanmar is the third country in the South-East Asia Region to take part in the Joint External Evaluation (JEE) which took place in Nay Pyi Taw in May 2017 and the first country who developed National Action Plan for Health Security in the SEARO. The official request for Joint External Evaluation (JEE) was made to The World Health Organization (WHO) in January 2017. The mission consisted of a multi-sectoral International team made up of individuals with recognized expertise in their field from different countries. Support was also given by technical advisors from The Food and Agriculture Organization (FAO), Public Health England (PHE), Public Health Agency of Sweden and Centre for Disease Control (US-CDC) and Ministry of Health, Sri Lanka.

Technical presentations led by the Ministry of Health and Sports (MoHS) were given by the multi-sectoral Myanmar team focusing on the self-assessment for core capacities to IHR they had conducted followed by a joint multi-sectoral discussion. The joint recommendations that followed emerged from this process and supported with various field visits. The team of experts visited The National Health Laboratory, Yangon Seaport, the Livestock Breeding and Veterinary Department (LBVD) Laboratory and Yangon International Airport. All the nineteen action packages/technical areas were assessed. A multi-sectoral team of experts (nominated by JEE secretariat) participated in the week long assessment which took place from 3 to 9 May 2017. All the 19 action packages/technical areas were assessed.

The summary findings demonstrated that although there has been major progress, gaps still exist in key core technical areas. Out of the 48 indicators, Myanmar had got 2 (4.2%) Green (Demonstrated/sustainable Capacity), 33 (68.8%) Yellow (Limited/Developed capacity), and 13 (27.0%) red (No capacity) on the Joint External Evaluation. Except measles coverage under immunization which has scored 4 (even in Green), majority lie between limited to developed capacity. Areas for Antimicrobial Resistance, Biosafety from prevention strategic category, and preparedness, emergency response operation, medical counter measures, risk communication from response strategic category, and Chemical events, radiation emergencies from other category falls in red (no capacity) that indicate immediate priority actions for these areas to be started.

As a follow up to the JEE in May 2017, WHO was requested to support in the development of a National Action Plan for Health Security. Based on the findings and recommendations

of JEE, the Ministry of Health and Sports (MoHS), Myanmar, has initiated development of five-year National Action Plan for Health Security with WHO's technical supports which was materialized in November 2017 and February 2018 through costing working sessions with representatives from multi-disciplinary and multi-sectoral experts from MoHS and relevant ministries, and development partners such as FAO, US CDC, USAID, JICA, PHE, DFID, World Bank, ADB and PREDICT contributed technical expertise to the development of the plan. The relevant ministries involved in NAPHS development are Ministry of Agriculture Livestock and Irrigation, Department of Civil Aviation, Myanmar Port Authorities, Myanmar Port Authorities, Department of Customs, Department of Immigration, Department of Forestry, Ministry of Defence, Ministry of Foreign Affairs, Myanmar Police Force, General Administration Department, Department of Atomic Energy (TL), Department of Relief and Resettlement and City Development Committee. Myanmar is the first country in South East Asia Region-SEAR that has developed "NAPHS"

This plan aims to reduce morbidity, mortality, disability and socio-economic disruptions due to public health threats. Specifically it aims at to: (i) strengthen and sustain the capacity to prevent outbreaks and other health emergencies; (ii) strengthen and sustain the capacity to promptly detect and confirm outbreaks; (iii) strengthen and sustain the capacity to promptly respond to and recover from the negative effects of outbreaks and health emergencies; (iv) strengthen linking human and animal health as "One Health Approach"; (v) strengthen multi-sectoral cooperative efforts to prevent, detect, control and response against public health risks; (vi) To function actions for legislations and formalized procedures. The national action plan will align with all activities with the "One Health approach" and multi-sectoral cooperative actions planned; mapping existing and potential domestic and external financing to support the delivery of the national action plan and strengthen institutional framework to support Health Security and One Health implementation.

The five Year plan (2018-2022) will cover 19 key technical areas under the four strategic categories of prevent, detect, respond and other IHR-related hazards and points of entry with a total cost of USD 158,524,934.49. The major costs being on the Prevent component (56.08%), followed by Detect (24.35%), other IHR Hazards (17.99%); and then Response (1.58%) of the total cost estimated. Some of activities in NAPHS are ongoing activities and newly inputs of activities are prioritized and planned in order to achieve intended objectives for JEE indicators under each technical area and be in line with Myanmar National Health Plan.

The main cost drivers of the National Action Plan for Health Security, Myanmar includes Immunization (46,746,771.74 USD), the National Health Laboratory (32,333,141.93 USD), the Chemical Events (22,585,312.48 USD), the Zoonotic Diseases (20,652,080.45 USD), the Biosafety and Biosecurity (15,011,529.81 USD), Antimicrobial Resistance (5,199,801.47 USD), the Points of Entry (3,692,693.83 USD), the Workforce Development (3,505,474.36 USD), the Radiation Emergency (2,238,841.78 USD) and then the Emergency Response Operations (1,212,472.23 USD).

Multi-sectoral involvement in planning, implementation, monitoring and implementation of NAPHS, regular communication mechanism among stakeholders, commitments and policy

supports by government and stable security and political weather will mitigate risks in not only implementation of NAPH but also international communications and relationship, budget, financing and human resources. Regular information sharing practices, technical working group meetings, multi-sectoral cooperation and one health approach will reduce constraints and challenges for implementation of NAPHS for better progress.

The implementation of the plan will consider principles such as ownership and leadership; strengthening partnerships and development; promoting multi-sectoral collaboration; evidence-based evaluation and actions; shared responsibility; efficiency, one health approach. Implementation of NAPHS activities will focus on sub-national level to enhance capacity of states/regional and till township level health care system.

Existing Technical Strategy Group for Public Health Emergency & Preparedness under guidance of National Cross Government Steering Committee in Myanmar Health Sector Coordination Committee acts as platform for overseeing the implementation of NAPHS. Member of committee will work together regular monitoring, supervision through regular coordination meetings, field visit by each technical areas. Evaluation of each indicated objective for each output indicators for each technical area will be assessing bi-annually. Annual reporting and 5 yearly JEE assessment will be conducted as major parts of Monitoring and Evaluation for NAPHS.

RECORD OF CHANGES

JEE recommendation by IHR core capacity indicators was a significant record for initiation and developing of NAPHS, Myanmar. This record encouraged Myanmar MoHS to start actions for workshops for NAPHS development, for which first development workshop was conducted in September 2017 with drafted NAPHS matrix and its' estimated cost, and, finalization workshop were held in February 2018 resulting more complete NAPHS matrix and its' costing with important recommendations and next steps as well. These actions makes multi-sector stakeholder more strong coordination and cooperation efforts to complete NAPHS plan. During August to October 2018, MoHS has tried to finish complete and comprehensive NAPHS with narrating of the plan by the financial and technical of WHO assigning one national consultant. During these three months, key expert responsible persons for different ministries and departments were working together with National consultant through close talks and discussion time to time for finalization of NAPHS package. Review, discussion and revision of the plan were reiterated along the process of development for better, reasonable and suitable planning.

Event on endorsement and acknowledgment by multiple ministries and dissemination of agreed NAPHS was conducted at Nay Pyi Taw in October 2018 in order to do advocate and increase awareness for effective and cooperative implementation to all stakeholders and development partners. Regular plan and achievements updates will be shared and monitored during monthly, bi-annual evaluation and coordination meetings among Technical Working Group and National Cross Government Overarching Committee. Minutes and notes are kept as records and source of information for revision of plan.

Yearly revision on activity and costing will be conducted during annual evaluation and coordination meeting. The information, updates, lesson-learns, evaluation results, constraints and challenges from regular records, resource mapping (HR and budget) and inputs from implementing stakeholders will be used as resources. This process will give more spaces of opportunity for better planning of efficient and effective NAPHS in next consecutive year.

BACKGROUND / CONTEXT

COUNTRY PROFILE

Situation Analysis

The Republic of the Union of Myanmar is the largest country in mainland South-East Asia and is located on the Bay of Bengal and Andaman Sea. It is bounded on the north and north-east by the People's Republic of China, on the east and south-east by the Lao People's Democratic Republic and the Kingdom of Thailand, on the west and south by the Bay of Bengal and Andaman Sea, on the west by the People's Republic of Bangladesh and the Republic of India.

ADMINISTRATIVE AND POLITICAL STRUCTURE

Administratively, Myanmar is divided into seven regions (Ayeyawady, Bago, Magway, Mandalay, Sagaing, Tanintharyi, and Yangon), seven states (Chin, Kachin, Kayah, Kayin, Mon, Shan, and Rakhine) and Union Territory. Nay Pyi Taw, the capital, is under the direct administration of the president. The regions and states are divided into 70 districts and 330 townships, 84 sub-townships, 398 towns, 3,063 wards, 13,618 village tracts and 64,134 villages. There are also five self-administered zones and one self-administered division for six minority ethnic groups. (WHO 2014) The smallest administrative unit is the village tract.

There are over 130 ethnic groups in Myanmar with eight major groups: Bamar (60%), Shan (8.5%), Kayin (16.2%), Rakhine (4.5%), Mon (2.4%), Chin (2.2%), Kachin (1.4%), and Kayah (0.4%). About 90% of the population is Buddhist, 5% Christian, and 4% Muslim.

Demography

Socio-demographic and administrative characteristics are total population: 51.4 million, Annual Growth rate (%): 1.0%, Infant Population: 0.9 million, Under Five year population: 4.6 million, Proportion of rural population: 67%, Proportion of Urban population: 33%, 0-15 Year population: 25%, 15-59 year population: 67%, 60 and above year population: 8%, Number of state and Regions: 15, Number of district: 70, Number of Township: 330. (Myanmar Census 2014)

A quarter of Myanmar's population is under fifteen, two-thirds are between the ages of 15-59, and the remaining 8% are sixty or over. Two-third of the population lives in rural areas. The infant population is close to a million. Myanmar had a census in 2014, following a period without a census since 1983, and estimated the population is approximately 52 million.

Some internal migration takes place in the country as people leave their homes to work in areas with gold and jade mines as well as rubber plantations.

Social-economic and Political context

Myanmar gained independence from British colonial rule in 1948. After fifteen years of democratic government, there was a military coup in 1962. In 1974, the Burma Socialist Programme Party introduced a constitution. The military staged another coup in 1988. In 2008, a new constitution was ratified and there were national elections in November 2010. The country now has elected chair persons and vice-chairpersons of parliament.

Since the new government came to power in 2011, the country has introduced several sweeping reforms to end its isolation. Formation of civil society organizations is now allowed and there is media freedom.

Recent constitutional reforms have opened up new health sector and program pathways in Myanmar. Administrative systems becomes more decentralized, NGOs become more active, policy reforms such as social protection are beginning to emerge, and there has been a substantial increase in international development assistance aid flows and government health investment. The main opportunity presented is increased resources for health system development and operational delivery of public services, and expanded opportunity for peace agreements with populations in conflict. The main threat is lack of absorptive capacity by sub national institutions that have limited systems (planning, budgeting, M & E) to manage and direct larger operational budgets. The political reform context has also generated higher levels of population mobility and urban drift, presenting major contextual challenges in terms of the growth of urban poor settlements.

HEALTH SECTOR ANALYSIS

Macroeconomic Context

Myanmar has been under economic sanctions since the late 1990s and these have inhibited economic growth. The new civilian government that came into power in 2011 has introduced reforms to integrate Myanmar's economic with the global system. In the past year, Myanmar's economy has been growing well and was 8.5 percent in real terms in 2014-2015. However, growth is projected to decline to 6.5 percent in 2015-2016 due to floods and slowing investments. Economic reforms have supported consumer and investor confidence despite ongoing business environment and socio-political challenges. Rapidly rising demand for investment-related imports has widened the current account deficit. Inflation is estimated to have reached over 10 percent in the year. Medium-term economic growth prospects remain strong assuming continued progress on reforms (www.worldbank.org/en/country/myanmar).

Health Status

The health status of the Myanmar population is poor and does not compare favorably with other countries in the region. Life expectancy at birth in Myanmar is 64.7 years, the lowest among ASEAN countries. The maternal mortality ratio (MMR) is the second highest among ASEAN countries at 282 deaths per 100,000 live births. Every year, around 2,800 women die during pregnancy or childbirth (2014 census). The under-five mortality rate (U5MR) is 72 deaths per 1,000 live births – compared to 29 in Cambodia and 12 in Thailand – and

the infant mortality rate is 62 per 1,000 live births, compared to 25 in Cambodia and 11 in Thailand (World Bank). Malnutrition is highly prevalent, with more than one third of the children under the age of five stunted. Both HIV prevalence and TB incidence are second highest among ASEAN countries. Burden of disease associated with non-communicable diseases (NCDs) is increasing at alarming rates; it is estimated to already account for more than 40 per cent of all deaths. Diabetes and hypertension are particularly prevalent and have so far been largely neglected. Hidden behind the national averages are wide geographic, ethnic and socio-economic disparities. For example, the MMR in Chin State is 357, compared to 213 in Yangon, and the U5MR ranges from 108 in Magway Region to 48 in Mon State. Children from poorer households are more than twice as likely. (Myanmar National Health Plan 2017- 2021)

Health system

The health system has evolved over time and the country has gone from a hospital centric approach during 1988-2011 to a system with a goal of universal coverage. However, government spending on health is still low. The government has spent a relatively low percentage of its general expenditure on health with only 1.8% of GDP spent on health in 2013 (Health Sector Review WHO 2014)

Health System Organization

The Ministry of Health and Sports (MoHS) is responsible for planning, financing, administrating, regulating and providing health care; it is headed by the Minister. The MoHS has recently reorganized and now has six departments: Department of Traditional Medicine (DTM), Department of Medical Research (DMR), Department of Health Professional Resource Development and Management (DHPRDM), Department of Medical Service (DMS), Department of Public Health (DoPH), and Department of FDA (FDA) (Myanmar National Health Plan 2017- 2021).

Health Financing

Government health expenditure in Myanmar, 3.65% of general government expenditures (source: MoHS). Expenditure on health has increased in recent years but is still low at about 3.65%. Inadequate government expenditure on health over the past decade has results in high out-of- pocket payments by household, which because the largest source of financing for health care (79%) (WHO 2014)

INTERNATIONAL HEALTH REGULATION CAPACITY ANALYSIS

Situation Analysis

A World Health Assembly (WHA)'s decision in May 2016 requested WHO to develop a global implementation plan that included immediate planning to improve delivery of the International Health Regulations (2005). In consideration of the growth in international travel and trade, and the emergence or re-emergence of international disease threats and other public health risks, the Global Action Plan recommends that Member States, with the support of WHO and development partners, develop and implement five year national action plans.

This shall be in line with The purpose and scope of the IHR (2005) are “to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade.”

As member State of WHO, in order to prevent, detect, control and response to internal and international public health and emergency risks, Union Minister for Ministry of Health and Sport, have initiated to develop National Action Plan for Health Security through technical and financial supports from development partners, especially for WHO and multi-sectoral cooperation from stakeholders.

JEE mission, a multi-sectoral international team made up of individual from different countries with recognized expertise in their field participated in the week long assessment which took place during May 2017. Myanmar is the third country in the South-East Asia Region to take part in the Joint External Evaluation (JEE) which took place in Nay Pyi Taw. The JEE was undertaken by the MoHS that oversees Myanmar’s health services through seven departments; The Departments of Public Health, Medical Services, Food & Drug Administration, Medical Research, Traditional Medicine, Health Professional Resource Development & Management, and Sports & Physical Education. All the nineteen technical areas were assessed. Myanmar multi-sectoral ministries team completed a self-assessment using the JEE tool. The results of this assessment, including host country self-assessed scores for the nineteen Action Packages, were then presented to the Joint External Evaluation Team. The JEE team and host country experts then participated in a facilitated discussion to jointly assess on current strengths, areas of country which need strengthening, and priority actions; scores were developed through a process of consensus and is done in a collaborative manner, with the JEE team members and host country experts seeking agreement. Field visits by JEE team and Myanmar expert team were conducted for more accurate assessment and recommendations. Action Package scores, supporting information, and specific recommendations for priority actions are provided under the Action Package sections of this report. JEE team presented the results of the assessment and observations of the Host Country’s Health Security preparedness in the context of IHR to Minister of Health for more advices and guidance, and to senior government officials from different ministries and the WHO Country Representative as well. The following table will describe results of JEE scores by assessment.

Table 1: Myanmar scores

Technical areas	Indicators	Score
National legislation, policy and financing	p.1.1 Legislation, laws, regulations, administrative requirements, policies, or other government instruments in place are sufficient for implementation of IHR (2005)	2
	P.1.2 The State can demonstrate that it has adjusted and aligned its domestic legislation, policies, and administrative arrangements to enable compliance with IHR (2005)	2

Technical areas	Indicators	Score
IHR coordination, communication and advocacy	P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	2
Antimicrobial resistance	P.3.1 Antimicrobial resistance detection	3
	P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	3
	P.3.3 Health care-associated infection (HCAI) prevention and control programmes	1
	P.3.4 Antimicrobial stewardship activities	1
Zoonotic diseases	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	3
	P.4.2 Veterinary or animal health workforce	3
	P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional	2
Food safety	P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases	2
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	2
	P.6.2 Biosafety and biosecurity training and practices	1
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	3
	P.7.2 National vaccine access and delivery	4
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	3
	D.1.2 Specimen referral and transport system	3
	D.1.3 Effective modern point-of-care and laboratory-based diagnostics	2
	D.1.4 Laboratory quality system	3
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	4
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	2
	D.2.3 Integration and analysis of surveillance data	3
	D.2.4 Syndromic surveillance systems	3
Reporting	D.3.1 System for efficient reporting to FAO, OIE and WHO	3
	D.3.2 Reporting network and protocols in country	2

Technical areas	Indicators	Score
Workforce development	D.4.1 Human resources available to implement IHR core capacity requirements	3
	D.4.2 FETP ¹ or other applied epidemiology training programme in place	3
	D.4.3 Workforce strategy	3
Preparedness	R.1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented	1
	R.1.2 Priority public health risks and resources are mapped and utilized	1
Emergency response operations	R.2.1 Capacity to activate emergency operations	2
	R.2.2 EOC operating procedures and plans	1
	R.2.3 Emergency operations programme	2
	R.2.4 Case management procedures implemented for IHR relevant hazards.	2
Linking public health and security authorities	R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	2
Medical countermeasures and personnel deployment	R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency	1
	R.4.2 System in place for sending and receiving health personnel during a public health emergency	1
Risk communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	1
	R.5.2 Internal and partner communication and coordination	3
	R.5.3 Public communication	3
	R.5.4 Communication engagement with affected communities	2
	R.5.5 Dynamic listening and rumor management	2
Points of entry	PoE.1 Routine capacities established at points of entry	2
	PoE.2 Effective public health response at points of entry	2
Chemical events	CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies	1
	CE.2 Enabling environment in place for management of chemical events	1

Technical areas	Indicators	Score
Radiation emergencies	RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	1
	RE.2 Enabling environment in place for management of radiation emergencies	1

Out of the 48 indicators, Myanmar has scored 2 green, 33 yellow and 13 red on the Joint External Evaluation (Figure 1.)

Figure 1. Status of indicators

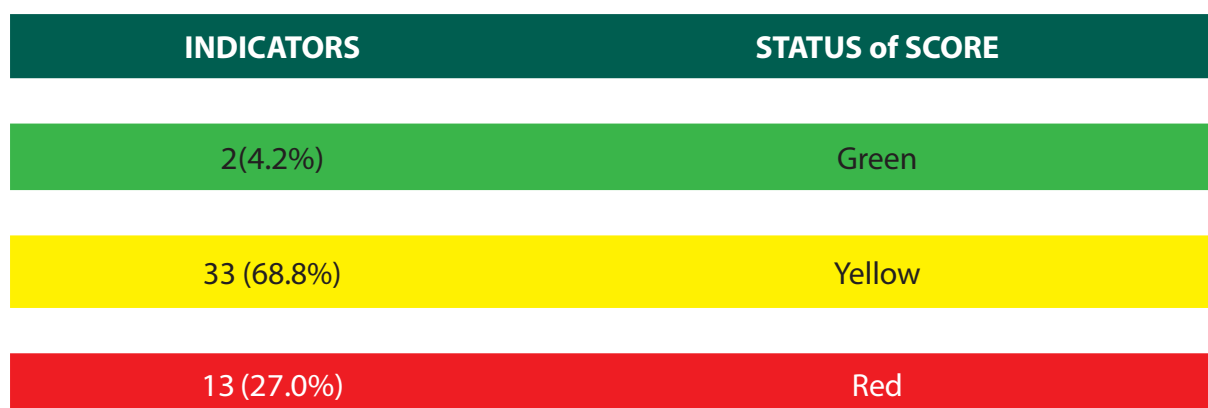
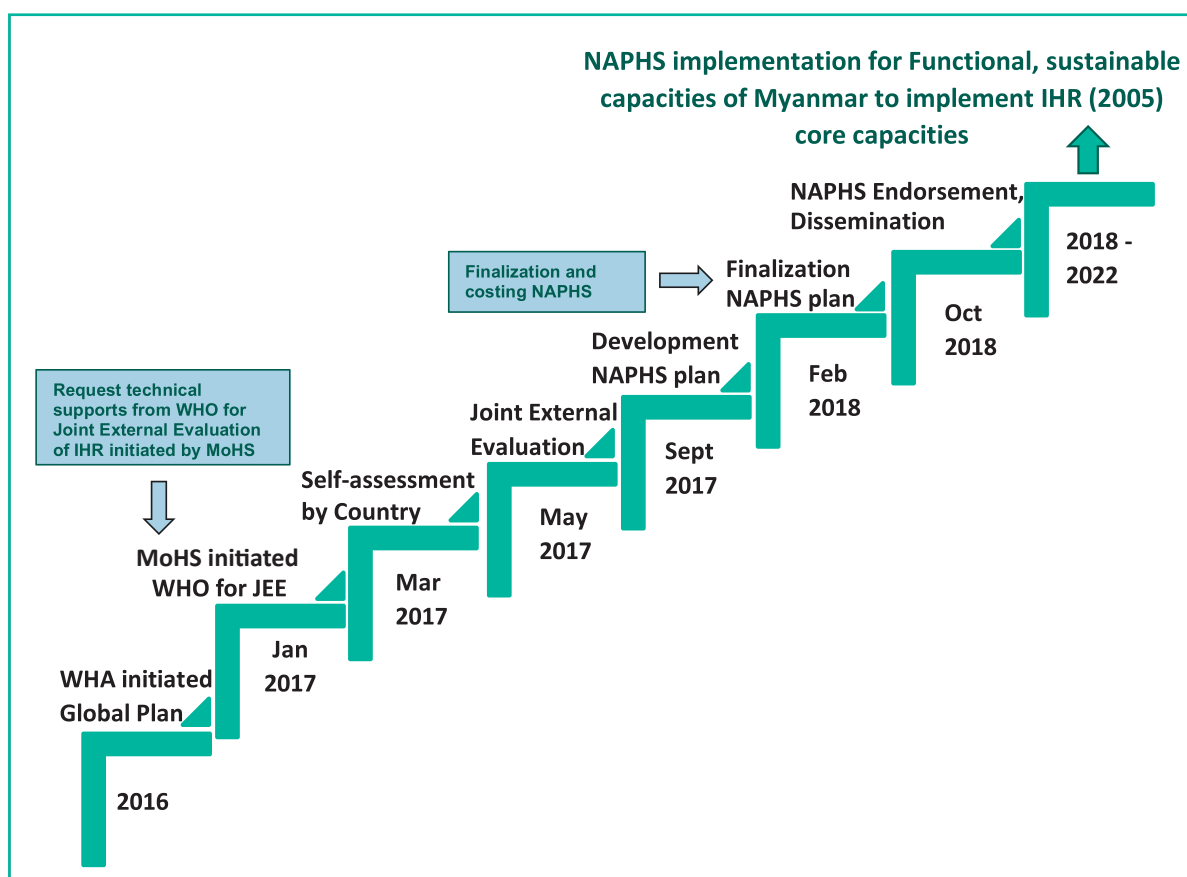


Figure 2. Milestones of NAPHS Development, Myanmar



VISION, MISSION & OBJECTIVES

VISION:

Enjoy high level of security for their health and well-being through Universal Health Coverage and building resilient health system which can adapt and response to challenges posed by outbreaks, risks and other emergencies

MISSION:

To strengthen and sustain national multi-sectoral capacity for preventing public health emergencies and raising public health security in line with IHR (2005).

GOAL:

To reduce human and animal morbidity and mortality associated with all public health events or threats.

GENERAL OBJECTIVES

1. To prevent and reduce the likelihood of outbreaks and all public health hazards and events defined by IHR (2005).
2. To promptly detect threats (due to all hazards) to save lives and ensure proper control measures.
3. To establish a functional system and mechanism for effective multi-sectoral national and international response to all public health events.
4. To establish and maintain the core capacities at designated points of entry for routine and timely detection and prompt effective response of any potential hazards.
5. To develop and sustain optimum capacity to prevent, detect and manage chemical events and radiation emergencies.
6. To strengthen linking human and animal health as “One Health Approach”
7. To function actions of legislations and formalized procedures

Guiding Principles and Core Values for development, implementation of NPAHS

(1) Country ownership and leadership:

As per strong initiation and commitments by Minister for MoHS, Myanmar team will provide political and technical oversight for all phases of the NAPHS (planning, implementation and, Monitoring, Supervision and Evaluation), including committing domestic resources to financing the NAPHS. In addition to these, NAPHS is formulated from findings and recommendations of joint External Evaluation and prioritized activities

based on in-country issues, available resources. Therefore, under close guidance of Minister, National Cross Government Steering Committee will take overseeing with the supports by Technical Strategy Group for Public Health Emergency and Preparedness in technical and programmatic theme.

(2) Equity, Gender mainstreaming and Human Rights:

As per WHO's standards and recommendation in implementation of IHR (2005) for Member State and international standards on human rights, will be taken as principles in each and every steps and process of implementation of this plan. The plan will address all population groups, regardless of their location, ethnicity, gender, age, social, economic, cultural, and political status.

(3) Community Engagement:

The community is a crucial unit in addressing health security for themselves and the persons around them. Individuals in households with adequate knowledge and skills about prevention of illnesses are able to take timely corrective measures and maintain a healthy lifestyle. Therefore, empowering individuals and households by reaching them through various social groupings can improve people's lifestyles which in turn can improve the individuals' overall health status. Community engagement will be through a participatory approach in development and implementation of culturally acceptable and scientifically sound risk communication strategies. Sustainable actions regarding Health Security for community will be always in active among public as a demand resulting by community engagement.

(4) Partnership, inter-sectoral and multi-disciplinary collaboration:

The partnership principle will be facilitated through inter-sectoral collaboration at community, levels on the one hand, and involvement of the wide spectrum of all relevant stakeholders at national level. This theme will be the main driving forces in successful and effective operation of NAPHS as the plan is multi-sectoral body for health security of country. This entails partnership with other government departments, sectors, development partners, and academia.

(5) Efficiency:

The implementation of this NAPHS will foster rationalization of inputs to ensure maximum outputs and outcomes and value for money (VfM) by adapting with different policies and regulations by country and funders.

(6) One Health Approach:

Humans and animals share the same eco-system and the opportunities for spill-over of diseases are increasing with modern trends in globalization, rapid population growth, climate change, economic development, mass urbanization, and increasing demand for animal sourced foods. One Health is an approach that addresses public health events such as high impact infectious diseases arising at the intersection of human, animal (domestic and wildlife), and environmental interface. This NAPHS is under umbrella on

the one health approach and will ensure that all phases taking into account the one health approach in line with National One health Strategic Plan.

(7) Alignment and ensuring synergies with Myanmar National Health Plan and its' UHC:

NAPHS's efforts to build and sustain the IHR core capacities in the Myanmar will be based integrated approaches rather than parallel to existing or ongoing ones for sustainable and resilient health systems that can cope affects from and do actions with outbreaks and other health emergencies. The implementation this plan will be done in synergy with the implementation of existing activities and strategies to Myanmar National Health Plan. So, NAPHS 5 years plan and implementation is also aligned with exiting national plans/strategies of public health diseases

(8) Evidence led and taking into consideration innovations:

The implementation of this NAPHS will take into account emerging trends, risks and health innovations, as well as, inter country, regional, sub-regional and cross-border cooperation to reinforce timely information sharing and coordinated interventions. These regular information and updates among stakeholder in country, region will valuable engine for further and better steps to be taken effective operation of country NAPHS.

SUMMARY OF OUTPUTS USED IN THE DEVELOPMENT OF THE NATIONAL ACTION PLAN

During the preparation period, Central Epidemiological Unit (CEU), MoHS, organize to conduct self-assessment of existing capacity how much fulfill IHR core capacity and Health Security for each area by relevant ministries through leading by technical working group with technical assistance from WHO. Technical Strategic Group for Public Health Emergency & Preparedness, under National Cross Government Steering Committee, is more cooperation in practices for actions while frequent contacts among the stakeholders established.

JEE assessment, scores for each indicator in each area is key basic facts for prioritizing new activities based on gaps, weakness and needs, and relevant existing ongoing activities that are included in National Actions Plan for Health Security.

Team Members from responsible Departments, Stakeholders and development partners have formulated the objectives of each technical area with prioritized summary activity for which prioritized detailed activities are put in in the plan. JEE indicator, scores and recommendation are also applied for formulating detailed activities in planning matrix. By realizing detailed activities will result objectives of each technical area because the detailed activities are resulting of prioritization from multi-sectoral group works through doing exercise for prioritization, weakness, gaps, availability of supportive partners, funding. During group exercise and additional working after development workshop, prioritization of activities and actions came from common agreement of reasonable and suitable inputs

by each person from different designation and technical areas, policies and administration.

Estimation of required resources of human, technical, level of actions, time frame, quantity of activity actual needed, process and methodology of activity are led and done by technical experts from the most responsible department for estimation of costing and quantification of activities by each year. This process of calculating resources included mapping of supports or collaborative partners and budget availability in consideration of each time frame. Some of activities are included in different technical areas describing same objectives, persons, and some activities do same people and same place at different objectives. Synchronization of those activities among different areas are done as much as possible so that resources of budget, person and time have to be save and effectiveness, efficacy of NAPHS would be increased. It is the best outputs among multi-sectoral team members who are doing development of NAPHS how to do good consultation and consensus building process for prioritized agreement among different people. Best scenarios of doing this exercise among members is multi-sectoral approach due to working together starting from advocacy to development of NAPHS.

The activities prioritized in NAPHS are resulted additionally not only to fulfill core capacities of IHR but also linking with existing strategies (National Health Plan) and ongoing activities by different stakeholders and ministries. These will make NAPHS comprehensive and best performing with more effective and efficient outcomes.

Lead department, associated ministries and development partners will operate the activities of NAPHS by further developing operation work plan for each area. This will be integrated with going national activities not only in actions but also for national budget and financing accordingly. Budget availability, confirmation and additional availability will be increased at the same time with finalization of NAPHS because mapping of development partners and budget are already included since during inception and development of phase of NAPHS. Monitoring and reporting will be conducted by implementing the new activities for monitoring, super vision and evaluation and its' mechanism that are topped up existing M & E practices, system and additional requirements activities for IHR M & E frame work.

PRIORITY ELEMENTS OF THE NATIONAL ACTION PLAN WITH COSTING

Regarding core capacity to IHR by Myanmar, technical area of Antimicrobial Resistance, biosafety and security, preparedness and some actions of emergency responses operation, Medical Counter measures, risk communication, and chemical events, radiation emergencies have low capacity. Most priorities elements falls in these technical areas above while approval of law and legislation, development, finalization of essential guidelines, training modules and capacity building trainings in other technical areas, are reflecting to fulfill the capacity competence of IHR are set as priority in NAPHS and its' important for operations. Some of development process of national plans, mechanisms, system for detection, surveillance and reporting are ongoing and in progress that are linking with implementation of NAPHS. In addition to this, activities integrated and linked with each sector strategic plan under technical area also priority element for implementation by each department as by essential cooperative efforts by multi-sectoral stakeholders. At the same time, new developments and legal framework in NAPHS are priority and required for early implementation in order

to be readiness for further consecutive and related activities implementation by time frame in NAPHS, such as, development SOP have to be under first 6 month of a year, trainings on SOP will be in during next consecutive 6 month in same year. NAPHS was developed in line with priority scores based on JEE results related IHR and country context and needs as first criteria, then taking into account funding and ongoing partners availability, and then, other activities with gaps of funding by ongoing partner are proposed to national financing as per regular budgeting 2018-19 fiscal year. Risk on inadequate human resources that multiply into tight schedule for existing manpower would create insecure and gaps for some priority activities, are also marked as priority for responsible leaders. Timely Recruitment, timely integration of national budgeting, regular mapping and advocacy to resources will be under responsibilities of lead departments for related areas. Regular updating practices during coordination and evaluation meeting or time to time updating will be one of the best ways reducing these risks. During the coordination and update mechanism such as regular or ad-hoc meetings, resources mobilization for priority elements of NAPHS would be good one as alternatives. The following are describing the elements of NAPHS and costing for 5 years.

Figure 3. Budget allocation by Technical Strategic Category of the NAPHS

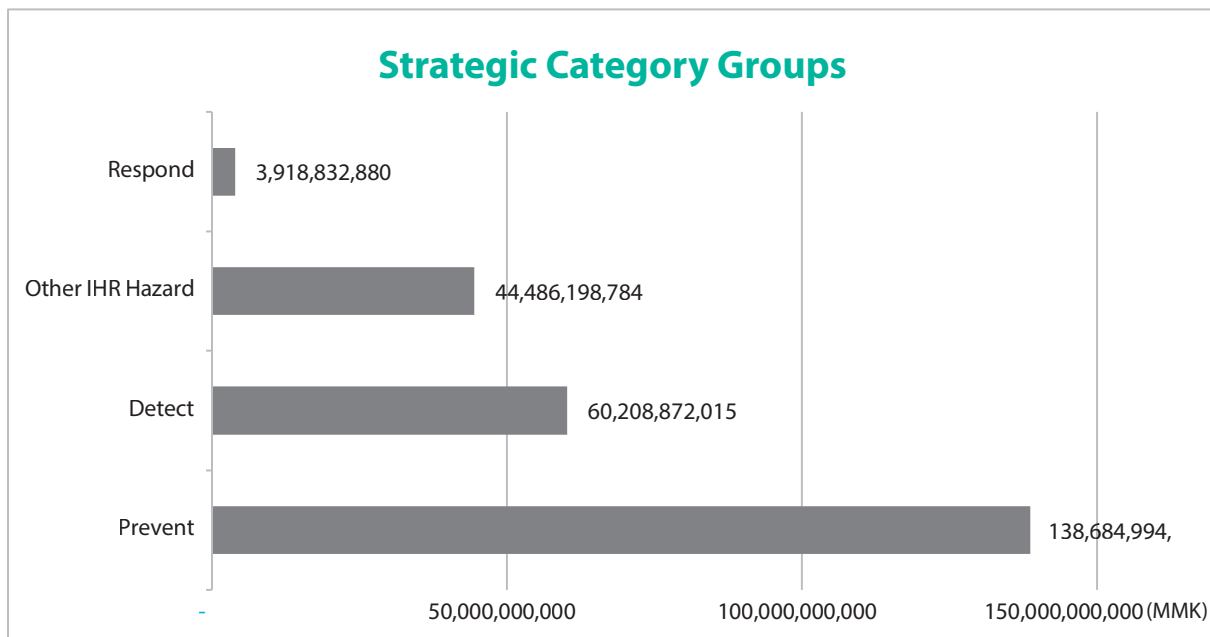


Figure 4. Budget allocation by Technical Areas of the NAPHS

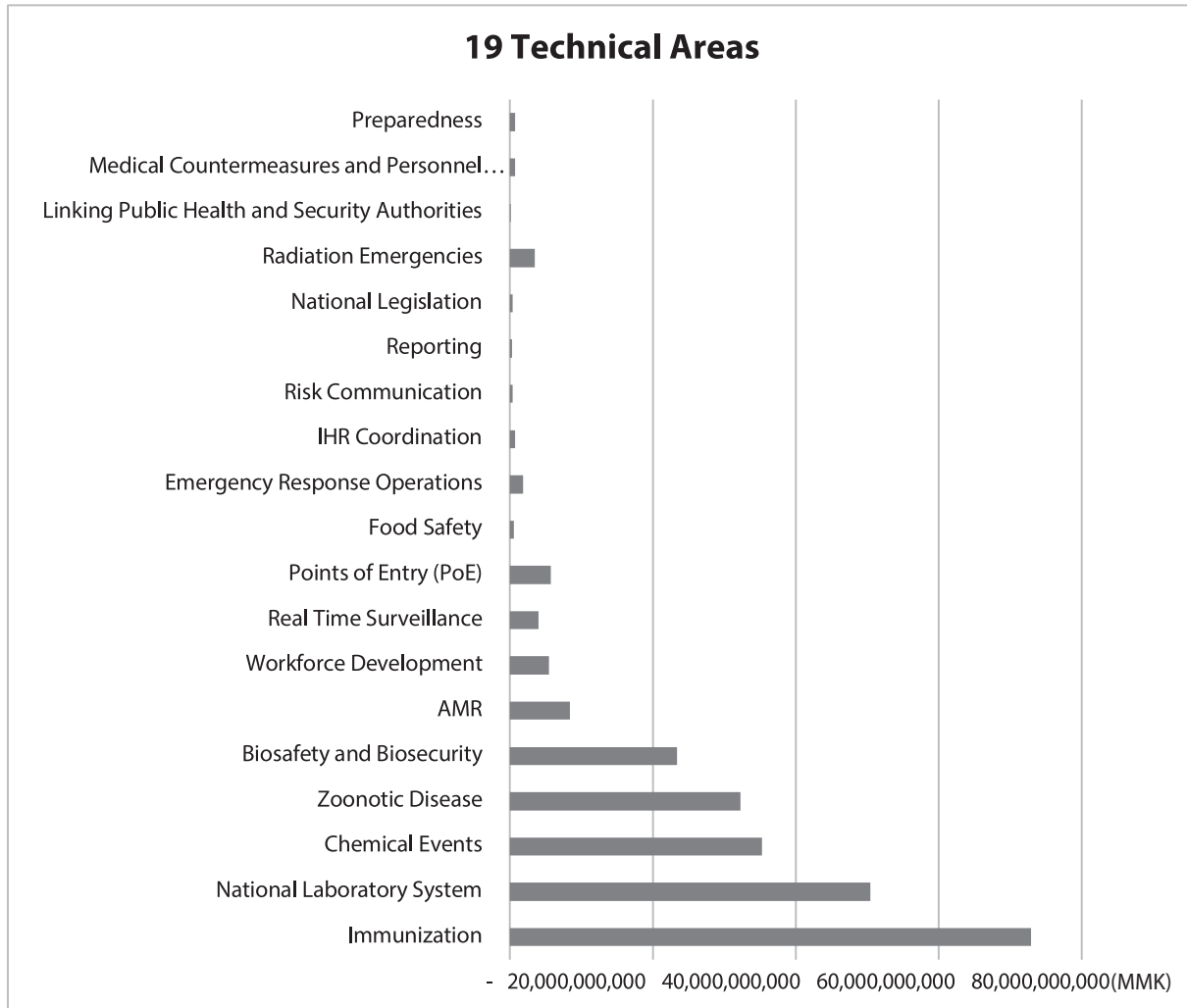


Figure 5. Distribution of Cost by Year for Category- NAPHS (MMK)

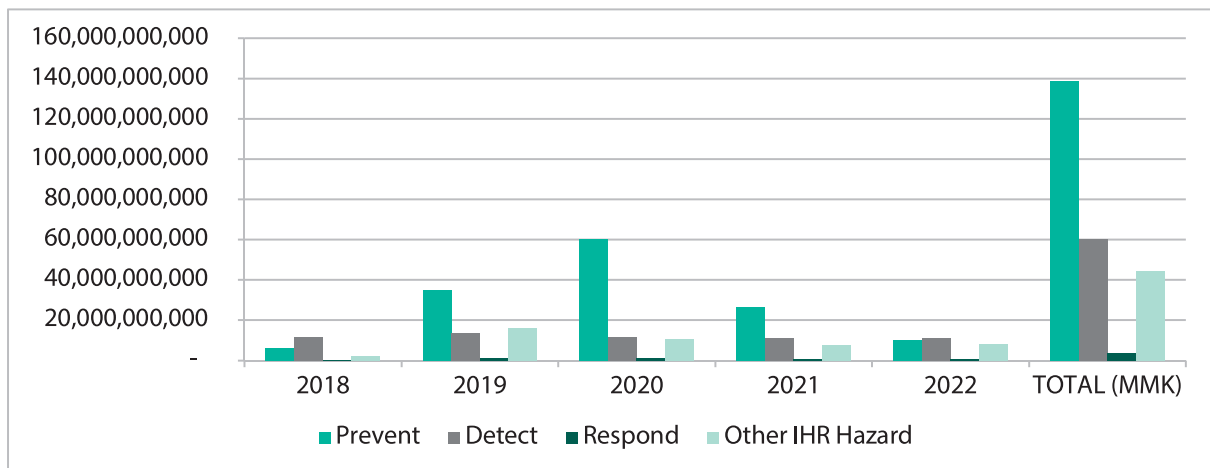


Table 2: Total Cost and Cost for each Strategic Category by Year (in MMK)

Category\ Year	2018	2019	2020	2021	2022	TOTAL (MMK)
Prevent	6,079,325,640	35,258,512,122	60,411,368,116	26,689,226,305	10,246,561,940	138,684,994,122
Detect	11,801,210,883	13,662,333,483	11,792,505,883	11,529,670,883	11,423,150,883	60,208,872,015
Respond	18,875,000	1,315,441,620	1,080,101,220	755,809,020	748,606,020	3,918,832,880
Other IHR Hazard	2,135,904,040	16,234,610,848	10,431,379,632	7,621,234,632	8,063,069,632	44,486,198,784
Grand Total	20,035,315,563	66,470,898,073	83,715,354,851	46,595,940,840	30,481,388,475	247,298,897,801

Figure 6: Distribution of Cost by Year for Category- NAPHS (USD)

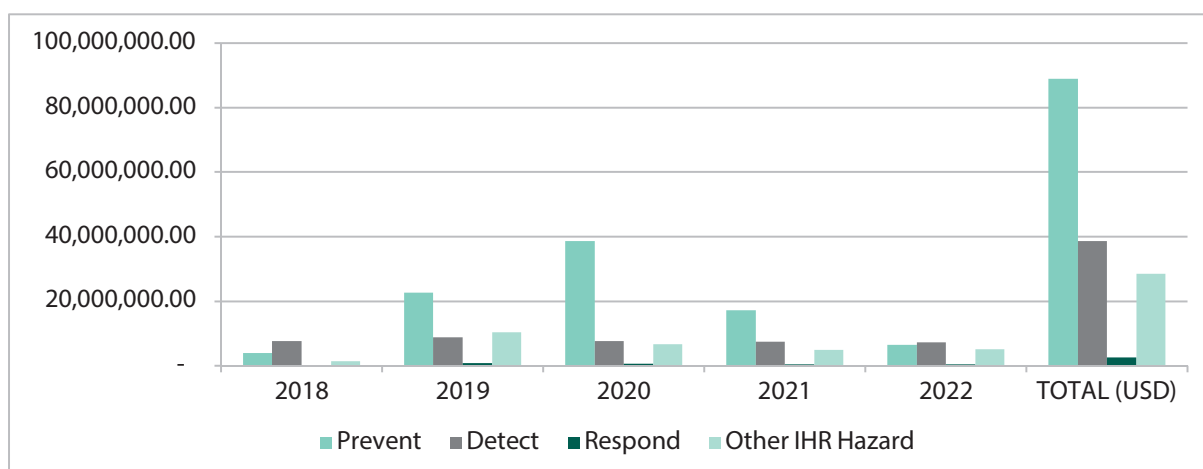


Table 3: Total Cost and Cost for each Strategic Category by Year (in USD)

Strategic Category\ Year	2018	2019	2020	2021	2022	TOTAL (USD)
Prevent	3,897,003.62	22,601,610.33	38,725,235.97	17,108,478.40	6,568,308.94	88,900,637
Detect	7,564,878.77	8,757,906.08	7,559,298.64	7,390,814.67	7,322,532.62	38,595,431
Respond	12,099.36	843,231.81	692,372.58	484,492.96	479,875.65	2,512,072
Other IHR Hazard	1,369,169.26	10,406,801.83	6,686,781.82	4,885,406.82	5,168,634.38	28,516,794
Grand Total	12,843,151	42,609,550	53,663,689	29,869,193	19,539,352	158,524,934

IMPLEMENTATION OF ACTION PLAN WITH TIMEFRAME

Implementation of NAPHS will be under guiding principles and core values described in above and one health approach of cooperative mechanism and practices will be main theme to ensure effectiveness to reach objectives and outcomes by monthly, bi-annually, annually monitoring and evaluation. Implementation of the planned activities will be delivered at each national, state and region, district and township level according to priority and relevancy that is agreed and planned during development phase. Leading roles and ownership for each activity have been already identified since development and described in NAPHS. National Cross Government Committee and Public Health Emergency and Preparedness Technical Strategic Group always encourage regular monitoring. The stakeholders with leading role will be responsible for managing and working together with the relevant officials at National, sub-national, district and township level for efficient operation of activities in time. Cross Government Committee will monitor regular coordination at each level for implementation by using mechanism such as meetings and systems developed, while leading ministry organizing the implementation of activities at each level. Operational work plan by sequence of activities with time frame will be outlined by lead ministry for each area to ensure fulfill gaps for immediate and long term orders. Operational work plan will be shared among multi-sectoral partners as supportive purpose if it is needed. Quantitative achievements from inputs of activities and verifiable objectives will be used for evaluation of each activity and its' outcome by realization of NAPHS accordingly and these evaluation are in line with indicators of IHR M & E frame work. Assessment of intended impact from operating of NAPHS will be after 3 year and 5 year life of NAPHS through evaluation by JEE and internal M & E evaluation system, how much Country's core capacity increase in line with IHR and health security of Myanmar. Operation of regular evaluation and coordination meeting, advocacy meeting and awareness raising through distribution and dissemination of information, education, communication material and channels while multi-sectoral ministries, development partners and stakeholders are implementing the activities of NAPHS, that will ensure promoting awareness among stakeholders and community describing gaps, budget, weakness, constraints and challenges for resources mapping and its mobilization.

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ANNEXES

ANNEX I:

Situation Analysis, Summary of Country Assessment and Plans relevant to IHR

LIST OF KEY RECOMMENDATION / PRIORITY ACTIONS FOR EACH TECHNICAL AREA

PREVENT

1. National Legislation, Policy and Financing

- Myanmar should ensure that in the revised laws and regulations both from human health and animal health that the country is planning to present to the parliament, have legislations and regulation that support strengthening the IHR capacities implementation in the country.
- Myanmar needs to continue the best practice of having cross border level MoU between Thailand and Myanmar. The practices should be continued with other neighboring countries.

2. IHR Coordination, Communication and Advocacy

- Establishment of an overarching cross government steering committee to oversee global health security activities through an all hazards approach.
- Development of multi-sectoral, multidisciplinary coordination and communication mechanisms; and action plans through this overarching committee

3. Antimicrobial Resistance

- Raise awareness among the general public on AMR and among health care workers in human and animal health sectors on surveillance, prudent use of antimicrobials and the importance of good practices
- Increase laboratory capacity on AMR, both in the human and animal health sector and share AMR data across the sectors
- Cooperate in a One Health approach between sectors at local, regional and national levels on AMR

4. Zoonotic Disease

- Endorse and implement the national One Health strategic framework and action plan of Myanmar (2016-2019)
- Establish information sharing systems, joint simulation exercises and formal coordination mechanisms between LBVD and DoPH
- Expand the animal health workforce and organise continuous education for the existing workforce on local, regional and national levels

5. Food Safety

- Establish a multi-sectoral strategy for a national food safety management and surveillance system from farm to fork
- Implement food safety control management systems based on multi-sectoral involvement in risk profiling of food safety problems
- Activate a transparent communication mechanism between all public and private food safety stakeholders

6. Biosafety and Biosecurity

- Develop national biosecurity and biosafety legislation, regulations or frameworks
- Undertake a comprehensive training needs assessment across human, animal and agricultural sectors
- Establishing funding and ensuring sustainability for supporting comprehensive national biosafety and biosecurity system

7. Immunization

- Conduct an EPI coverage survey
- Develop a strategy/plan to cover the low coverage areas
- Strengthen Human Resources capacity for supply, operations and mid-level management/ supervision
- Develop communication plan for demand generation

DETECT

1. National Laboratory System

- Establish and maintain systematic collaboration between human and animal health laboratories, the national laboratory system should be considered one entity
- Endorse and implement the National Strategic Plan for Health laboratories (currently drafted)
- Developing national testing guidelines for clinicians and veterinarians based on financial and practical factual constraints to maximize the capacity for case diagnosis, indicative surveillance and outbreak contexts
- Improve simple testing capability in remote areas, including point of care diagnostics and harvesting the flora of new combined lateral flow tests on the market, but under tight quality control by the central laboratory.

2. Real-Time Surveillance

- Indicator based surveillance needs to include capacity building among primary

responders and provide education and follow-up of adherence.

- A one-health approach encompassing human, animal and wildlife surveillance should be considered.
- Review CD laws for IHR, review surveillance systems (indicative and event triggered), including list of notifiable diseases and syndromes
- Look for possible bias in systematic data collection caused by geographical factors, capacity limits and knowledge among stakeholders

3. Reporting

- Establish written processes and protocols for identifying and reporting potential PHEIC up to central level MOHS / NFP.
- Improved workforce capability and awareness, including IHR responsibilities, risk assessment and reporting of a potential PHEIC, for human and animal health sectors (at national and subnational levels)
- Ensure regular, systematic information sharing between human and animal health sectors
- Improve Information Communications Technology (ICT) for reporting and information sharing

4. Workforce Development

- To develop a HR strategic plan for next 5 years after evaluating existing HR strategic plan. This includes development of HR data base with tracking facilities
- To increase health personnel stock level in line with Sustainable Development Goal (SDG) targets
- To train more epidemiologists, biostatisticians and social scientists abroad or set up in-country training for those specialities which facilitate further strengthening of IHR core capacities .

RESPOND

1. Preparedness

- Develop a national multi-hazard public health emergency preparedness and response plan, which should include processes for funding, managing, and mobilizing emergency resources.
- Undertake a National Risk Assessment and Resource Mapping, and update as needed

2. Emergency Response Operations

- Identify and assign permanent staff for the PH EOC within an IMS structure, along with job descriptions and appropriate training

- Develop a PHEOC plan / handbook with associated SOPS
- Initiate an exercise and continuous improvement programme for emergency preparedness and response by conducting at least one table-top and one functional exercise per year to reinforce IMS personnel training, skills and EOC operations.
- Develop SOPs for response operations, daily functions, managing cases of infectious patients, including at the points of entry

3. Linking Public Health and Security Authorities

- Develop a Memorandum of Understanding (MOU) or other agreement between public health and security organizations, which defines the criteria that trigger immediate sharing of information.
- Develop SOPs for joint public health and security risk assessment of potential deliberate biological incidents that have both public health and security ramifications, as well as for implementing the information sharing MOU.
- Develop a joint exercise program between public health and security authorities that tests and improves plans and procedures.

4. Medical Countermeasures (MCM) and Personnel Deployment

- Develop a national plan for identifying procedures and decision making related to sending and receiving medical countermeasures during public health emergencies
- Improving access to in-place stockpiles of countermeasures matching the risks that you foresee
- Develop a national plan for identifying procedures and decision making related to sending and receiving health personnel during public health emergencies

5. Risk Communication

- Develop an all-hazards national risk communications plan
- Establish suitable funding to implement national risk communications plan and functions
- Ongoing assessment of the effectiveness of public information messaging, including formalizing system for feedback and adjusting messaging as appropriate
- Establish proactive and ongoing engagement with communities in areas where engagement is currently limited, to help inform messaging and risk assessment

OTHER

1. Points of Entry

- Develop and implement an encompassing National Public Health Emergency Contingency Plan for the designated points of entry and link it with the national

public health emergency plans.

- Human resource capacity building and plan including for the animal health staff and staff at the ground crossings.
- Conduct a formal evaluation for the PoEs core capacities and response to likely public health emergencies.
- Establish/improve measures for vector control, safe environment and animal quarantine at the designated PoEs

2. Chemical Events

- Finalize and approve the national CBRN contingency plan, which defines authorities, roles, and responsibilities across the whole of government for chemical event surveillance, alert, and response
- Develop SOPs for chemical event detection, assessment, and response operations
- Develop an integrated national chemical surveillance system, which incorporates lab analysis and centralized reporting of chemical events to the national PHEOC

3. Radiation Emergencies

- Finalize and approve the national CBRN contingency plan, which defines authorities, roles, and responsibilities across the whole of government for radiological event surveillance, alert, and response (to include designating a radiological / nuclear focal point for coordination and communication with the IHR NFP)
- Develop SOPs for radiation detection, assessment, and response operations
- Develop an integrated national radiological surveillance system, which incorporates lab analysis and centralized reporting of radiological events to the national PHEOC

ANNEX II:

DOCUMENTATION OF WORKSHOP FOR PLANNING OF NATIONAL ACTION PLAN FOR HEALTH SECURITY

First Development Workshop

Date: 13-15 September 2017

Place: Mingalar Thiri Hotel, Nay Pyi Taw, Myanmar

Background/Context/Recommendations/Next Steps:

Following the results of the JEE report, the government of Myanmar requested WHO support in developing the National Action Plan for Health Security (NAPHS). Myanmar is the first country in SEARO to launch NAPHS with integrated budgets. This shows

strong commitment and domestic/country ownership of the health security and sets a good example for other SEARO countries to follow suit. The three levels of WHO (HQ, RO, CO) will continue its effort to support Myanmar finalizing the NAPHS and turn into actions.

The three day multi-stakeholder workshop, which brought together 62 participants including Myanmar's officials (Permanent Secretary MOHS, DG and DDG, other head of agencies and authorities), partners and donors (PREDICT, FAO, UK, WB, USAID, ADB, JICA), institutions, and academia relevant for ensuring effective collaborations on health security.

The meeting was led by the MoHS with support by WHO, outlined process steps and resulted in a first draft action plan covering key priority activities to prevent, detect, respond and other IHR-related hazards and PoE. Based on the substantial progress made during the workshop, the necessary steps to follow were agreed upon: the Myanmar government will send the draft NAPHS to respective department for approval with a clear focus on strengthening the IHR core capacities. Further comments will be compiled into the draft NAPHS and send to WHO. Together with the support of WHO and other partners, the Costed NAPHS will be finalized. The Costed NAPHS is proposed to be disseminated by March 2018.

Second Development Workshop

Date: 26-28 February 2018

Place: Mingalar Thiri Hotel, Nay Pyi Taw, Myanmar

Background/Context:

Changing interactions among human, animal and the environment in recent years has result in increasing emergence and re-emergence of infectious diseases, natural disasters and other public health emergencies of international concerns across the world. WHO Member States have agreed to work together to strengthen prevention, detection and response to public health emergencies under the International Health Regulations (2005). As a Member State, Myanmar has carried out Joint External Evaluation of IHR to assess the country's capacity under the IHR to prevent, detect, and rapidly respond to public health threats in May 2017.

Based on the findings and recommendations of JEE, the Ministry of Health and Sports (MoHS), Myanmar, has initiated development of five-year National Action Plan for Health Security with WHO's technical support. A World Health Assembly (WHA)'s decision in May 2016 requested WHO to develop a global implementation plan that included immediate planning to improve delivery of the International Health Regulations (2005). The Global Action Plan recommends that Member States, with the support of WHO and development partners, develop and implement 5 year national action plans. Member States have also agreed to work towards Universal Health Coverage and to build resilient health systems which can adapt and respond to challenges posed by outbreaks and other emergencies.

Myanmar National Action Plan for Health Security Costing Workshop

Myanmar is the first country in SEAR that has developed NAPHS. The workshop on NAPHS costing was organized by the MoHS in Nay Pyi Taw, Myanmar, 26-28 February 2018. About 65 participants including High level officials, facilitators from 40 multi-disciplinary and multi-sectoral experts from MoHS and relevant ministries, and development partners such as WHO, FAO, US CDC, USAID, JICA, PHE, DFID, World Bank, ADB and PREDICT contributed technical expertise to the development of the plan and overall meeting execution. The relevant ministries involved in NAPHS development are Ministry of Agriculture Livestock and Irrigation, Department of Civil Aviation, Myanmar Port Authorities, Myanmar Port Authorities, Department of Customs, Department of Immigration, Department of Forestry, Ministry of Defence, Ministry of Foreign Affairs, Myanmar Police Force, General Administration Department, Department of Atomic Energy (TL), Department of Relief and Resettlement and City Development Committee.

The main objective of the workshop was to finalize planned activities and to cost a 5-year National Action Plan for Health Security, based on the JEE recommendations and other complementary assessments and national strategic plans. Priority activities were framed taking into account One Health, health system strengthening and whole of government approaches. The Ministry of Health and Sports in collaboration with relevant ministries and development partners reviewed previous planning documents to finalize proposed activities and ensuring the linkage with on-going national strategies and guidelines, such as the National Health Plan, National Action Plan for Antimicrobial Resistance, National Strategic Plan for Health Laboratory, Biosafety and Biosecurity guideline, One Health Strategic plan and National Risk Communication Plan.

The main outcome of the meeting was the draft Myanmar National Action Plan for Health Security and costed work plan, with key priorities and cost drivers identified for detailed costing and time bound milestones and targets for a phased implementation. In addition, almost all of the participants have learned costing tool of NAPHS and worked out on the costing on their own. This is also a significant achievement of the workshop. The plan will be a coordination platform to map and ensure interplay between multiple sectors and other existing plans at all administrative levels of the country.

The meeting highlighted the commitment of the Government of Myanmar and development partners such as ADB to strengthen health security, the importance of national financing for sustainability, the role of private sector engagement and the importance of resilient health systems in health security. The meeting further emphasized strong country ownership, WHO leadership and active partnership to develop and implement the National Action Plan and to match resources to gaps. The government, donors and technical partners expressed their collaborative support to take forward the National Action Plan for Health Security in Myanmar.

Recommendations:

1. Prioritize the finalization of the National Action Plan for Health Security: both the narrative and the costed workplan, aligning high level objectives with costs and

- scoring of JEE.
2. Align activities to the desired outcome indicators to have measurable data for monitoring and evaluation of the plan.
 3. Cross-check activities across 19 technical areas to ensure integrating of One Health approach in NAPHS without overlapping the activities.
 4. Implementation of NAPHS should focus on sub-national level to enhance capacity of states/regional level health care system.
 5. NAPHS should link strategically with Myanmar Sustainable Development Plan. This linkage would help to ensure integration of NAPHS in national financing programme resulting in effective communication with Development Assistance Coordination Unit and MoPF.
 6. Ministry of Planning and Finance suggested the MoHS to share costed NAPHS including potential funding source and to prioritize activities for implementation when the MoHS submits NAPHS to MoPF for financing.
 7. Costed NAPHS should be in line with Myanmar budget year.
 8. ADB has committed that their GMS project would contribute towards nearly 10% of NAPHS implementation.
 9. Establish a robust monitoring & evaluation mechanism to ensure timely and effective implementation of planned activities and milestones.
 10. Existing Technical Strategy Group for Public Health Emergency & Preparedness in Myanmar Health Sector Coordination Committee can be a good platform for overseeing the implementation of NAPHS.

Next Steps:

1. Share the draft costed NAPHS within MoHS and with relevant ministries by second week March 2018.
2. Consolidate the comments from key focal points from MoHS and relevant ministries by May 2018.
3. Finalize the costed NAPHS under the leadership of Central Epidemiology Unit, MoHS in collaboration with relevant ministries and partners in June 2018.
4. Submit and obtain high level Government's endorsement of NAPHS in July 2018.
5. Disseminate the costed NAPHS in August 2018.
6. Launch and initiate resource mobilization efforts for NAPHS in 2018.
7. Submit the NAPHS and budget for inclusion in 2019 national budget in 2018.
8. Implement, Monitor and Evaluate NAPHS: 2018-2022.

Table 4. Participant List for workshops:

Sr.	Participant	Designation	Organization
1	Prof. Dr. Thet Khaing Win	Permanent Secretary	Ministry of Health and Sports (MoHS)
2	Dr. Thar Tun Kyaw	Director General	Ministry of Health and Sports
3	Dr. Than Tun Aung	Deputy Director General (Disaster)	Department of Public Health (DoPH), MoHS
4	Prof. Dr. Htay Htay Tin	Deputy Director General (NHL)	Department of Medical Services, MoHS
5	Dr. Thaung Hlaing	Deputy Director General (Public Health)	Department of Public Health (DoPH), MoHS
6	Dr. Thet Thet Mu	Deputy Director General (HMIS)	Department of Public Health (DoPH), MoHS
7	Dr. Thandar Lwin	Deputy Director General (Disease Control)	Department of Public Health (DoPH), MoHS
8	Dr. Win Naing	Deputy Director General (PSM)	Ministry of Health and Sports (MoHS)
9	Prof. Dr. Soe Lwin Nyein	Technical Advisor to Union Minister	
10	Dr. Htun Tin	Director (Epidemiology)	Department of Public Health, MoHS
11	Dr. Win Thein	Director, NHL	National Health Laboratory, Department Medical Service, MoHS
12	Dr. Moe Khaing	Director (Medical care)	Department of Medical Services
13	Dr. Phyu Phyu Aye	Director (HLPU)	Department of Public Health, MoHS
14	Dr. G Seng Taung	Director (Planning)	Department of Public Health, MoHS
15	Dr. Aung Moe	Director	Department of Atomic Energy, Ministry of Education
16	Lt. Col Khine Zaw Oo	Head of Department	Defence Service Medical Research
17	Lt. Col Moe Kyaw		Defence Service Medical Research
18	Dr. Thin Thin Nwe	Deputy Regional Public Health Director	Regional Public Health Department, Mandalay, MoHS

Sr.	Participant	Designation	Organization
19	Dr. Min Thein Maw	Director	Livestock, Breeding, Veterinary Department (LBVD), Ministry of Agriculture, Livestock and Irrigation (MoALI)
20	Dr. Ye Min Htwe	Deputy Director	NIMU, MoHS
21	Dr. Lwin Lwin Oo Hlaing	Deputy Director	Department of Medical Services, MoHS
22	Dr. Mya Mya Aye	Deputy Director	Department of Medical Research, MoHS
23	Dr. Sabei Htet Htet Htoo	Deputy Director	Dpt. of FDA, MoHS
24	Dr. Hnin Nandar Kyaw	Deputy Director	Dpt. of Food and Drug Administration, DoPH, MoHS
25	Daw Aye Aye Maw	Deputy Director	Chemical Examiner Office, Myanmar Police Force
26	Dr. Aye Mya Aung	Deputy Director	Department for Human Resource for Health, MoHS
27	Dr. Khin Khin Gyi	Deputy Director	Central Epidemiology Unit, DoPH, MoHS
28	Dr. Toe Thiri Aung	Deputy Director	Central Epidemiology Unit, DoPH, MoHS
29	Dr. Nyan Win Myint	Deputy Director	Central Epidemiology Unit, DoPH, MoHS
30	Dr. Khin Sanda Aung	Deputy Director	Central Epidemiology Unit (CEU), DoPH, MoHS
31	Dr. Aung Kyaw Moe	Deputy Director	EPI, DoPH, MoHS
32	Dr. Thu Zar Lwin Oo	Deputy Director	Department of Atomic Energy, Ministry of Education
33	U Soe Nyunt Hlaing	Deputy Director	Union Attorney General Office
34	U Than Oo	Deputy Director	Ministry of Information
35	Dr. Sai San Mya	Assistant Director	Food and Drug Administration, DoPH, MoHS
36	Dr. Aung Soe Htet	Assistant Director	IRD, MoHS
37	Dr. Aung Naing Oo	Assistant Director	EPI

Sr.	Participant	Designation	Organization
38	Dr. Phyu Win Thant	Assistant Director	NIMU
39	Dr. Thet Wai Nwe	Assistant Director	IHR/ CEU
40	Dr. Kyaw Khine San	Assistant Director	Disaster, DoPH, MoHS
41	Dr. Aye Lwin	Assistant Director	CEU, DoPH, MoHS
42	Dr. May Wint Wah	Assistant Director	Public Health Laboratory, Mandalay
43	Dr. Sanda Aung	Assistant Director	Medical Care
44	Dr. Thinzar Aung	Assistant Director	CEU, DoPH, MoHS
45	Dr. Ei Ei Zar Nyi	Assistant Director	CEU
46	Dr. Htoo Myint Swe	Assistant Director	Planning, DoPH, MoHS
47	Dr. Aung Myat Htay	Assistant Director	CEU
48	Dr. Yan Linn Aung	Assistant Director	CEU
49	Dr. San Kyu Kyu Aye	Lecturer, PSM, UMM	Preventive and Social Medicine, University of Medicine, Mandalay
50	Daw Swe Swe Win	Assistant Director	General Administrative Department
51	Daw Thida Aung	Assistant Director	Department of Immigration
52	Daw Khaing Mon Kyaw	Assistant Director	Chemical Examiner's Office, Myanmar Police Force
53	U Nay Win	Assistant Director	Department of Agriculture
54	Dr. Lin Lin Bo	Assistant Director	LBVD, MoALI
55	Dr. Hein Zeya	Assistant Director	Nay Pyi Taw City Development Council
56	Dr. Phyu Sin Thein	Head of Department	Disease Prevent Control Unit, DSMR
57	U Soe Naing	Assistant Director	General Administration Department
58	Daw Thandar	Assistant Director	Union Attorney General Office
59	Dr. Sai Myo Nyunt	Medical Officer	CEU, DoPH, MoHS
60	Dr. Nyan Htet Lwin	Chief Officer	Port Health, Yangon, DoPH, MoHS
61	Dr. Yin Min Min Htut	Medical Officer	Planning, DoPH, MoHS

Sr.	Participant	Designation	Organization
62	Dr. Kyaw Kyaw Naing	Medical Officer	EPI, DoPH, MoHS
63	Dr. Aung Thu	Medical Officer	CEU, DoPH, MoHS
64	Dr. May Pyone Myint	Medical Officer	CEU, DoPH, MoHS
65	Dr. B La Tawng	Medical Officer	CEU, DoPH, MoHS
66	Dr. Myat Pwint Phyu	Medical Officer	CEU, DoPH, MoHS
67	Dr. Zaw Myo Latt	Medical Officer	CEU, DoPH, MoHS
68	Dr. Zin Ko Ko Chit	Medical Officer	CEU, DoPH, MoHS
70	Dr. Min Thein Aung	Medical Officer	CEU, DoPH, MoHS
71	Dr. Zaw Ye Htut	Medical Officer	OEH, DoPH, MoHS
72	Deliver Htwe	Research Officer	Department Medical Research
73	Dr. Aung Tun	Research Officer	LBVD
74	Daw Ei Ei Mon	Assistant Officer	Chemical Examiner's Office, Myanmar Police Force
75	Daw Khin Thet Win	Assistant Staff Officer	Myanmar Police Force
76	Dr. Stephan Paul Jost	WHO Representative to Myanmar	World Health Organization
77	Dr Ludy Prapancha Suryantoro	Team Leader, WHO HQ	World Health Organization
78	Dr. Jostacio M. Lapitan	Technical Officer, WHO HQ	World Health Organization
79	Dr. Glenn Pierre Maesa LOLONG	Technical Officer, WHO HQ	World Health Organization
80	Dr. Maung Maung Than Htike	Technical Officer, WHO SEARO	World Health Organization
81	Dr. Mya Yee Mon	National Professional Officer	World Health Organization
82	Dr. Tint Maw	National Consultant	World Health Organization
83	Ms Hnin Hnin Pyne	Senior Human Development Specialist	World Bank
84	Dr. Si Thu	M&E Consultant	World Bank
85	U Min Thu	Consultant	World Bank
86	Dr. Nu Nu Khin	Program Management Specialist (Health Program Manager)	USAID

Sr.	Participant	Designation	Organization
87	Mr. Ben Zinner	Deputy Director (Health)	USAID
88	Mr. Ikana Nozaki	Representative	JICA
89	Mr. David Hadrill	Country Team Leader	FAO
90	Ms. Emmeline Buckley	Project manager, Global Public Health	Public Health England
91	Dr. Wai Lwin	Health Advisor	DFID
92	Dr. Ohnmar Aung	Project Coordinator	PREDICT
95	Dr Ohn Kyaw	One Health Coordinator	FAO
96	Dr. Ei Ei Khin	Consultant	US CDC
97	Dr. Kyi Thar	Consultant	ADB
98	Dr. Myat Kyaw	Deputy Chief Technical Advisor	GMS – HS Project
99	Dr. Tay Zar Soe	M & E Consultant	GMS – HS Project

ANNEX III:

ROLES AND RESPONSIBILITIES

National Cross Government Steering Committee for Health Security

Myanmar needs to prevent, protect, control and provide response to public health risks, effect of diseases including international spread of disease assuring Health Security of Myanmar people. Development and effective implementation of five year National Action Plan for Health Security is essential to fulfil this needs. So, National Cross Government Steering Committee will do overseeing the progress and effectiveness of realization of NAPHS through working with Public Health Emergency and Preparedness Technical Strategic Group. This Committee was proposed to form and will be active with endorsement of its' members and functions.

Proposed functions of the National Cross Government Steering Committee for Health Security

The National Cross Government Steering Committee for Health Security will have the following roles and functions:-

- Provide policy, decision making and strong commitments
- Ensure cooperative efforts among multi-sectoral and disciplinary to as a “One”
- Provide strategic leadership in the development, implementation and sustainability of health and wellbeing of people, animals and the environment

- Provide strategic advice, support and assistance in the implementation of the five years strategic plan
- Monitor identified and emerging risks and provide guidance on their prevention, mitigation and management
- Recognize barriers and enablers to fully implement the strategic plan
- Mobilize resources
- Monitor the implementation of the strategic plan
- Monitor the budget and expenditure of the program
- Establish committees at different levels of implementation, including Technical Working Group at National level.

Role of individual members of the National Steering Committee for Health Security

The role of the individual members of the National Steering Committee for Health Security is as follows:

- attending regular meetings and actively participating in the committee's work
- Provide interest and commitments to representing ministry for NAPHS
- a genuine interest in the initiatives and the outcomes being pursued in the program
- being an advocate for the program's outcomes
- being committed to, and actively involved in, pursuing the program's outcomes

General Membership

The National Cross Government Steering Committee for Health Security shall be comprised of:

- Union Minister for Ministry of Health and Sports
- Union Minister for Ministry of Agriculture, Livestock and Irrigation
- Union Minister for Ministry of Natural Resource and Environmental Conservation
- Union Minister for Ministry of Labour, Immigration and Population
- Union Minister for Ministry of Planning and Finance
- Union Minister for Ministry of Education
- Union Minister for Ministry of Transport & Communications
- Union Minister for Ministry of Defence
- Union Minister for Ministry of Social Warfare, Relief and Resettlement
- Union Minister for Ministry of Home Affairs

- Union Minister for Ministry of Information
- Union Minister for Ministry of Foreign Affairs
- Union Minister for Ministry of Transport and Communication
- Member form Union Attorney General Office
- Representative from WHO
- Representative form UN agencies
- Representatives from other development partners

ANNEX IV:

Implementation with Monitoring and evaluation of the plan

Monitoring, Supervision and Evaluation of implementation of the National Action plan for Health Security will be carried throughout its' life of plan, through the systems, mechanisms and approaches identified below, according the major elements of the global IHR M&E framework. In addition, the major indicators will be in further development within M&E frame works and plan NAPHS that will be in line with IHR M & E frame work, existing M & E frame work in each areas and M & E frame work Myanmar National Health Plan intending ways to UHC. The focal person for each area will conduct monitoring, supervision and evaluation for implementation of activities in each area in collaboration with National Cross Government Steering Committee and National Focal Point of IHR regularly and periodically. These M & E action will be integrating and cooperating the existing ongoing program and activities as much as possible in order to utilize less resources.

o **Monitoring for activity progress or achievement of NAPHS Plan**

National Cross Government Steering Committee (NCGSC) and National Focal Points of IHR (NFP) and technical area focal lead will monitor progress of activities implementation by time by time and as necessary in ad hoc. Technical area focal lead will use the Activity Monitoring table regularly. By using this table, the progress or behind of the activity against the planned is clearly seen and can be used as desktop for progress monitoring as out of process by NAPHS. During regular Monitor and Coordination meetings, it will be shared to NCGSC, TSG and NFP including constraints, challenges and gaps for further decision to actions together. The example of Activity Monitoring Table is described below.

Table 5: Activity Monitoring Table: Sample

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022																	
PREVENT																	
General Objective: To prevent and reduce the likelihood of outbreaks and other public health hazards and events defined by IHR (2005).																	
GOAL																	
TECHNICAL AREA	Prevention 5	Food Safety						Basic inputs questionnaire	Costing Matrix	Results 1	Graphs	List pending items	National Legislation	IHR Coordination AMR1			
JEE Indicator	P.5.1	Mechanisms for multisectoral collaboration established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases						Zoonotic Disease	Food Safety	Biosafety-Biosecurity	Immunization	Laboratory	Real Time Surveillance	Reporting Workforce Development			
JEE Scores	2							Preparedness	Emergency Response	Linking PH n Security Ath	Med Counter measures	Risk Communication	PoEs	Chemical event Radiation Emergencies			
JEE recommendations	<ul style="list-style-type: none"> * Establish a multi-sectoral strategy for a national food safety management and surveillance system from farm to fork * Implement food safety control management systems based on multi-sectoral involvement in risk profiling of food safety problems * Activate a transparent communication mechanism between all public and private food safety stakeholders 																
Objective	To promote capacities for surveillance and response among State parties for food- and water-borne disease risks or events To strengthen effective communication and collaboration among the sectors responsible for food safety, and safe water and sanitation																
No	Summary of Planned Activities at National Level (Strategic actions)	Responsible authority(s) for Implementation including budget line holder	Related existing plan/framework / Programme or on going activities	Detailed activities (Input description for costing)	Where is the action to be implemented (National or sub-national)	Output indicators (Monitoring and Evaluation)	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	Estimated cost (Local currency)		Year of implementation					
												2018	2019	2020	2021	2022	
1	Guidelines for the National Food Safety Emergency and Outbreak Response of food borne diseases	CEU, FDA, Laboratory- MoHS, LBVD-MoALI	Rapid Response Team (RRT) already established, outbreak management guidelines.	(1) Advocacy meeting to develop guideline, training Modules and to organize or form task force for National Food Safety Emergency and Outbreak Response of food borne diseases (20 participants, Away 6, 1 day, 2 time)	National	Guideline/manual and task force developed in time	Multi-sectoral involvement and communication mechanism, human resources and financial support	N		2,136,000	(9000 * (20 - 6) * 1 + 6 * 3 * 30000 + 6 * 95000 + 1 * 250000 (True) + 20 * 1 * (15000True + 10000True) + 20 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 20 Days = 1, Participants away = 6 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 25000, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1				
				(2) Task force meetings to develop draft guideline, training Modules (15 participants, Away 6, 1 dya, 4 times)	National	Guideline/manual drafted	Multi-sectoral involvement and communication mechanism, human resources	N		1,903,500	(9000 * (15 - 6) * 1 + 6 * 3 * 30000 + 6 * 95000 + 1 * 250000 (True) + 15 * 1 * (15000True + 10000True) + 15 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 15 Days = 1, Participants away = 6 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 25000, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2				
				(3) All stakeholders involvement Workshop on finalization of National Food Safety Emergency and Outbreak Response of food borne diseases Guideline, training Modules (40 participants, Away 20, 2 days, 1 time)	National	Guideline/manual Developed	Multi-sectoral involvement and communication mechanism, human resources	N		7,360,000	(9000 * (40 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000True + 10000True) + 40 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 40 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 25000, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1				
		FDA, NHL-MoHS, LBVD-MoALI		(4) Dessimination workshop/meeting for Guidelines on National Food Safety Emergency and Outbreak Response of food borne diseases Guideline, training Modules (70 participants per meeting, 35 away, for 2 days)	National	Dessimination meeting conducted		N		8,085,000	(9000 * (70 - 30) * 1 + 30 * 3 * 30000 + 30 * 95000 + 1 * 250000 (True) + 70 * 1 * (15000True + 10000True) + 70 * 2500True) * 1 + 0 + 0	1 Workshop : Per diem = 9000 Participants = 70 Days = 1, Participants away = 30 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 25000, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1				

Table 5.a. Activity Monitoring Table: Sample

Sr.	Summary of Planned Activities at National Level (Strategic actions)	Detailed activities (input description for costing)	Estimated cost (Local currency)	Plan and achievement by Year																		
				2018		2019		2020		2021		2022										
				Plan	Achieved	Plan	Achieved	Plan	Achieved	Plan	Achieved	Plan	Achieved									

o **Annual Reporting**

The country will continue to report annually on the development of the main IHR (2005) core capacities as their obligation to report annually to the World Health Assembly on the implementation of IHR (2005). This annual report is generated from regular internal reporting mechanism, meetings, supervisions and evaluation of implementation of NAPHS plan.

o **Meetings**

Meetings on coordination among stakeholders and evaluation on implementation of NAPHS will explore the process, mechanism for more effective coordination and do effective prompt actions against constraints and challenges during implementation of activities. Again, these process will enforce implementation of NAPHS’s activities to be on track according to plan and effectiveness, efficiency and quality of activities, NAPHS. Regular monthly, quarterly, bi-annual and annual will be conducted in each technical area accordingly for more coordination, evaluation and actions needed. Ad-hoc meetings will be as part of monitoring process for urgent actions as necessary.

o **Supervision Visits**

Topping up with onsite supervisions on regular monitoring on reports and meeting will be conducted as per plan and as necessary on needs. This will supports to implementer for more skills, improvement of relevant technical and in doing on-job trainings. These will significantly increase the quality outputs of activities in operating of NAPHS as parts of improvement plan for core capacities of IHR.

o **Simulation Exercises and testing**

Country team will conduct simulation, testing exercised according to plan to test the functionality of the system in a non-event environment and to validate the functional capacities of a system. In addition, there will be more simulation exercise specific for radiation emergencies and chemical events annually. The findings of exercises can provide a more operational view in the level of capacities across the nineteen technical areas for further actions necessary as well.

o **After Action Review**

An after action review (AAR) is a qualitative review of actions taken to respond to an

emergency as a means of identifying best practices and lessons learned. This will give country team opportunities to act the activities against actual views and doing revision activities planned in NAPHS revision.

o **The Joint External Evaluations**

The initial JEE provided key recommendations that guided the development of the national actions plan for health security. A second JEE will be conducted as part of the end-evaluation of the NAPHS. There will also be yearly review and revise activity of the plan to assess progress, identify bottlenecks to implementation and provide recommendations to guide implementation in the next year of the plan period. In addition to this, mid-term evaluation and end year plan evaluation will be conducted in which progress and effectiveness of NAPHS operation and status of core capacity will be assessed. JEE will be carried out at the 5th year of project life, and annual coordination, review and revise meetings for 5th year of NAPHS implementation will be conducted after JEE visit so that findings and recommendations will be incorporated into revising NAPHS for next 5 year plan.

ANNEX V:

Advocacy and Communication Strategy

Sustainable Core capacity level of country regarding with implementation IHR (2005) to ensure Country’s Health Security will be on effective timely operation of NAPHS during 2018 and onwards. Multi-sectoral approaches with their involvement and commitments will create the good pictures of outcomes by NAPHS. Using effective and appropriate advocacy and communication strategies will realize implementation of NAPHS resulting intended goals and objectives. The followings strategies on advocacy and communication will be used as basic approaches for implementation of NAPHS in line to ensure IHR (2005)

o **Advocacy**

Letting know of NAPHS and its’ implementation to the policy and decision makers will establish strong commitments and interests for the supports to implementation of activities. Implementer, related/relevant stakeholders and partners would give more inputs and cooperative efforts into plans for effective timely implementation. Acceptance and participation by community and beneficiaries to implementation will be in sustainable actions remained. In doing so, availability of funds, human resources, more participation will be increased.

o **Awareness**

Awareness on NAPHS operation in line with IHR increased will make more understanding of NAPHS among higher level officers, stakeholders, partners, implementers and community/beneficiaries. This understanding on activities of NAPHS by them will be increase their acceptance, supports and collaboration in operation of NAPHS activities.

Education with IEC material, talks, documentary, video and airing will be used as necessary and appropriately for awareness promoted and increased

○ **Orientation**

All stakeholders, partners, implementers including beneficiaries is essential to know NAPHS what type of activities or actions will be conducted by whom at what time for how long duration and at which place with for what objectives, and how monitoring, evaluation approaches. These information will create ability for stakeholder to find engagement place or points for them and to cooperate implementation of NAPHS activities. These will ensure multi-sectoral approach and their involvements.

○ **Simulation and exercises and drills**

The knowledge, information and understanding on operation and objectives in operation of NAPHS needs a platform or places in order to be tested or exercise done, from which harmonized movements, coordination by time to time will be in place as active functioning. So, multi-sectoral involvement simulation, exercise, drills including beneficiaries will important for effective implementation of NAPHS's activities. This will result trusts increased among and by all related stakeholders.

○ **Risk Communication Plan**

In order to increase awareness through advocacy, education for more knowledge, information and facts, communication plan for public and emergency/ risks will be utilized by implementer, stakeholders and partners. What type of information and facts will be disseminated by what channel to public before and after the events are included in Communication plan. Assessment of ongoing information and doing correct and appropriate feedback will be included in communication plan so that all persons and community will increase more understanding of operating NAPHS and IHR for health security of country.

○ **Media Surveillance and rumor verification**

Existence and spreading of correct or appropriate information, knowledge and facts on public emergencies and events is essential for improving health security of country through operation of NAPHS. So, implementer, all stakeholder and partner will conduct the implementation of media surveillance and rumor verification by assigning one designated unit and focal person.

○ **Community Engagement for inclusion**

In doing the communication strategy above will enable and ensure engagement by community starting by initial participation. Understanding and acceptance through communication strategies will be increased for sustainable actions of NAPHS, and in turn, demands will be generated by themselves for their healthy lifestyle. Therefore, community will do more engagement in NAPHS not only implementation but also in planning phase.

ANNEX VI:

Key Technical Areas and experts for Country Planning Participants lists and list of Stakeholders including Sectors and Partners

WHO country office, Myanmar and Technical Professional Officer works closely with Central Epidemiological Unit, MoHS and supports not only technical in all areas as necessary but also financing for this NAPHS development. Development partners such as US-CDC did providing technical and time in development of NAPHS.

Table 6: Key Technical areas and Experts:

Strategic Category	Technical areas	Responsible Person	Designation	Department/ Organizations
I. PREVENT	1. National legislation, policy and financing	Dr Htun Tin	Director	DoPH, MoHS
		Dr Khin Khin Gyi	Deputy Director	CEU, MoHS
		Dr. Aung Min Thein	Assistant Director	Union Attorney General's office
		Dr Htoo Myint Swe	Assistant Director	DPF, MoHS
		Dr Aung Thu	Medical Officer	CEU, MoHS
	2. IHR coordination, communication and advocacy	Dr Kyaw Khaing	Director, (Assistant Permanent Secretary)	IRD, MoHS
		Dr Htun Tin	Director	DoPH, MoHS
		Dr Nyan Win Myint	Deputy Director	CEU, MoHS
		Dr Khin Sandar Aung	Deputy Director	CEU, MoHS
		Dr Thet Wai Nwe	Assistant Director	CEU, MoHS
	3. Antimicrobial resistance	Prof. Dr Htay Htay Tin	Deputy Director General, NHL	DMS, MoHS
		Dr Htun Tin	Director	DoPH, MoHS
		Dr Latt Latt Kyaw	Deputy Director, NHL	DMS, MoHS
		Dr Win Thein	Deputy Director, NHL	DMS, MoHS
		Dr Eh Htoo	Assistant Director, NHL	DMS, MoHS
		Dr Khin Nyein San	Assistant Director, NHL	DMS, MoHS
	4. Zoonotic diseases	Dr Min Thein Maw	Director, LVBD	MoALI
		Dr Htun Tin	Director	DoPH, MoHS
		Dr Khin Sanda Aung	Deputy Director	CEU, MoHS
		Dr Yan Linn Aung	Assistant Director	CEU, MoHS

Strategic Category	Technical areas	Responsible Person	Designation	Department/ Organizations
	5. Food safety	Dr Htin Linn	Deputy Director General	FDA, MoHS
		Dr Htun Tin	Director	DoPH, MoHS
		Dr Min Thein Maw	Director, LVBD	MoALI
		Dr Sabai Htet Htet Htoo	Assistant Director	FDA, MoHS
	6. Biosafety and biosecurity	Prof. Dr Htay Htay Tin	Deputy Director General, NHL	DMS, MoHS
		Dr Htun Tin	Director	DoPH, MoHS
		Dr Latt Latt Kyaw	Deputy Director, NHL	DMS, MoHS
		Dr Win Thein	Deputy Director, NHL	DMS, MoHS
		Dr Ohnmar Lwin	Assistant Director, NHL	DMS, MoHS
	7. Immunization	Dr Htun Tin	Director	DoPH, MoHS
		Dr Htar Htar Linn	Deputy Director	EPI, MoHS
		Dr Aye Mya Chan Thar	Assistant Director	EPI, MoHS
		Dr Aung Naing Oo	Assistant Director	EPI, MoHS
II. DETECT	1. National laboratory system	Prof. Dr Htay Htay Tin	Deputy Director General, NHL	DMS, MoHS
		Dr Latt Latt Kyaw	Deputy Director, NHL	DMS, MoHS
		Dr Win Thein	Deputy Director, NHL	DMS, MoHS
		Dr Eh Htoo	Assistant Director, NHL	DMS, MoHS
	2. Real Time Surveillance	Dr Htun Tin	Director	DoPH, MoHS
		Dr Toe Thiri Aung	Deputy Director	CEU, MoHS
		Dr Aung Myat Htay	Assistant Director	CEU, MoHS
		Dr Ei Ei Zar Nyi	Assistant Director	CEU, MoHS
	3. Reporting	Dr Htun Tin	Director	DoPH, MoHS
		Dr Toe Thiri Aung	Deputy Director	CEU, MoHS
		Dr Khin Sandar Aung	Deputy Director	CEU, MoHS
		Dr Thet Wai Nwe	Assistant Director	CEU, MoHS
		Dr Aung Myat Htay	Assistant Director	CEU, MoHS
	4. Workforce Development	Dr Htun Tin	Director	DoPH, MoHS
		Dr Phyu Phyu Aye	Director	HLP, MoHS
		Dr Aye Mya Aung	Deputy Director	HRH, MoHS

Strategic Category	Technical areas	Responsible Person	Designation	Department/ Organizations
III. RESPOND	1. Preparedness	Dr Htun Tin	Director	DoPH, MoHS
		Dr Khin Sandar Aung	Deputy Director	CEU, MoHS
		Dr Kyaw Khine San	Assistant Director	Preparedness, MoHS
		Dr Aung Myat Htay	Assistant Director	CEU, MoHS
	2. Emergency Response Operation	Dr Htun Tin	Director	DoPH, MoHS
		Dr. Toe Thiri Aung	Deputy Director	CEU, MoHS
		Dr Kyaw Khine San	Assistant Director	Preparedness, MoHS
		Dr Aung Myat Htay	Assistant Director	CEU, MoHS
	3. Linking Public Health & Security Authority	Dr Htun Tin	Director	DoPH, MoHS
		Dr Kyaw Khin San	Assistant Director	Preparedness, MoHS
		Dr Moe Khine	Assistant Director	DMS, MoHS
		Dr Aung Myat Htay	Assistant Director	CEU, MoHS
	4. Medical Counter Measures and personnel deployment	Dr Htun Tin	Director	DoPH, MoHS
		Dr Kyaw Khin San	Assistant Director	Preparedness, MoHS
		Dr Moe Khine	Assistant Director	DMS, MoHS
	5. Risk Communications	Dr Htun Tin	Director	CEU, MoHS
		Dr Phyu Phyu Aye	Deputy Director	HLPU, MoHS
		Dr Yi Yi Win	Deputy Director	HRH, MoHS
		Dr Thet Wai Nwe	Assistant Director	CEU, MoHS
		Dr Yan Lin Aung	Assistant Director	CEU, MoHS
IV. Other IHR related hazards & Point of Entries (PoEs)	1. Point of Entry	Dr Htun Tin	Director	DoPH, MoHS
		Dr Min Thein Maw	Director, LVBD	MoALI
		Dr Nyan Win Myint	Deputy Director	CEU, MoHS
		Dr Thet Wai Nwe	Assistant Director	CEU, MoHS
		Dr Nyan Htet Lwin	Medical Officer	Yangon Port Health, MoHS

Strategic Category	Technical areas	Responsible Person	Designation	Department/ Organizations
	2. Chemical Event	Dr Htun Tin	Director	DoPH, MoHS
		Col Khine Zaw Oo		DMSR
		Dr Khaing Khaing Soe	Assistant Director	EH, MoHS
		Dr Aung Thu	Medical Officer	CEU, MoHS
	3. Radiation Emergency	Dr Htun Tin	Director	CEU, MoHS
		Dr Aung Moe	Director	DAE, MoE
		Dr Thuzar Lwin Oo	Deputy Director	DAE, MoE
		Dr Khaing Khaing Soe	Deputy Director	EH, MoHS

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

PREVENT

General Objective: To prevent and reduce the likelihood of outbreaks and other public health hazards and events defined by IHR (2005).

GOAL													Total Estimated cost (USD)
National Legislation, Policy and Financing													Total Estimated cost (Local currency) (Myas)
TECHNICAL AREA	Prevention 1	Legislation, laws, regulations, administrative requirements, policies or other government instruments in place for implementation of IHR.											
JEE Indicator	P.1.1	To have sufficient national legislation, policy and framework to support IHR implementation											
JEE Scores	2	* Myanmar should ensure that in the revised laws and regulations both from human health and animal health that the country is planning to present to the parliament, have legislations and regulation that support strengthening the IHR capacities implementation in the country. * Myanmar needs to continue the best practice of having cross border/local MoU between Thailand and Myanmar. The practices should be continued with other neighboring countries.											
JEE recommendations	To have sufficient national legislation, policy and framework to support IHR implementation												
Objective	To have sufficient national legislation, policy and framework to support IHR implementation												
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible Authority(s) for implementation including budget holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (Input description for costing)"	Where is the action to be implemented (National (National or sub-national))	"Output indicators (Monitor-Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency	Total Estimated cost (USD)
1	To establish or develop cross-border MOUs with neighbouring countries on public health emergencies	MOHS, MOA-II, MONREC and other relevant stakeholders	Discussion with responsible persons from Parliament, Union Attorney General Office and other stakeholders.	(3) Hiring of international Consultants (2) national experts for 20 days each, 2 persons for OIE tool for Evaluation of Performance of Veterinary Services (OIE PVS tool)	National	Final draft laws submitted to the parliament	Coordination and information sharing problems among variety of sectors/players	N		1 * 20 * (238920 + 660000) + 1 * 1584000 = 19562,400	2	39,124,800	39,124,800
2	To review the existing ASEAN framework and health clusters to include the aspect of public health emergencies	Myanmar and neighbouring countries, ASEAN countries	MBDS network, ASEAN framework, ASEAN health clusters	(1) hire the national consultant to review existing MOUs or agreements for recommendations and follow up actions (for 40 days)	National Sub-national	MOU developed and done for rapid and effective cross-border IHR implementation	Different laws and policies within neighbouring and ASEAN countries.	N		1 * 40 * (80000 + 200000) + 1 * 0 = 11200000	1	11,200,000	11,200,000
3	Regular assessment identifying adjustment needs for relevant legislation, regulations or administrative requirements every 5 years	Related Ministries coordinated by the steering committee	IHR (2005), Government police and existing Laws	(1) hire the national consultants for periodic assessment for identification of adjustment and needs (3 national consultants for 60 days)	National Sub-national	assessment done for adjustment needs	collaboration from different departments, timeframe	N		1 * 60 * (80000 + 200000) + 1 * 0 = 16800000	3	50,400,000	50,400,000
												254,347.31	
												396,781,800	
												TOTAL	
												50,400,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-Evaluation)"	Comments or Potential challenges	Existing budget-get(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
												2018	2019	2020	2021	2022	TOTAL
												2 0 1 8	2 0 1 9	2 0 2 0	2 0 2 1	2 0 2 2	TOTAL
3	Advocacy to stakeholders and Raising awareness campaign about laws to the public	Related Ministries for law and legislation	Instructions, laws and orders of Government	(1) Advocacy meetings/workshop to Stakeholders at Central level (70 participants, 20 Away, 1 Day)	National and Sub-national	Number of Meeting done for increased awareness	Tights schedules for high level official	N		6,385,000	1	-	-	-	6,385,000	6,385,000	
		Related Ministries for law and legislation	Instructions, laws and orders of Government	(2) Advocacy meetings/workshop to Stakeholder at 17 States and Regions (40 participants per meeting)	National and Sub-national	Number of Meeting done for increased awareness	delayed awareness due to Language barrier, conflict areas, low socio-economic status, hard-to-reach areas, cultures, customs	N		950,000	17	-	-	-	16,150,000	16,150,000	

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

PREVENT

General Objective: To prevent and reduce the likelihood of outbreaks and other public health hazards and events defined by IHR (2005).

GOAL													Total Estimated cost (USD)			
TECHNICAL AREA													491,528.85			
IHR Coordination, Communication and Advocacy													Total Estimated cost (Local currency) (Myats)			
A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR.													157,495,000			
JEE indicator													283,720,000			
JEE Scores													128,590,000			
JEE recommendations													58,390,000			
* Establishment of an overarching cross government steering committee to oversee global health security activities through an all hazards approach.													128,590,000			
* Development of multi-sectoral, multidisciplinary coordination and communication mechanisms; and action plans through this overarching committee													766,785,000			
1. To establish the coordination and integration of relevant sectors to implement IHR													TOTAL			
Objective	Summary of Planned Activities at National Level (Strategic actions)	"Responsible" entities for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Myat)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency				
No											2018	2019	2020	2021	2022	
1	Establishing Cross Government Steering Committee (CGSC) to oversee global health security activities (Comprehensive NAPHS) through an all hazards approach	Government, related ministries and other stakeholders	Myanmar Action Plan for Disaster Risk Reduction (MAPDRR), Standing Order on Natural Disaster Management in Myanmar (2010), National strategic plan for influenza, IHR (2005)	(1) Meeting on Establishment of CGSC and TOR development of Overarching Cross Government Steering Committee (CGSC) (30 participants, away 15, 1 Day for 3 times)	National and Sub-national	Number of Meetings conducted. CGSC developed for Timeliness, Readiness and Completeness	Staff turnover, chain of command, multi tasks simultaneously	N		4,125,000 (9000* (30 - 15) *1 + 15 * 4 * 30000 + 15 * 95000 + 1 * 250000 (True) +30 * 1 * (15000)True + 10000(True) + 30 * 2500(True) * 1 + 0 + 0	2	8,250,000	4,125,000	-	-	12,375,000
		Government, related ministries and other stakeholders	Myanmar Action Plan for Disaster Risk Reduction (MAPDRR), Standing Order on Natural Disaster Management in Myanmar (2010), National strategic plan for influenza, IHR (2005)	(2) Capacity building Training CGSC TOR and functioning mechanism for committee members and functional staff (30 participant, away 15, 2 days, 1 times per year for 5 years)	National and Sub-national	Number of Meetings conducted. CGSC developed for Timeliness, Readiness and Completeness	Staff turnover, chain of command, multi tasks simultaneously	N		5,660,000 (9000* (30 - 15) *2 + 15 * 4 * 30000 + 15 * 95000 + 2 * 250000 (True) +30 * 2 * (15000)True + 10000(True) + 30 * 2500(True) * 1 + 99000 + 0	1	5,660,000	5,660,000	5,660,000	5,660,000	28,300,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monotoring and Evaluation)"	Comments or Potential challenges	Existing budget (get/yr)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency				
												2018	2019	2020	2021	2022
		Government, related ministries and other stakeholders	Myanmar Action Plan for Disaster Risk Reduction (MAPDRR) Standing Order on Natural Disaster Management in Myanmar (2010), National strategic plan for influenza, IHR (2005)	(3) Logistic supply (Internet, Fax, Computer, Phone, Office (eg. EOC), vehicles, etc), running costs as per MOHS and WHO specification	National and Sub-national	Facilities, IT, equipment installed for command, multi tasks simultaneously Timeliness Readiness and Completeness	Staff turnover, chain of command, multi tasks simultaneously	N		190,700,000	1	-	-	-	-	190,700,000
		Government, related ministries and other stakeholders	Myanmar Action Plan for Disaster Risk Reduction (MAPDRR) Standing Order on Natural Disaster Management in Myanmar (2010), National strategic plan for influenza, IHR (2005)	(4) Coordination meeting within relevant ministries on public health event or risk of national or international concern (Annually and ad-hoc) (30 participants, Away 15, 1 Day, 3 times per year)	National and Sub-national	Number of meeting for public health events or risk done	Staff turnover, chain of command, multi tasks simultaneously	N		(9000* (30 - 15) *1 + 15 * 3 * 30000 + 15 * 95000 + 1 * 250000 (True) + 30 * 1 * (15000)True + 10000(True) + 30 * 2500(True) * 1 + 0 + 0	3 3 3 3	12,375,000	12,375,000	12,375,000	12,375,000	61,875,000
		Government, related ministries and other stakeholders	IHR (2005), Government policy and existing Laws	(5) Coordination meeting on drafting, submission and approval of laws and policies (30 participants, Away 15, 1 Day, 2 times per year)	National and Sub-national	Number of meeting laws and policies approval or revision done	Staff turnover, chain of command, multi tasks simultaneously	N		(9000* (30 - 15) *1 + 15 * 3 * 30000 + 15 * 95000 + 1 * 250000 (True) + 30 * 1 * (15000)True + 10000(True) + 30 * 2500(True) * 1 + 0 + 0	2 2 2 2	-	8,250,000	8,250,000	8,250,000	33,000,000
2	Developing multi-sectoral, multidisciplinary Comprehensive Country Joint Action Plan to implement IHR for Health Security (NAPHS)	Government, related ministries, steering committee and other stakeholders	Government policy, variety of National Plans, IHR (2005), existing communication channel and practices	(1) Advocacy/Workshops to multi-sectoral, multidisciplinary Comprehensive Country Joint Action Plan to implement IHR for Health Security (NAPHS) (70 participants per meeting, 35 away, for 1 days)	National and Sub-national	Number of Meetings for development of NAPHS	Coordination, Cooperation, Collaboration Multi tasks and duties	Y	WHO	8,085,000	1	8,085,000	-	-	-	8,085,000
		Government, related ministries, steering committee and other stakeholders	Government policy, variety of National Plans, IHR (2005), existing communication channel and practices	(2) Development workshop on multi-sectoral, multidisciplinary Comprehensive Country Joint Action Plan to implement IHR for Health Security (NAPHS) (40 participants, Away 20, 2 Day, 2 times)	National and Sub-national	Number of workshop for development of NAPHS	Coordination, Cooperation, Collaboration Multi tasks and duties	Y	WHO	7,310,000	2	14,620,000	-	-	-	14,620,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-Evaluation)"	Comments or Potential challenges	Existing budget (get/y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
												2018	2019	2020	2021	2022	TOTAL
3	Developing multi-sectoral, multidisciplinary coordination and communication mechanisms and joint action plan for mechanisms	Government, related ministries, steering committee and other stakeholders	Government policy, variety of National Plans IHR (2005), existing communication channel and practices	(1) Workshops to develop Multi-Sectoral mechanisms and action plan (30 participants, Away 5, 1 Day) (2) Test or drill or simulation exercises on action plan for mechanism (30 participants, Away 5, 1 Day, 2 different places, 2 times per year for 5 year)	National and Sub-national	Number of Meetings for development Mechanism and Action Plan developed for reducing Mobility and Mortality	timeline, efficiency and effectiveness for planning and implementation of the plan.	Y	WB (under discussion)	2,365,000 $(9000 * 60 - 5) * 1 + 5 * 3 * 30000 + 5 * 95000 + 1 * 250000 (True) + 30 * 150000 True + 100000 True + 25000, Venue = 250000, Print Dis = 90000, Printing costs = 0, Disseminating costs = 0$	3 2	7,095,000	4,730,000	-	-	-	11,825,000
		Government, related ministries, steering committee and other stakeholders	Government policy, variety of National Plans IHR (2005), existing communication channel and practices	(2) Test or drill or simulation exercises on action plan for mechanism (30 participants, Away 5, 1 Day, 2 different places, 2 times per year for 5 year)	National and Sub-national	Number of exercises for functioning of Mechanism and Action Plan developed for reducing Mobility and Mortality	timeline, efficiency and effectiveness for planning and implementation of the plan.	Y	WB (under discussion)	2,365,000 $(9000 * 60 - 5) * 1 + 5 * 3 * 30000 + 5 * 95000 + 1 * 250000 (True) + 30 * 150000 True + 100000 True + 25000, Venue = 250000, Print Dis = 90000, Printing costs = 0, Disseminating costs = 0$	4 4 4 4	9,460,000	9,460,000	9,460,000	9,460,000	9,460,000	47,300,000
		Government, related ministries, steering committee and other stakeholders	Government policy, variety of National Plans IHR (2005), existing communication channel and practices	(3) Annual Evaluation meeting on current action plan for mechanism (40 participants, Away 20, 2 Day, 1 times per year) <u>This activity will be incorporated or extended with activity P.2.1.4.4 and maybe with P.2.1.2.7</u>	National and Sub-national	Number of Meetings for functioning and revision Mechanism and its' Action Plan developed for reducing Mobility and Mortality	timeline, efficiency and effectiveness for planning and implementation of the plan.	Y	WB (under discussion)	7,310,000 $(9000 * 60 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 40 * 150000 True + 100000 True + 40 * 25000 True + 0 + 0$	1 1 1 1 1 1	7,310,000	7,310,000	7,310,000	7,310,000	7,310,000	36,550,000
4	SOPs or TOR development for coordination between IHR Focal point and other relevant sectors (including review and revise of existing SOPs and guidelines)	CEU, IRD	IHR (2005), Government policy	(1) Hiring consultant for development of SOP or TOR coordination mechanism between IHR National Focal Point (NFP) and other sectors, stakeholders (1 national consultant for 60 days)	National	SOPs or TOR established	In place practical use of SOP	N		16,800,000 $1 * 60 * 60000 + 200000 + 1 * 0 = 16800000$	1	16,800,000	-	-	-	16,800,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

	CEU, IRD	IHR (2005), Government policy	(2) Meetings/workshop to develop SOPs (30 participants, Away 15, 1 Day, 2 times)	National	SOPs or TOR established	In place practical use of SOP	N	4,125,000	(9000* (30 - 15) + 15 * 95000 + 1 * 250000 (True) + 30 * 15000 (True) + 10000 (True) + 10000 (True) + 30 * 2500 (True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 30 Days = 1, Participants away = 15 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 90000, Printing costs = 0, Disseminating costs = 0	2	8,250,000	8,250,000	-	-	16,500,000
	CEU, IRD	IHR (2005), Government policy	(3) Finalization workshop of SOPs from draft the SOPs (sharing information, function of IHR (NFP, etc) (30 participants, Away 15, 1 Day, 1 times)	National	SOPs or TOR established	In place practical use of SOP	N	4,125,000	(9000* (30 - 15) + 15 * 95000 + 1 * 250000 (True) + 30 * 15000 (True) + 10000 (True) + 10000 (True) + 30 * 2500 (True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 30 Days = 1, Participants away = 15 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 90000, Printing costs = 0, Disseminating costs = 0	1	4,125,000	4,125,000	-	-	4,125,000
	CEU, IRD	IHR (2005), Government policy	4. Meeting on evaluation of the functions of IHR NFP (SOPs) (40 participants, Away 20, 2 Day, 1 times per year, starting from 2019) Conducting this activity will be incorporated or extended with activity P.2.1.3.3 and maybe with P.2.1.2.7 in IHR Coordination plan.	National	SOPs or TOR established	In place practical use of SOP	N	7,310,000	(9000* (40 - 20) + 20 * 95000 + 2 * 250000 (True) + 40 * 15000 (True) + 10000 (True) + 40 * 2500 (True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 40 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	23,400,000	23,400,000	-	-	23,400,000
5	Developing Monitoring, Evaluation framework and tools to oversee progress of NAPHS Operations	Existing progress monitoring sheet, Annual Assessment report and JEE and NAPHS plan	(1) Development of M & E framework and Tools	National and Sub-national	Number of tools, Meetings Conducted	timeline, efficiency and effectiveness for planning and implementation of the plan.	Y	23,400,000	Lumpsum	Lumpsum	1	23,400,000	23,400,000	-	-	23,400,000
		Existing progress monitoring sheet, Annual Assessment report and JEE and NAPHS plan	(2) Mid term Evaluation on NAPHS Operation in line with assessing core capacities of IHR national	National and Sub-national	Number of evaluation and reports finished	timeline, efficiency and effectiveness for planning and implementation of the plan.	Y	70,200,000	Lumpsum	Lumpsum	1	70,200,000	70,200,000	-	-	70,200,000
		Existing progress monitoring sheet, Annual Assessment report and JEE and NAPHS plan	(3) End line Evaluation on NAPHS Operation in line with assessing core capacities of IHR national	National and Sub-national	Number of evaluation and reports finished	timeline, efficiency and effectiveness for planning and implementation of the plan.	Y	70,200,000	Lumpsum	Lumpsum	1	70,200,000	70,200,000	-	-	70,200,000

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022
PREVENT

General Objective: To prevent and reduce the likelihood of outbreaks and other public health hazards and events defined by IHR (2005).

GOAL		Antimicrobial Resistant										Total Estimated cost (USD)					
TECHNICAL AREA		Antimicrobial resistance (AMR) detection										Total Estimated cost (Local currency) (Nyar)					
JEE Indicator	Prevention 3																
JEE Indicator	P.3.1																
JEE Scores	3											5,399,801.47					
JEE recommendations		Raise awareness among the general public on AMR and among health care workers in human and animal health sectors on surveillance, prudent use of antimicrobials and the importance of good practices										Total cost per year of implementation					
		Increase laboratory capacity on AMR, both in the human and animal health sector and share AMR data across the sectors															
		Cooperate in a One Health approach between sectors at local, regional and national levels on AMR															
Objective		To strengthen the AMR detection for both human and animal sectors															
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(ies) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
1	To sustain the quality and services of laboratories that are able to detect and report priority AMR pathogen aligned with the Global AMR Surveillance System GLASS (for existing nearly 25 laboratories)	MoHS, MoA-LI, Ministry of Defence	National action plan for AMR	(1) To provide TOT and refresher training to improve the capacity of staff to detect the priority AMR pathogen in country (human health) (Participants = 20, Participants away = 15, Days = 3, two times per year for 5 year)	National	Number of staff trained and trainings done	Budget and tight duties by trainers and trainees.	N		6,110,000	2 2 2 2 2 0 0 0 0 0 1 1 2 2 2 8 9 0 1 2	2018	2019	2020	2021	2022	TOTAL
												12,220,000	12,220,000	12,220,000	12,220,000	12,220,000	61,100,000
				(2) To provide TOT and refresher training to improve the capacity of staff to detect the priority AMR pathogen in country (veterinary health) (Participants = 20, Participants away = 15, Days = 3, two times per year for 5 year) Multiplier trainings for staff from veterinary health are included in Activities of Zoonotic Disease areas.		Number of staff trained and trainings done	Budget and tight duties by trainers and trainees.	N		6,110,000	2 2 2 2 2	12,220,000	12,220,000	12,220,000	12,220,000	12,220,000	61,100,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

(3) Capacity building on AMR detection of lab professionals through international programme eg, fellowship (human health) (Travel cost 1000USD, tuition 4,000 USD, Per diem and accommodation 2,800 USD, for 2 weeks, 2 people per year)	Number of Professional attended for AMR detection International Fellowship Program	Budget and tight duties by trainers and trainees.	N	10,296,000	(1000+4000+2800) USD*1320 MMK						20,592,000	20,592,000	20,592,000	20,592,000	20,592,000	82,368,000
(4) Capacity building on AMR detection of lab professionals through international programme eg, fellowship (veterinary health) (Travel cost 1000USD, tuition 4,000 USD, Per diem and accommodation 2,800 USD, for 2 weeks, 2 people per year)	Number of Professional attended for AMR detection International Fellowship Program	Budget and tight duties by trainers and trainees.	N	10,296,000	(1000+4000+2800) USD*1320 MMK						20,592,000	20,592,000	20,592,000	20,592,000	20,592,000	82,368,000
(5) To procure the necessary laboratory materials and equipments, Automatic Identification and Sensitivity Detection of Microorganism (VITEK 2) (compact machine) 25 laboratories	Number of Laboratory Materials, equipment and VITEK 2 procured	Budget	N	1,027,490,000					1 1 1 1	1 1 1 1	1,027,490,000	1,027,490,000	1,027,490,000	1,027,490,000	1,027,490,000	5,137,450,000
(6) To support the logistics (sample preparation, transport, testing) to sustain the NEQAS for AMR detection	Number of sample transported NEQAS	Budget	N	2,500,000					2 2 2 2	2 2 2 2	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	25,000,000
(7) Monitoring, supervision & Evaluation visits to S/R hospitals (human health) 2 supervisors * 3days/ visit * 5 years	Number of M & E visit counducted	Budget	N	850,000	2*3*31000+1*132000*3=850000				10 10 10 10	10 10 10 10	8,500,000	8,500,000	8,500,000	8,500,000	8,500,000	42,500,000
(8) Monitoring, supervision & Evaluation visits to townships (veterinary health) 2 supervisors * 3 days per visit * 2 times per year * 5 year	Number of M & E visit counducted	Budget	N	850,000	2*3*31000+1*132000*3=850000				2 2 2 2	2 2 2 2	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	8,500,000
(9) To provide participation fees for PHL (Mandabay) and NHL (Yangon) to enroll at National IH- Thailand for International External Quality Assurance System (IEQAS)	Increase number participating laboratories NEQAS & IEQAS National Participation in NEQAS and IEQAS done	Training & technical assistance	Y	6,600,000					1 2 2 2	1 2 2 2	6,600,000	13,200,000	13,200,000	13,200,000	13,200,000	59,400,000

JEE Indicator		"Surveillance of infections caused by antimicrobial-resistant pathogens"															
JEE Scores		3															
JEE recommendations		* Raise awareness among the general public on AMR and among health care workers in human and animal health sectors on surveillance, prudent use of antimicrobials and the importance of good practices * Increase laboratory capacity on AMR, both in the human and animal health sector and share AMR data across the sectors * Cooperate in a One Health approach between sectors at local, regional and national levels on AMR															
Objective		To strengthen the AMR detection for both human and animal sectors															
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for Implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL	
1	To develop surveillance system for usage of antimicrobial in human and animal sectors	MoHS, MoAU		(1) Hiring of international Consultant for technical assistance from WHO or other technical agencies for Development of Antibiotic stewardship programme (antibiotic usage) and trainin Module (one international consultant 20 working days/visit * 3 visits)	National	Antibiotic stewardship programme (antibiotic usage) and trainin Module developed	availability of Training & Technical assistance Budget	N		1* 20 * (238920 + 660000) + 1* 1584000 = 19562400	2	1	19,562,400	19,562,400	-	-	58,687,200
				(2) Stakeholders Workshop/meeting on Development of Antibiotic stewardship programme (antibiotic usage) and trainin Module (50 participants per meeting, 35 away, for 2 days)	National	Antibiotic stewardship programme (antibiotic usage) and trainin Module was done		N		(9000* (50 - 30) + 30 * 4 * 30000 + 30 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000 True + 10000 True) + 50 * 2500 True) * 1 + 0 + 0	1		9,935,000	-	-	-	9,935,000
				(3) Dissemination workshop/meeting for Antibiotic stewardship programme (antibiotic usage) and trainin Module (70 participants per meeting, 35 away, for 1 days)	National	Dissemination on Antibiotic stewardship programme (antibiotic usage) workshop done		N		(9000* (70 - 30) + 30 * 3 * 30000 + 30 * 95000 + 1 * 250000 (True) + 70 * 1 * (15000 True + 10000 True) + 70 * 2500 True) * 1 + 0 + 0	1		8,085,000	-	-	-	8,085,000
				(4) Capacity building Training on Antibiotic stewardship programme (antibiotic usage) (50 participants, 30 away, for 3 days, 2 times per Year for 5 Year)	National	Number of training Staff trained		N		(9000* (30 - 20) + 20 * 5 * 30000 + 20 * 95000 + 3 * 250000 (True) + 30 * 3 * (15000 True + 10000 True) + 30 * 2500 True) * 1 + 0 + 0	2	2	16,490,000	16,490,000	16,490,000	16,490,000	65,960,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

2	Strengthen WHONET data analysis			(1) Hiring International Consultant for technical assistance from WHO or other technical agency to support WHONET and training (1 international consultant (7 working days/visit * 1 visits)	National	Consultant for WHONET training hired	availability of Training & technical assistance Budget	N	7,876,440	1*7*(238920 +660000)+1*1584000 = 7876440	Number = 1 ; No of Days = 7 ; Per diem = 238920 ; Daily rate = 660000 ; Travel = 1584000	1	1	1	1	1	1	7,876,440	7,876,440	7,876,440	7,876,440	7,876,440	39,382,200	
			(2) Training on WHONET for laboratory Staff (25 participants, 20 away, for 2 days, 2 times per Year for 5 Year)	National	Number of training Number of Staff trained			N	6,202,500	(9000* (25- 20) *2+ 20 * 4* 30000 + 20 * 95000 + 2 * 250000 (True) +25 * 2 * (15000) True + 10000(True) + 25 * 2500(True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2	2	2	2	2	2	-	12,405,000	12,405,000	12,405,000	12,405,000	12,405,000	49,620,000
		NHL- MOHS, MAPAMR	(3) Development of infrastructure, IT equipments, internet facilities at each 25 laboratory For WHONET (USD 25,000- 1000 USD per laboratory)	National	IT equipment and facilities fixed. Laboratories with WHONET functioning			N	33,000,000			1	1	1	1	1	33,000,000	33,000,000	33,000,000	33,000,000	33,000,000	165,000,000		
		NHL- MOHS, MAPAMR	(4) Assignment of data assistant for WHONET at each 25 laboratory and 1 NHL (250 USD for each data assistant for 26)	National	IT equipment and facilities fixed. Laboratories with WHONET functioning		Finding appropriate staff	N	330,000	330000*1826		26	26	26	26	26	-	8,580,000	8,580,000	8,580,000	8,580,000	8,580,000	34,320,000	
		NHL- MOHS,	(5) Annual meeting with NHL, clinicians & lab from WHONET implementing laboratories, veterinary sector and other stakeholders (50 participants, away 35, 1 day meeting, 1 time per year for 5 year)	National	Number of annual meeting done			Y	8,235,000	(9000* (50- 35) *1+ 35 * 3* 30000 + 35 * 95000 + 1 * 250000 (True) +50 * 1 * (15000) True + 10000(True) + 50 * 2500(True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 50 Days = 1, Participants away = 35 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	1	1	1	1	-	8,235,000	8,235,000	8,235,000	8,235,000	8,235,000	32,940,000	
JEE Indicator		P.3.3	Health care-associated infection (HCAI) prevention and control programs																					
JEE Scores	1																							
JEE recommendations			* Raise awareness among the general public on AMR and among health care workers in human and animal health sectors on surveillance, prudent use of antimicrobials and the importance of good practices * Increase laboratory capacity on AMR, both in the human and animal health sector and share AMR data across the sectors * Cooperate in a One Health approach between sectors at local, regional and national levels on AMR																					
Objective			To establish national guideline for AMR prevention and control.																					
1	prevention and control program Workshop on IPC	NHL- MOHS,	Trainings conducting for prevention and control infection	(1) Workshop/trainings on Infection prevention control for laboratory and clinical management (30 participants, away 20 for 4 days training, 2 times per year for 5 year)	Number of training done and number trained staff	availability of Training & technical assistance Budget	N	16,290,000	(9000* (50- 35) *4+ 35 * 6* 30000 + 35 * 95000 + 4 * 250000 (True) +50 * 4 * (15000) True + 10000(True) + 50 * 2500(True) * 1 + 0 + 0	1 Workshop : Per diem = 9000 Participants = 50 Days = 4, Participants away = 35 Days away = 6 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	3	2	2	2	2	2	48,870,000	32,580,000	32,580,000	32,580,000	32,580,000	179,190,000		

JEE Indicator		"Antimicrobial stewardship activities"																				
JEE Scores																						
JEE recommendations * Raise awareness among the general public on AMR and among health care workers in human and animal health sectors on surveillance, prudent use of antimicrobials and the importance of good practices * Increase laboratory capacity on AMR, both in the human and animal health sector and share AMR data across the sectors * Cooperate in a One Health approach between sectors at local, regional and national levels on AMR																						
Objective		To establish national guideline for AMR prevention and control.																				
1	To achieve regular monitoring by national steering committee for AMR and technical working groups for better coordination and implementation of plan against each objectives	MoHS, MoALL, MoE, Ministry of Information, Ministry of Industry, Ministry of Home Affairs, Ministry of Defence	National action plan for AMR	National	Number of Meeting done TOR for NMSC & TWG developed	Implementation of Stewardship activity in Hospital (JMS) regular participation by each member	N	4,865,000	$(9000 * 30 - 20) + 20 * 95000 + 1 * 250000 (True) + 30 * 150000True + 100000True + 30 * 2500True) * 1 + 0 + 0$	1 Meeting - Per diem = 9000 Participants = 30 Days = 1, Participants away = 20 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	2	2	2	2	2	9,730,000	9,730,000	9,730,000	9,730,000	9,730,000	48,650,000
		MoHS, MoALL, MoE, Ministry of Information, Ministry of Industry, Ministry of Home Affairs, Ministry of Defence	National action plan for AMR	National	Number of TWG meeting done Number of participants attended	Tight schedule by participants Budget	N	8,677,500	$(9000 * 35 - 25) + 25 * 95000 + 2 * 250000 (True) + 35 * 2 * (150000True + 100000True) + 35 * 2500True) * 1 + 0 + 0$	1 Meeting - Per diem = 9000 Participants = 35 Days = 2, Participants away = 25 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	2	2	2	2	2	8,677,500	17,355,000	17,355,000	17,355,000	17,355,000	78,097,500
		NHL- MOHS,	National action plan for AMR	National	Number of TWG meeting done Number of participants attended	Tight schedule by participants Budget	N	8,677,500	$(9000 * 35 - 25) + 25 * 95000 + 2 * 250000 (True) + 35 * 2 * (150000True + 100000True) + 35 * 2500True) * 1 + 0 + 0$	1 Meeting - Per diem = 9000 Participants = 35 Days = 2, Participants away = 25 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	2	2	2	2	2	8,677,500	17,355,000	17,355,000	17,355,000	17,355,000	78,097,500

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (get/y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
												2018	2019	2020	2021	2022	TOTAL
		NHL- MOHS,		(2c) AMR (National Action Plan for AMR) on IPCTWG coordination meeting To share updates and improve mechanism and submit it to the ministry in first year To have regular coordination and collaboration discuss annual work plan and progress Total 70 participants (35 from government officials, 25 away, 35 from agencies and organization, 2 days, 2 times per year for 5 years)	National	Number of TWG meeting done Number of participants attended	Tight schedule by participants Budget	N		8,677,500 $(9000 * (35 - 25) + 25 * 95000 + 2 * 250000 (True) + 35 * 2 * (15000True + 10000True) + 35 * 2500True) * 1 + 0 + 0$	1 2 2 2 2 0 0 0 0 1 1 2 2 2 8 9 0 1 2	8,677,500	17,355,000	17,355,000	17,355,000	17,355,000	78,097,500
		NHL- MOHS,		(2d) AMR (National Action Plan for AMR) on Antimicrobial Usage TWG coordination meeting To share updates and improve mechanism and submit it to the ministry in first year To have regular coordination and collaboration discuss annual work plan and progress Total 70 participants (35 from government officials, 25 away, 35 from agencies and organization, 2 days, 2 times per year for 5 years)	National	Number of TWG meeting done Number of participants attended	Tight schedule by participants Budget	N		8,677,500 $(9000 * (35 - 25) + 25 * 95000 + 2 * 250000 (True) + 35 * 2 * (15000True + 10000True) + 35 * 2500True) * 1 + 0 + 0$	1 2 2 2 2 0 0 0 0 1 1 2 2 2 8 9 0 1 2	8,677,500	17,355,000	17,355,000	17,355,000	17,355,000	78,097,500
		NHL- MOHS,		(2e) AMR (National Action Plan for AMR) on Research Innovation TWG coordination meeting To share updates and improve mechanism and submit it to the ministry in first year To have regular coordination and collaboration discuss annual work plan and progress Total 70 participants (35 from government officials, 25 away, 35 from agencies and organization, 2 days, 2 times per year for 5 years)	National	Number of TWG meeting done Number of participants attended	Tight schedule by participants Budget	N		8,677,500 $(9000 * (35 - 25) + 25 * 95000 + 2 * 250000 (True) + 35 * 2 * (15000True + 10000True) + 35 * 2500True) * 1 + 0 + 0$	1 2 2 2 2 0 0 0 0 1 1 2 2 2 8 9 0 1 2	8,677,500	17,355,000	17,355,000	17,355,000	17,355,000	78,097,500

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

2	Establish an evidence-based public communications programme targeting audiences in policy making, human and animal health practice, the general public and professional on prudent use of antimicrobials	MoHS, MoAL, MoE, Ministry of Information	National action plan for AMR	(1) Communication campaign for antibiotic awareness improvement by MoHS and MoAL at central level and 17 states and regions (100 participants, Away 40, 1 day, Printing & dissemination - 6,600,000 MMK)	National & sub-national	Number of Awareness Campaign was done	Political commitment & community participation	N	17,540,000	$(9000 * (100 - 40) * 1 + 40 * 3 * 30000 + 40 * 95000 + 1 * 250000 (True) + 100 * 1 * (15000)True + 100000True) + 100 * 2500True) * 1 + 5000000 + 1600000$	1 Meeting : Per diem = 9000 Participants = 100 Days = 1, Participants away = 40 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 5000000, Disseminating costs = 1600000	6	18	18	18	105,240,000	315,720,000	315,720,000	315,720,000	315,720,000	1,368,120,000
		MoHS, MoAL,		(2) Advocacy Workshop on integration of AMR in to undergraduate and post-graduate curriculum to (50 participants, Away 35, 1 day for 1 times)	National	Number of workshop done	Budget	N	10,920,000	$(9000 * (50 - 35) * 2 + 35 * 4 * 30000 + 35 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000)True + 100000True) + 50 * 2500True) * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 50 Days = 2, Participants away = 35 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1				10,920,000	-	-	-	10,920,000	
		MoHS, MoAL,		(3) Workshop on Development of therapeutic guidelines for four major subjects (Surgery, Medicine, Obstetric and Gynecology and orthopedic, Pediatric and veterinary (50 participants, Away 35, 1 day for 3 times)	National	Number of workshop done	Budget	N	8,235,000	$(9000 * (50 - 35) * 1 + 35 * 3 * 30000 + 35 * 95000 + 1 * 250000 (True) + 50 * 1 * (15000)True + 100000True) + 50 * 2500True) * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 50 Days = 1, Participants away = 35 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2				16,470,000	-	-	-	16,470,000	
3	Surveillance of irrational usage of antibiotics among clinical practices	MoHS, MoAL,		(1) Hiring of International Consultant for Technical assistance from WHO or other technical agency to establish surveillance of irrational usage of antibiotics among clinical practices and training modules (1 international consultant 20 working days, visit 3)			Strong and interest academic and professional inputs	N	19,562,400	$1 * 20 * (238920 + 660000) + 1 * 1584000 = 19562400$	Number = 1 ; No of Days : 20 ; Per diem = 238920 ; Daily rate = 660000; Travel = 1584000	3				58,687,200	-	-	-	58,687,200	
		MoHS, MoAL,		(2) Stakeholders Workshop/ meeting on surveillance of irrational usage of antibiotics among clinical practices and training modules (50 participants per meeting, 35 away, for 2 days)	National	Surveillance of irrational usage of antibiotics was done	Strong and interest academic and professional inputs	N	9,935,000	$(9000 * (50 - 30) * 2 + 30 * 4 * 30000 + 30 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000)True + 100000True) + 50 * 2500True) * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 50 Days = 2, Participants away = 30 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1				9,935,000	-	-	-	9,935,000	
		MoHS, MoAL,		(3) Dissemination workshop/ meeting for surveillance of irrational usage of antibiotics among clinical practices and training modules (70 participants per meeting, 35 away, for 2 days)	National	Surveillance of irrational usage of antibiotics was done	Strong and interest academic and professional inputs	N	8,085,000	$(9000 * (70 - 30) * 1 + 30 * 3 * 30000 + 30 * 95000 + 1 * 250000 (True) + 70 * 1 * (15000)True + 100000True) + 70 * 2500True) * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 70 Days = 1, Participants away = 30 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1				8,085,000	-	-	-	8,085,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency						
												2018	2019	2020	2021	2022	TOTAL	
		MoHS, MoAL,		(4) Training on surveillance of irrational usage of antibiotics among clinical practices for laboratories and medical care staff (25 participants, away 15, 2 times per year for 5 days)	National	Number of training done and number trained staff	Strong and interest academic and professional inputs	N		9,462,500	2 2 2 2 0 0 0 0 1 1 2 2 8 9 0 1 2	2018	2019	2020	2021	2022	TOTAL	
		MoHS, MoAL,		(1) Hiring of International Consultant for Formulating Regulatory Framework for control of Human and Veterinary use of antimicrobial substances, (1 international consultant, 15 working days, visit 1)	National	Biosafety and biosecurity legislation/law/formulated	Weakness in Biosafety & Biosecurity management and practices	N		15,067,800	1		15,067,800					15,067,800
		NHL, MoHS, LBVD		(2) Stakeholders Workshop/meeting on control of Human and Veterinary use of antimicrobial substances, (50 participants per meeting, 35 away, for 2 days)	National	Comprehensive national biosafety and biosecurity legislation was done		N		9,935,000	1		9,935,000					9,935,000
		NHL, MoHS, LBVD	Other laws/legislation approval	(4) laws/legislation approval from Union Parliament (Discussion and defense for law in Meetings with responsible persons from Parliament, Union Attorney General Office and other stakeholders (5 times 20 participants)	Naypyitaw	Biosafety and biosecurity legislation/law approved	time will take place	N		1,370,000	1							
		NHL, MoHS, LBVD		(5) one dissemination workshop/meeting for control of Human and Veterinary use of antimicrobial substances, (70 participants per meeting, 35 away, for 2 days)	National	Comprehensive national biosafety and biosecurity legislation was done		N		8,085,000	1		8,085,000					8,085,000

5	Strengthen National Regulatory Agency (NRA) or Drug Regulatory Agency (DRA)	MoHS, MoAL, MoAL, MoAL	National action plan for AMR	(1) Coordination meeting on regulations and quality checklists for Antimicrobials agents (AMAs), Active Pharmaceutical Ingredients (API) and Over the counter (OTC) sales. (50 participants, Away 35, 2 days, 2 times per year for 5 Year)	National and checklist developed	Difficult in placing practices	N	10,920,000	$(9000 * 50 - 35) + 35 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True + 50 * 2500True * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 50 Days = 2, Participants away = 35 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2	2	2	2	2	2	21,840,000	21,840,000	21,840,000	21,840,000	21,840,000	87,360,000
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MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

PREVENT

General Objective: To prevent and reduce the likelihood of outbreaks and other public health hazards and events defined by IHR (2005).

GOAL		Surveillance system in place for prioritized zoonotic diseases										Total Estimated cost (USD)				
TECHNICAL AREA		Zoonotic Disease										Total Estimated cost (Local currency) (Kyats)				
JEE Indicator		Surveillance systems in place for priority zoonotic diseases/pathogens										Total cost per year of implementation				
JEE Scores												4,374,560,700				
JEE recommendations		*Endorse and implement the national OH strategic framework and action plan of Myanmar (2016-2019)										6,926,042,301				
Objective		To develop effective surveillance system for prioritize zoonotic diseases with One Health approach										6,506,187,500				
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible Authority(s) for Implementation including budget line holder"	Related existing plan/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-ing and Evaluation)"	Comments or Potential Challenges	Existing budget(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation					
											2018	2019	2020	2021	2022	
1	Development of One Health (OH) planning and Finalizing	MoHS,MoALI, MoNREC	OH strategic framework (Drafted)	(1) Hiring of International Expert for reviewing and finalization of final version of One Health strategic plan (1 International Consultant, 10 Days)	National	National One Health Strategic Plan of Myanmar Developed	effective implementation, Commitments	N	Development Partners (WHO, OIE, FAO)	1*10*(238920 +660000) + 1*1584000 = 10573200	10,573,200	-	-	-	-	10,573,200
		MoHS,MoALI, MoNREC	OH strategic framework (Drafted)	(2) Workshop on finalization of One Health Strategic Plan and submission to related H.E Ministers (1 Day workshop) (Participants 40, Participants away 15, 2 Days, 2 times)	National	National One Health Strategic Plan of Myanmar Developed	effective implementation, Commitments	N	Development Partners (WHO, OIE, FAO)	(9000*(40-15) *2+15*4*30000 +15*95000+2*250000 (True) +40 *2*(15000True+10000True) +40 *2500True)*1+75000+0	6,350,000	6,350,000	-	-	-	12,700,000
		MoHS,MoALI, MoNREC	OH strategic framework (Drafted)	(3) Dissemination/advocacy workshop on One Health Strategic Plan (Participants 40, Participants away 15, 2 Days, 2 times)	National	National One Health Strategic Plan of Myanmar Developed	effective implementation, Commitments	N	Development Partners (WHO, OIE, FAO)	(9000*(35-15) *1+15*3*30000 +15*95000+1*250000 (True) +35 *1*(15000True+10000True) +35 *2500True)*1+75000+0	4,242,500	4,242,500	-	-	-	4,242,500
												7,893,937,500				
												32,217,245,301				
TOTAL												TOTAL				

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

2	Developing joint Training program for public and animal health	MoHS,MoALI, MoNREC, MoD	Under OH strategic Frame Work	(1) Hiring of International Consultant for Development of Training Modules on surveillance, preparedness, detect and response to zoonotic events (diseases/pathogens) by reviewing of Training program (1 International Consultant, 10 day) (2) Training on preparedness, detect and response to zoonotic events (diseases/pathogens) for Public Health and Animal Health Professionals at Central level (50 participants, Away 35, 3 days, 4 times per year)	National and sub-national	Number of training module/ programs,	limited human resources and competing priorities	N	10,573,200 $1 * 10^7 (238920 + 660000) + 1 * 1584000 = 10573200$	$(9000^* (50 - 35) + 35 * 9500 + 3 * 250000) (True) + 50 * 3 * (15000True) + 10000True) + 50 * 2500True) * 1 + 0 + 0$	Number = 1 ; No of Days : 10 , Per diem = 238920 ; Daily rate = 660000 ; Travel = 1584000	1	4	4	4	4	4	10,573,200	54,620,000	54,620,000	54,620,000	54,620,000	10,573,200	-	-	-	10,573,200
		MoHS,MoALI, MoNREC, MoD	Under OH strategic Frame Work	(3) Training on preparedness, detect and response to for Public Health and Animal Health Professional at State and Regional level (20 participants, Away 0, 2 days, 35 times per year)	National and sub-national	Number of staff well trained	limited human resources and competing priorities	N	13,655,000 $(9000^* (20 - 0) + 20 * 9500 + 2 * 250000) (True) + 20 * 2 * (15000True) + 10000True) + 20 * 2500True) * 1 + 0 + 0$	1 Training : Per diem = 9000/Participants = 30 Days = 3, Participants away = 35 Days away = 5 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 25000, Printing costs = 0, Disseminating costs = 0	35	35	35	35	35	35	66,850,000	66,850,000	66,850,000	66,850,000	66,850,000	66,850,000	-	-	-	66,850,000	
3	Strengthening Education and awareness raising by implementing National Awareness Campaign (OH day, Antibiotic awareness week, world rabies day)	MoHS,MoALI, MoNREC	Annual participation in zoonotic disease (OH day, Ab awareness day, rabies day)	(1) Hiring National Consultant for development of IEC material development (pamphlet, poster, video, TV talk, billboards) (1 National Consultant, 60 days) (2) Producing and Printing of IEC material developed (pamphlet-1,000,000, poster -100,000, video -5, TV talk, billboards - 100)	All level	Number and type of IECs developed	HR, budget, community participation	N	16,800,000 $1 * 60^* (80000 + 200000) + 1 * 0 = 16800000$	Number = 1 ; No of Days : 60 , Per diem = 80000 ; Daily rate = 200000 ; Travel = 0	1						16,800,000	-	-	-	16,800,000	-	-	-	16,800,000		
		MoHS,MoALI, MoNREC	Annual participation in zoonotic disease (OH day, Ab awareness day, rabies day)	(3) Awareness raising event on One Health Day at 340 townships in Country (50 participant, Away 0, 1 day, 340 times per year)	All level	no of IEC developed and produced.	HR, budget, community participation	N	180,000,000	1 Workshop : Per diem = 9000 Participants = 50 Days = 1, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	1					180,000,000	-	-	-	180,000,000	-	-	-	180,000,000		
		MoHS,MoALI, MoNREC	Annual participation in zoonotic disease (OH day, Ab awareness day, rabies day)		All level	reduce incidence of diseases and community participation improved, PPP improved.	HR, budget, community participation	N	2,075,000 $(9000^* (50 - 0) + 1 * 0 * 3 * 30000 + 0 * 95000 + 1 * 250000) (True) + 50 * 1 * (15000True) + 10000True) + 50 * 2500True) * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 50 Days = 1, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	340	340	340	340	340	340	705,500,000	705,500,000	705,500,000	705,500,000	705,500,000	705,500,000	705,500,000	-	-	-	705,500,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation					Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL					
		MoHS/MoALI MoHREC	Annual participation in zoonotic disease (OH day, Ab awareness day, Rabies day)	(4) Awareness raising event on Antibiotic Awareness Week at 340 townships in Country (50 participants, Away 0, 1 day, 340 times per year)	All level	reduce incidence of diseases and community participation improved, PPP improved.	HR, budget, community participation	N		2,075,000 (9000* (50-0) *1+0-0 *3*30000 +0*95000+1*250000 (True) +50 *1* (15000True +10000True) + 50 *2500True) *1 +0+0	340	340	340	340	340	705,500,000	705,500,000	705,500,000	705,500,000	705,500,000	3,527,500,000
		MoHS/MoALI MoHREC	Annual participation in zoonotic disease (OH day, Ab awareness day, Rabies day)	(5) Awareness raising event on World Rabies Day at 350 townships in Country (50 participants, Away 0, 1 day, 350 times per year)	All level	reduce incidence of diseases and community participation improved, PPP improved.	HR, budget, community participation	N		2,075,000 (9000* (50-0) *1+0-0 *3*30000 +0*95000+1*250000 (True) +50 *1* (15000True +10000True) + 50 *2500True) *1 +0+0	350	350	350	350	350	726,250,000	726,250,000	726,250,000	726,250,000	726,250,000	3,631,250,000
4	Development of coordination mechanism for interagency response team for in the event of suspected zoonotic outbreaks	MoHS/MoALI MoHREC, MoD	Contingency plan for Avian Influenza-AI National rapid response team	(1) Workshop/meeting on Development of TOR for RRT, SOP, Guideline and Training Module including simulation exercise modules of coordination mechanism for Rapid Response Team (50 participants, Away 30, 3 days, 1 time)	National and sub-national	Coordination mechanism and readiness of response team was established.	limited human resources and competing priorities	N		25,130,600 (9000* (50-30) *3+30 *5*30000 +30*95000+3*250000 (True) +50 *3* (15000True + 10000True) + 50 *2500True) *2 + 100000 +0	1					25,130,600					25,130,600
		MoHS/MoALI MoHREC, MoD	Contingency plan for Avian Influenza-AI National rapid response team	(2) Hiring of International consultant for Development of TOR, SOP, Guideline and Training Module including simulation exercise module for Rapid Response Team (1 International Consultant, 10 days)	National and sub-national	Coordination mechanism and readiness of response team was established.	limited human resources and competing priorities	N		10,573,200 1*10* (238920 +660000) + 1*1584000 = 10573200	1					10,573,200					10,573,200
		MoHS/MoALI MoHREC, MoD	Contingency plan for Avian Influenza-AI National rapid response team	(3) Training and simulation exercise for RRT in the event of suspected zoonotic outbreaks. (50 participants, Away 0, 2 days, 15 trainings per year)	National and sub-national	No of staff well trained	limited human resources and competing priorities	N		4,025,000 (9000* (50-0) *2+0-0 *4*30000 +0*95000+2*250000 (True) +50 *2* (15000True +10000True) + 50 *2500True) *1 +0+0	15	15	15	15	15	60,375,000	60,375,000	60,375,000	60,375,000	60,375,000	301,875,000
5	Development (improvement) of surveillance for prioritized zoonotic diseases or reporting, Feedback and actions	MoHS/MoALI MoHREC	AI, Rabies, AMR surveillance activities	(1) Coordination Meeting on improvement of surveillance to implement prioritized zoonotic diseases such as AI, Rabies, AMR (100 participant, 0 Away, 2 days, 2 times per year)	National and sub-national	Surveillance indicators, no. of supervisory visits	limited human resources and competing priorities	N		7,550,000 (9000* (100-0) *2+0-0 *4*30000 +0*95000+2*250000 (True) +100 *2* (15000True +10000True) + 100*2500True) *1 +0+0	2	2	2	2	2	15,100,000	15,100,000	15,100,000	15,100,000	15,100,000	75,500,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

	MohS, MoALI MoNREC	Feed back meeting/ workshop on AI surveillance activities	(2) Routine Meeting on development of reporting mechanism and identification of format for relevant department for reporting including Annual Reporting (100 participant, 0 Away, 2 days, 2 times per year)	National and sub-national	Routing meeting for information sharing Annual reporting to relevant Ministries	limited human resources and competing priorities	N	7,550,000	$(9000 * (100 - 0) + 0 * 95000 + 2 * 250000) (True) + 100 * 250000 + 1000000 + 100 * 250000 * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 100 Days = 2, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2	2	2	2	2	2	15,100,000	15,100,000	15,100,000	15,100,000	15,100,000	15,100,000	75,500,000
6	Strengthening laboratory capacity and upgrading	MohS, MoALI	Boisafty level 2 (BSL 2+) facility	(1) Maintenance Program for existing BSL 2+ facilities, biosafety and biosecurity laboratory	National	validate test result and improve QA/QC sustainable BSL2+ facilities done	N	7,504,000			1	1	1	1	1	1	7,504,000	7,504,000	7,504,000	7,504,000	7,504,000	7,504,000	37,520,000
			Boisafty level 2 (BSL 2+) facility	(2) Multiplier training on Biosafety and Biosecurity for Animal sector 20 participants (15 - away) 2-day training (TOT training will be at Biosafety and Biosecurity area plan)	National	number of staff trained as multiplier for biosafety and biosecurity	N	4,865,000	$(9000 * (20 - 15) + 15 * 95000 + 2 * 250000) (True) + 20 * 2 * (15000) (True) + 100000 (True) + 20 * 25000 (True) * 1 + 0 + 0$	1 Training : Per diem = 9000 Participants = 20 Days = 2, Participants away = 15 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 25000, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2	2	2	2	2	2	9,730,000	9,730,000	9,730,000	9,730,000	9,730,000	29,190,000	
			Boisafty level 2 (BSL 2+) facility	(3) Multiplier training on improve the capacity of staff to detect the priority AMR pathogen in country for Animal sector 20 participants (15 - away) 2-day training (TOT training will be at AMR area plan)	National	number of staff trained as multiplier for biosafety and biosecurity	N	4,865,000	$(9000 * (20 - 15) + 15 * 95000 + 2 * 250000) (True) + 20 * 2 * (15000) (True) + 100000 (True) + 20 * 25000 (True) * 1 + 0 + 0$	1 Training : Per diem = 9000 Participants = 20 Days = 2, Participants away = 15 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 25000, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2	2	2	2	2	9,730,000	9,730,000	9,730,000	9,730,000	9,730,000	29,190,000		
			Boisafty level 2 (BSL 2+) facility	(4) International fellowship program on Biosafety and Biosecurity 1 weeks Travel cost @ 1000USD Tuition @2,000 Perdiem and accommodation @ 2,800 2 people per year	International	number of staff trained on international program for biosafety and biosecurity	N	7,656,000				2	2	2	2	2	15,312,000	15,312,000	15,312,000	15,312,000	15,312,000	15,312,000	76,560,000
			Boisafty level 2 (BSL 2+) facility	(5) Workshop/meeting on harmonization of the laboratory tests. (15 Participants, Away 13, 3 days, 4 meetings per year)	National	Number of meeting for harmonization of laboratory test done	N	5,151,500	$(9000 * (15 - 13) + 13 * 95000 + 3 * 250000) (True) + 15 * 3 * (15000) (True) + 100000 (True) + 15 * 25000 (True) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 15 Days = 3, Participants away = 13 Days away = 5 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 25000, Venue = 250000, Printing costs = 0, Disseminating costs = 0	4	4	4	4	4	20,606,000	20,606,000	20,606,000	20,606,000	20,606,000	20,606,000	103,030,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

JEE Indicator		Animal Health and Veterinarian Workforce																
JEE Scores		3																
JEE recommendations		* expend the animal health workforce and organize continous education for existing workforce on local, regional and national levels																
Objective		To strengthen and expert Veterinary workforce upto subnational level																
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency						
												2018	2019	2020	2021	2022	TOTAL	
1	Developing and conducting joint training program for disease Prevention, Control and response	MOHS joint LBVD	risk assessment, risk communication, risk management	(1) Workshop/Meeting for development of joint training program and module including simulation exercises for more collaboration with MOHS and LBVD, MoALI (50 participant, Away 50, 7 days, 1 times)	National and sub-national	Joint training program developed and oint activities increased	Tight schedules by stakeholder for delays	N		31,275,500	1	-	31,275,500	-	-	-	-	31,275,500
			risk assessment, risk communication, risk management	(2) hiring international and national for development of Joint Training Program and module including simulation exercises prevention, control and response (1 international, 30 days)	National and sub-national	Joint training program developed and oint activities increased	Tight schedules by stakeholder for delays	N		8,400,001	1	-	8,400,001	-	-	-	-	8,400,001
			risk assessment, risk communication, risk management	(3) Training on joint training Program including joint simulation exercise for staff from both sectors (50 participant, Away 50, 7 days, 1 times per year)	National and sub-national	Training and numbers of trainees for joint activities increased	Tight schedules by stakeholder for delays	N		31,275,500	1	31,275,500	31,275,500	31,275,500	31,275,500	31,275,500	31,275,500	156,377,500
			risk assessment, risk communication, risk management	(4) To conduct Joint Field/site visit for more collaboration with MOHS AND LBVD (3 person, 15 days per visit 1 times per year)	National and sub-national	number of Field/site visit for joint activities increased	Tight schedules by stakeholder for delays	N		2,583,000	1	2,583,000	2,583,000	2,583,000	2,583,000	2,583,000	2,583,000	12,915,000
			risk assessment, risk communication, risk management	(5) To conduct Joint Outbreak Response and surveillance for more collaboration with MOHS AND LBVD (10 members, 7 days visit, 2 times per year for outbreaks, response and surveillance) 15 times of this activity are included in activity D.2.1.1.2 under Real Time surveillance area	National and sub-national	Number of joint response and surveillance activities increased	Tight schedules by stakeholder for delays	N		4,226,000	2	8,452,000	8,452,000	8,452,000	8,452,000	8,452,000	8,452,000	42,260,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

2	Development and strengthening field veterinary workforce FETPV	MHS joint LBVD, MoD	Animal Health Biosecurity	(1) FETPV (District) subnational level for national training programs (for all level of training course) (20 participants, 20 Away, 5 days, 70 trainings per Year) (Total 1,400 staff – 20 Deputy District Veterinary Officer x 70 districts)	National and subnational	epidemiologist at all level trained	Tight training schedule due to high training frequency	N	6,450,000 + 20 * 7 * 30000 + 20 * 95000 + 5 * 250000 (True) + 0 * 5 * (15000True + 10000True) + 0 * 2500True * 1 + 0 + 0	(9000* (0 - 20)) * 5 + 20 * 7 * 30000 + 20 * 95000 + 5 * 250000 (True) + 0 * 5 * (15000True + 10000True) + 0 * 2500True * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 0 Days = 5; Participants away = 20 Days away = 7 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	70	70	70	451,500,000	451,500,000	451,500,000	451,500,000	451,500,000	451,500,000	2,257,500,000	
		MHS joint LBVD, MoD	Animal Health Biosecurity	(2) FETPV (District) subnational level for international training programs (2 per person per year, 30 days in MMK) + round trip	National and subnational	epidemiologist at all level trained	Timely processing to go to the program	N	9,400,000	9,400,000		2	2	2	18,800,000	18,800,000	18,800,000	18,800,000	18,800,000	18,800,000	94,000,000	
3	Strengthening continuous education on zoonotic disease and Emerging infectious disease (EID)	MHS joint LBVD	Animal Health Biosecurity	(1) Hiring of Expert consultation for developing tools and materials, training module, simulation exercise for EID, biosafety, private and public veterinarian reporting training (1 International Consultant, 20 days)	National and subnational	continuous education to all veterinarians done	Awareness raised by community	N	19,562,400 + 660000 + 1 * 1584000 = 19562400	1 * 20 * (238920 + 660000) + 1 * 1584000 = 19562400	Number = 1; No of Days: 20; Per diem = 238920 ; Daily rate = 660000; Travel = 1584000	1			19,562,400	-	-	-	-	-	19,562,400	
		MHS joint LBVD	Animal Health Biosecurity	(2) Workshop/meeting for development of tools and materials, training module, simulation exercise for EID, biosafety, private and public veterinarian reporting training (50 participants, 30 Away, 3 days, 2 times)	National and subnational	continuous education to all veterinarians done	Awareness raised by community	N	12,515,000 * 3 + 30 * 5 * 30000 + 30 * 95000 + 3 * 250000 (True) + 50 * 3 * (15000True + 10000True) + 50 * 2500True * 1 + 0 + 0	(9000* (50 - 30)) * 3 + 30 * 5 * 30000 + 30 * 95000 + 3 * 250000 (True) + 50 * 3 * (15000True + 10000True) + 50 * 2500True * 1 + 0 + 0	1 Workshop: Per diem = 9000 Participants = 50 Days = 3; Participants away = 30 Days away = 5 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	2			25,030,000	-	-	-	-	-	-	25,030,000
		MHS joint LBVD	Animal Health Biosecurity	(3) Dissemination workshop/ meeting for guideline, tools and materials, training module, simulation exercise for EID, biosafety, private and public veterinarian reporting training (60 participants, 20 Away, 1 days, 1 times)	National and subnational	continuous education to all veterinarians done	Awareness raised by community	N	6,010,000 * 1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 60 * 1 * (15000True + 10000True) + 60 * 2500True * 1 + 0 + 0	(9000* (60 - 20)) * 1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 60 * 1 * (15000True + 10000True) + 60 * 2500True * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 60 Days = 1; Participants away = 20 Days away = 3 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	1			6,010,000	-	-	-	-	-	-	6,010,000
		MHS joint LBVD	Animal Health Biosecurity	(4) Training on guideline, tools and materials, training module, simulation exercise for EID, biosafety, private and public veterinarian reporting training for veterinary Staff (50 participants, 30 Away, 3 days, 2 times per Year)	National and subnational	Number of staff trained, continuous education to all veterinarians done	Awareness raised by community	N	12,515,000 * 3 + 30 * 5 * 30000 + 30 * 95000 + 3 * 250000 (True) + 50 * 3 * (15000True + 10000True) + 50 * 2500True * 1 + 0 + 0	(9000* (50 - 30)) * 3 + 30 * 5 * 30000 + 30 * 95000 + 3 * 250000 (True) + 50 * 3 * (15000True + 10000True) + 50 * 2500True * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 50 Days = 3; Participants away = 30 Days away = 5 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	2	2	2	25,030,000	25,030,000	25,030,000	25,030,000	25,030,000	25,030,000	125,150,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency							
												2018	2019	2020	2021	2022	TOTAL		
4	Regular updating of Animal census Data updating	LBVD	Only Central level estimation is on.	(1) Conducting Livestock census in Every 5 year	National and sub-national	Regular updating of more accurate census and veterinary coverage	Human resources	N		1,548,750,000	1	1,548,750,000	-	-	-	-	1,548,750,000	3,097,500,000	
5	Development of program for CAHW training	LBVD	Basic animal health services	(1) Advocacy meeting and workshop for development of Policies and regulation for Community Animal Health Worker (CAHW) upto village level in order to strengthen disease reporting, surveillance, vaccination (50 participants, 20 Away, 2 days, 1 times) (2) Hiring of one National consultant for development of Community Animal Health Worker (CAHW) guideline/manual, TOR, training Modules (1 National Consultant, 60 Days) (3) Workshop on development of Community Animal Health Worker (CAHW) guideline/manual, TOR, training Modules (50 participants, 20 Away, 4 days, 2 times)	National	Advocacy Meeting conducted	T Timely development is essential	Y	FAO	7,965,000 $(9000 * (50 - 20) + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000) (True) + 50 * 2 * (15000)True + 10000True + 50 * 25000True * 1 + 0 + 0$	1	-	7,965,000	-	-	-	-	7,965,000	12,480,000
		LBVD	Basic animal health services	(4) Recruitment Training for Community Animal Health Worker (CAHW) upto village level for disease reporting, surveillance, vaccination (40 participants, 0 Away, 7 days, 25 times per year, at district 25 each district level)	Sub-national	CAHW manual, guideline, TOR, training modules done	Timely development is essential	Y	FAO	12,705,000 $(9000 * (40 - 20) + 20 * 4 * 30000 + 20 * 95000 + 4 * 250000) (True) + 50 * 4 * (15000)True + 10000True + 50 * 25000True * 1 + 0 + 0$	2	-	25,410,000	-	-	-	-	25,410,000	25,410,000
		LBVD	Basic animal health services	(5) Refresher Training for Community Animal Health Worker (CAHW) upto village level for disease reporting, surveillance, vaccination (40 participants, 0 Away, 3 days, 25 times per year, at district 25 each district level)	Sub-national	CAHW manual, guideline, TOR, training modules done	Tight training schedules for trainers	Y	FAO	11,370,000 $(9000 * (40 - 0) + 7 * 0 * 9 * 30000 + 0 * 95000 + 7 * 250000) (True) + 40 * 7 * (15000)True + 10000True + 40 * 25000True * 1 + 0 + 0$	25	25	284,250,000	-	-	-	-	284,250,000	568,500,000
		LBVD	Basic animal health services		Sub-national	CAHW manual, guideline, TOR, training modules done		N		4,930,000 $(9000 * (40 - 0) + 3 * 0 * 5 * 30000 + 0 * 95000 + 3 * 250000) (True) + 40 * 3 * (15000)True + 10000True + 40 * 25000True * 1 + 0 + 0$	25	25	-	-	-	-	-	123,250,000	246,500,000

JEE Indicator		Mechanisms for responding to infectious zoonoses are established and functional															
JEE Scores		2															
JEE recommendations		* Establish information sharing systems, joint simulation exercises and formal coordination mechanisms between LBVD and DoPH															
Objective		To establish effective coordination and information sharing mechanisms among sectors															
1	Formal coordination and information sharing mechanism between LBVD and DoPH, other Stakeholders	Joint (LBVD- MoALI, MoHS, MoNREC)	Joint outbreak and surveillance report to OIE	(1) Meeting/workshop for disease specific regular exercise to develop formal information sharing mechanism and MOU (agreement) among three sectors, (60 participant, 20 away, 2 day, 1 times)	National- subnational	Formalized coordination and reporting and system in place MOU	coordination and collaboration Timely sharing	N	8,670,000	$(9000 * (60 - 20) + 20 * 95000 + 2 * 250000) (True) + 60 * 2 * (15000) (True) + 10000 (True) + 60 * 25000 (True) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 60 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	8,670,000	-	-	-	8,670,000
		Joint (LBVD- MoALI, MoHS, MoNREC)	Joint outbreak and surveillance report to OIE	(2) Regular quarterly Coordination meeting for Disease specific regular exercise and formal information sharing mechanism among three sectors, (30 participant, 10 away, 1 day, 4 times per year)	National- subnational	Formalized coordination and reporting and system in place MOU	coordination and collaboration Timely sharing	N	3,105,000	$(9000 * (30 - 10) + 10 * 95000 + 1 * 250000) (True) + 30 * 2 * (15000) (True) + 10000 (True) + 30 * 25000 (True) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 30 Days = 1, Participants away = 10 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	4	12,420,000	12,420,000	12,420,000	12,420,000	49,680,000
2	Strengthening of emergency response at all level (Table top exercise)	Joint (LBVD- MoALI, MoHS, MoNREC)	LBVD, FAO, MoHS	(1) Quarterly Meeting on Table Top exercise (50 participants, 30 Away, 2 days, 4 times per year)	National- subnational	Exercises done	regular exercises	Y	FAO 9,985,000	$(9000 * (50 - 30) + 30 * 95000 + 2 * 250000) (True) + 50 * 2 * (15000) (True) + 10000 (True) + 50 * 25000 (True) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 50 Days = 2, Participants away = 30 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	4	39,940,000	39,940,000	39,940,000	39,940,000	159,760,000
3	Strengthening Veterinary Sanitary Phytosanitary (SPS) management by establishing quarantine systems in border and airport/ seaport. (CIQ)	MoALI, MoC, MoR	Quarantine programs in limited area	(1) Upgrading of the quarantine facilities and services in potential border trade, at 5 check points. (50,000,000*1*5)	National and Subnational	Increase no of quarantine stations and installed.	border area security HR	N	5,000,000	$(50,000,000 * 1 * 5) \text{ for } 5 \text{ check points}$		5	25,000,000	25,000,000	25,000,000	100,000,000	
		MoALI, MoC, MoR	Quarantine programs in limited area	(1) Expansion of the quarantine facilities and services in potential border trade, 6 quarantine facilities will be expanded for every year (100,000,000*1*6, for 5 year)	National and Subnational	Increase no of quarantine stations and installed.	border area security HR	N	100,000,000	$(100,000,000 * 1 * 6) \text{ for } 6 \text{ stations for every year}$		6	600,000,000	600,000,000	600,000,000	2,400,000,000	
		MoALI, (LBVD- MoALI, MoHS, MoNREC)	Quarantine programs in limited area	(2) Training on Veterinary Sanitary Phytosanitary (SPS) management by establishing quarantine systems for inspector and quarantine for veterinarians (20 participant, 20 Away, 2 days, 6 times per year)	National and Subnational	Number of Staff trained	border area security HR	N	7,200,000	$(9000 * (20 - 5) + 20 * 95000 + 3 * 250000) (True) + 20 * 3 * (15000) (True) + 10000 (True) + 20 * 25000 (True) * 1 + 0 + 0$	1 Training : Per diem = 9000 Participants = 20 Days = 3, Participants away = 20 Days away = 5 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	6	43,200,000	43,200,000	43,200,000	172,800,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation					Total Cost Year in Local Currency						
											2018		2019		2020		2021		2022		TOTAL	
											1	2	1	2	1	2	1	2	1	2	1	2
		MoALI, Ministry of Commerce, Ministry of Revenue	Quarantine programs in limited area	(3) Review and Revise meeting on inspector and quarantine training (60 participant, 20 Away, 2 days, 1 times two year)	National and Sub-national	Increase no of quarantine stations	border area security HR	N		8,670,000	(9000* (60 - 20) *2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 60 * 2 * (15000) True + 10000 (True) + 60 * 2500 (True) * 1 + 0 + 0	1	1	-	-	8,670,000	-	-	8,670,000	17,340,000		
4	Strengthening Simulation exercises for Mechanisms for responding to infectious zoonoses	Joint (LBVD- MoALI, MoHS, MoNREC)	Annually with FAO, MoHS	(1) Bi-Annual Coordination and Review Meeting at State, Regional and District level (40 participant, 0 Away, 2 days, 2 times per year)	National, subnational	regular exercises at all level	regular exercises	N		3,320,000	(9000* (40 - 0) *2 + 0 * 4 * 30000 + 0 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000) True + 10000 (True) + 40 * 2500 (True) * 1 + 0 + 0	35	35	-	116,200,000	116,200,000	116,200,000	116,200,000	464,800,000			
		Joint (LBVD- MoALI, MoHS, MoNREC)	Annually with FAO, MoHS	(2) Bi-Annual coordination and Review Meeting at township level (40 participant, 0 Away, 2 days, 2 times per year)	National, subnational	regular exercises at all level	regular exercises	N		3,320,000	(9000* (30 - 0) *2 + 0 * 4 * 30000 + 0 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000) True + 10000 (True) + 40 * 2500 (True) * 1 + 0 + 0	340	340	-	1,128,800,000	1,128,800,000	1,128,800,000	1,128,800,000	4,515,200,000			
5	Strengthening reporting systems (LBVD, DOPH and MoNREC (inter departmental) Private veterinarian, Farmers	Joint (LBVD- MoALI, MoHS, MoNREC)	informal information sharing	(1) Meeting/workshop on Assignment of the focal point and development of the mechanism for formal sharing of information and development of reporting training materials (30 participants, 10 Away, 2 days, 2 times)	National, subnational	Mechanism for information sharing and reporting developed	reporting from farmers (no compensation mechanism) awareness of private veterinarians	N		4,585,000	(9000* (30 - 10) *2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 250000 (True) + 30 * 2 * (15000) True + 10000 (True) + 30 * 2500 (True) * 1 + 0 + 0	2	-	9,170,000	-	-	-	-	9,170,000			
		Joint (LBVD- MoALI, MoHS, MoNREC)	informal information sharing	(2) Hiring of National Consultant for development of the mechanism for formal sharing of information and development of reporting training materials (1 national consultant for 20 days)	National, subnational	Mechanism for information sharing and reporting developed	reporting from farmers (no compensation mechanism) awareness of private veterinarians	N		5,600,000	1 * 20 * (80000) + 200000 + 1 * 0 = 5600000	1	-	5,600,000	-	-	-	-	5,600,000			
		Joint (LBVD- MoALI, MoHS, MoNREC)	informal information sharing	(3) Training on awareness and education for developed the mechanism for formal sharing of information and reporting training Materials (40 participant, 0 Away, 2 days, 2 times per year)	National, subnational	Number of Staff trained	reporting from farmers (no compensation mechanism) awareness of private veterinarians	N		3,320,000	(9000* (40 - 0) *2 + 0 * 4 * 30000 + 0 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000) True + 10000 (True) + 40 * 2500 (True) * 1 + 0 + 0	2	2	-	6,640,000	6,640,000	6,640,000	6,640,000	26,560,000			

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

	Joint (LBVD- MOALI, MoHS, MoNREC)	informal information sharing	(4) Meeting/ workshop on development of Guideline/manual for Farmer for their reporting in outbreak or emergencies (for example, Using Insurance System for breeding or business) (30 participants, 20 Away, 2 days, 2 times)	National/subnational	Manual for former (Reporting) developed	reporting from farmers (no compensation mechanism) awareness of private veterinarians	N	4,585,000	$(9000 * (30 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 250000) (True) + 30 * 2 * (15000True) + 10000True) + 30 * 2500True) * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 30 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2	9,170,000	-	-	-	9,170,000	-	-	9,170,000
	Joint (LBVD- MOALI, MoHS, MoNREC)	informal information sharing	(5) Hiring of International Consultant for development of Guideline/manual for Farmer for their reporting in outbreak or emergencies (for example, Using Insurance System for breeding or business) (11 International Consultant, 20 days)	National/subnational	Manual for former (Reporting) developed	reporting from farmers (no compensation mechanism) awareness of private veterinarians	N	19,562,400	$1 * 20 * (238920 + 660000) + 1 * 1584000 = 19562400$	Number = 1 ; No of Days : 20 ; Per diem = 238920 ; Daily rate = 660000 ; Travel = 1584000	1	19,562,400	-	-	-	19,562,400	-	-	19,562,400
	Joint (LBVD- MOALI, MoHS, MoNREC)	Animal Health Biosecurity	(3) Dissemination workshop/meeting on Guideline/manual for Farmer for their reporting in outbreak or emergencies (60 participants, 20 Away, 1 days, 1 times)	National/subnational	Manual for former (Reporting) disseminated	New System and Practices will take times	N	6,010,000	$(9000 * (60 - 20) * 1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000) (True) + 60 * 1 * (15000True) + 10000True) + 60 * 2500True) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 60 Days = 1, Participants away = 20 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	6,010,000	-	-	-	6,010,000	-	-	6,010,000
6	Prevention of Rabies among Dog community (Imunization in Dog)	Existing Pilot vaccination of dog in country	(1) Procurement of Rabie Vaccination for Mass Dog Vaccination Campaign at Risk areas (500,000 dogs per years will be vaccinated)	All Level	Number dog vaccinated in one year, Number of vacing procured	Budget approval and HR for vaccination at each risk areas.	N	1,200	500,000*600 per year		5 5 5 0 0 0 0 0 0 0	600,000,000	600,000,000	600,000,000	600,000,000	600,000,000	600,000,000	600,000,000	2,400,000,000
			(2) Rabie Vaccination Practical Training on Rabies vaccine for Field Operation/vaccinators (Total 2500 persons (CAHW/field operation/vaccinator)- 50 participants, 0 Away, 7 days 50 times per year)	All Level	Number of vaccinator training and in fuction for vaccination	Budget approval and finding Vaccinators for vaccination at risk areas	N	13,825,000	$(9000 * (50 - 0) * 7 + 0 * 9 * 30000 + 0 * 95000 + 7 * 250000) (True) + 50 * 7 * (15000True) + 10000True) + 50 * 2500True) * 1 + 0 + 0$	1 Training : Per diem = 9000 Participants = 50 Days = 7, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	50 50 50 50	691,250,000	691,250,000	691,250,000	691,250,000	691,250,000	691,250,000	691,250,000	691,250,000

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

PREVENT

General Objective: To prevent and reduce the likelihood of outbreaks and other public health hazards and events defined by IHR (2005).

GOAL		Surveillance system in place for prioritized zoonotic diseases										Total Estimated cost (USD)					
TECHNICAL AREA		Food Safety										Total Estimated cost (Local currency) (Kyats)					
JEE Indicator		Mechanisms for multisectoral collaboration established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases										Total cost per year of implementation					
JEE Scores												206,090,100	109,775,000	109,775,000	109,775,000		
JEE recommendations		* Establish a multi-sectoral strategy for a national food safety management and surveillance system from farm to fork * Implement food safety control management systems based on multi-sectoral involvement in risk profiling of food safety problems * Activate a transparent communication mechanism between all public and private food safety stakeholders															
Objective		To promote capacities for surveillance and response among State parties for food- and water-borne disease risks; or events To strengthen effective communication and collaboration among the sectors responsible for food safety, and safe water and sanitation										Total Cost Year in Local Currency					
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	2018	2019	2020	2021	2022	TOTAL
1	Guidelines for the National Food Safety Emergency and Outbreak Response of food borne diseases	CEU, FDA, Laboratory- MoHS, LBVD- MoAU	Rapid Response Team (RRT) already established, outbreak management guidelines.	(1) Advocacy meeting to develop guideline, training Modules and to organize or form task force for National Food Safety Emergency and Outbreak Response of food borne diseases (20 participants, Away 6, 1 day, 2 time)	National	Guideline/ manual and task force developed in time	Multisectoral involvement and communication mechanism, human resources and financial support	N		2,136,000	1	-	2,136,000	-	-	-	2,136,000
				(9000*(20-6) *1+6*3*30000 +6*95000+1*250000 (True)+20 *1*(15000True +10000True) + 20*2500True) *1 +0+0													
				(9000*(15-6) *1+6*3*30000 +6*95000+1*250000 (True)+15 *1*(15000True +10000True) + 15*2500True) *1 +0+0						1,903,500	2	-	3,807,000	-	-	-	3,807,000
				(9000*(40-20) *2+20*4*30000 +20*95000+2*250000 (True)+40 *2*(15000True +10000True) + 40*2500True) *1 +0+0						7,360,000	1	-	7,360,000	-	-	-	7,360,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Y/N)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
												2018	2019	2020	2021	2022	TOTAL
3	To establish the effective communication platform	CEU, FDA, Laboratory, MoHS, LBVD, MoALL, YCDC, MCDC, IMDC	departmental own data, own analysis and own management and System.	(1) Coordination meeting to develop national data bank for outbreak of food borne diseases (15 participants, Away 5, 1 day)	National, subnational	Effective communication platform, its usage and data analysis software are established.	technical, financial and software engineering support	N		1,777,500	1	2018	2019	2020	2021	2022	TOTAL
													1,777,500				
				(2) Hiring of IT and Software experts and consultant for database software development and data bank establishment (1 national consultant for 45 days)	National, subnational	Availability of technical experts	N		12,600,000	1		12,600,000				12,600,000	
				(3) Development of database/software, IT equipments, internet facilities for National Data Bank Establishment (estimated lumpsum USD 25,000)	National, subnational		N		33,000,000	1		33,000,000				33,000,000	
				(4) Data training for relevant persons and staff from different departments (total 4 times) (40 participants, Away 25, 2 days, 4 times)	National, subnational		N		8,295,000	2	2		16,590,000			66,360,000	
				(5) Stakeholder Coordination and Review Meeting on effective use of information and dat from communication Platform (15 participants, Away 5, 1 day)	National, subnational	Number of Meeting conducted with all relevant participants	All relevant person participations and commitments	N	1,777,500	2	2	2	3,555,000			14,220,000	
4	To develop multi-sectoral strategy for National Food Safety Management and Surveillance system in line with strengthening of National Codex structure and process	MoHS (CEU, FDA, Lab) & MoALL, YCDC, MCDC, IMDC	departmental own control management	(1) Advocacy meeting to develop Multi-sectoral strategy and to organize or form task force for development (20 participants, Away 6, 1 day, 1 times)	National	Strategy and Guideline manual developed	Multisectoral involvement and communication mechanism, human resources and financial support	N		2,136,000	1		2,136,000				2,136,000

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

PREVENT

General Objective: To prevent and reduce the likelihood of outbreaks and other public health hazards and events defined by IHR (2005).

GOAL		Surveillance system in place for prioritized zoonotic diseases										Total Estimated cost (USD)							
TECHNICAL AREA	Prevention 5	Biosafety and Biosecurity										Total Estimated cost (Local currency) (Kyats)							
		Whole-of-government biosafety and biosecurity system is in place for human, animal, and agriculture facilities																	
JEE Indicator	P.6.1											212,380,000							
JEE Scores	2											466,248,400							
JEE recommendations	* Develop national biosafety and biosecurity legislation, regulations or frameworks * Undertake a comprehensive training needs assessment across human, animal and agricultural sectors * Establishing funding and ensuring sustainability for supporting comprehensive national biosafety and biosecurity system											22,213,614,101							
Objective	No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation					Total Cost Year in Local Currency		
												2018	2019	2020	2021	2022	TOTAL		
1	Develop Comprehensive National Biosafety and Biosecurity Legislation	MoHS	Biosafety Guidelines, Myanmar National Policy on Health Laboratories	(1) Hiring Consultant to develop comprehensive national biosafety and biosecurity law/legislation for both human, veterinary and Agriculture Sectors (1 International consultant for 10 days)	National	Comprehensive national biosafety and biosecurity legislation was done	Weakness in Biosafety & BioRisk management	N		10573200	1	0	10573200	0	0	0	0	0	10573200
				(2) Stakeholders Workshop/meeting on development of national biosafety and biosecurity legislation (50 participants per meeting, 30 away for 2 days)	National	Comprehensive national biosafety and biosecurity legislation was done	Multi sectoral Participations	N		9,935,000	1	-	9,935,000	-	-	-	-	-	9,935,000
		NHL, MoHS, LBVD	Other laws/legislation approval, Myanmar National Policy on Health Laboratories	(3) laws/legislation approval from Union Parliament (Discussion and defense for law in Meetings with responsible persons from Parliament, Union Attorney General Office and other stakeholders (20 participants, 1 day, 5 times) This activity will be incorporated with Legislation area activity P.1.2.2.1	Naypyitaw	Biosafety and biosecurity legislation approved	Duration of Approval	N		1,370,000	1	-	-	-	-	-	-	-	-

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

2	Strengthen infrastructure of biosafety and biosecurity facilities Central and in States/Regional laboratories	MOHS, MOAU, Myanmar National Policy on Health Laboratories	(4) One dissemination and advocacy workshop/meeting for national biosafety and biosecurity legislation (70 participants, 30 away, 1 day)	National	Comprehensive national biosafety and biosecurity legislation was done	Multi sectoral Participations	N	8,085,000	$(9000 * (70 - 30) * 1 + 30 * 3 * 30000 + 30 * 95000 + 1 * 250000) (True) + 70 * 1 * (15000) True + 10000 True + 70 * 2500 True * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 70 Days = 1, Participants away = 30 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	-	-	-	8,085,000	-	-	-	8,085,000																																																																								
																				National	BSL 3 in NHL established	Duration of Construction Time	Y	Government	18,153,725,469	1	-	-	-	18,153,725,469	-	-	-	-	-	-	-																																																						
																																						National	Equipments procured and installed	Duration of procurement Time	Y	Government	2,970,774,044	1	-	-	-	2,970,774,044	-	-	-	-	-	-	-																																				
																																																								National	Expenditure used per year	Duration of waiting for budget	Y	Government	825,242,588	1	-	-	-	825,242,588	-	-	-	-	-	-	-																		
																																																																										National & subnational	Number of HAI cases decreased	Financial support	N	7,400,000	8	8	6	6	6	6	6	6	6	6	6	6	6
National & subnational	Number of HAI cases decreased laboratory at State and Region with Waste Management system	Financial support	N	5,100,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																																																																								
National & subnational	Number of HAI cases decreased laboratory at State and Region with Sample packaging boxes	Procurement and Courier contract system	N	25,500,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000	5,100,000																																																																								

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost budget (Local currency)"	100000*(34+26)	Year of Implementation	Total Cost Year in Local Currency					
													2018	2019	2020	2021	2022	TOTAL
				(7) Transportation costs to states/regions for biosafety & biosecurity equipments (100,000 MMK for each State and Region)		Number of laboratory at State and Region with receipts of equipment	Time will take for transportation	N		1,700,000		1 1 1 1 1	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	8,500,000
				(8) Regular maintenance and calibration of equipment (34+26) 60 cabinets (100,000 MMK per cabinet)	National & subnational	Number of equipments maintenance and calibration done	Regular Follow up	N		100,000		60 60 60 60 60	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	30,000,000
				(9) Provided essential laboratory facilities : PPEs to States/Regional labs for both human & veterinary sector (Need to check annual stockpile to decide whether it needs to buy in next budget year)	National & subnational	Number of laboratory with PPE	Time for distribution	N		80,000,000		1 1 1 1 1	80,000,000	80,000,000	80,000,000	80,000,000	80,000,000	400,000,000
3	Strengthen biosafety & biosecurity system: Operationalise cross-border manual on bio-threat surveillance			(1) Provided essential laboratory facilities : Biosafety cabinets to border area hospitals (12 tsp)		Number of Laboratory at border 12 township with Biosafety Cabinet Number of HCA case prevented and de-creased	Time for distribution	N		7,400,000		12	-	-	-	-	-	88,800,000
				(2) Provided essential laboratory facilities : Waste management including Autoclaves to border area hospitals (12 tsp)		Number of Laboratory at border 12 township with Waste Management Number of HCA case prevented and de-creased	Time for distribution	N		4,600,000		12	-	-	-	-	-	55,200,000
4	Strengthen biosafety & biosecurity system			(1) M & E visits for Biosafety and Biosecurity practices at Laboratories (2 people, 3-day per visit)	National & Subnational	Number of M & E visit done	Tight Schedules for focal persons	N		850,000	2 * 3 * 31000 + 2 * 95000 + 1 * 132000 * 3 + 3 * 1 * 26000 = 850000	10 10 10 10 10	8,500,000	8,500,000	8,500,000	8,500,000	8,500,000	42,500,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

JEE Indicator		Biosafety and biosecurity training and practices														
JEE Scores		1														
JEE recommendations		* Develop national biosecurity and biosafety legislation, regulations or frameworks * Undertake a comprehensive training needs assessment across human, animal and agricultural sectors * Establishing funding and ensuring sustainability for supporting comprehensive national biosafety and biosecurity system														
Objective		To develop and promote the capacities person related to Biosafety and Biosecurity														
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-Evaluated)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation				TOTAL	
											2018	2019	2020	2021		2022
1	Building capacity by provision of Training Program on Biosafety and Biosecurity			(1) Basic training on Biosafety and Biosecurity (TOT) for human and animal sectors (30 participants, Away 25, 2 days, 2 times per year)	National	number of staff trained for biosafety and biosecurity	Budget	N		7,540,000	1 Meeting : Per diem = 9000 Participants = 30 Days = 2, Participants away = 25 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	15,080,000	15,080,000	15,080,000	15,080,000	75,400,000
				(2) Refresher training Biosafety and Biosecurity for human sector and animal sectors (30 participants, Away 25, 2 days, 2 times per year)	National	number of staff trained (refresher) for biosafety and biosecurity	Budget	N		7,540,000	1 Meeting : Per diem = 9000 Participants = 30 Days = 2, Participants away = 25 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	15,080,000	15,080,000	15,080,000	45,240,000	
				(3) Multiplier training on Biosafety and Biosecurity for human sector (30 participants, Away 15, 2 days, 2 times per year) (at 17 hospital for each year)	National	number of staff trained as multiplier for biosafety and biosecurity	Budget	N		4,865,000	1 Training : Per diem = 9000 Participants = 20 Days = 2, Participants away = 15 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	9,730,000	9,730,000	9,730,000	29,190,000	
				(4) International fellowship program on Biosafety and Biosecurity (1 weeks Travel cost @ 1000USD Tuition @ 2,000 Per diem and accommodation @ 2,800 2 people per year	International	number of staff trained on international program for biosafety and biosecurity	Budget	N		7,656,000	10000+2000+2800	15,312,000	15,312,000	15,312,000	61,248,000	

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

PREVENT

General Objective: To prevent and reduce the likelihood of outbreaks and other public health hazards and events defined by IHR (2005).

GOAL		Surveillance system in place for prioritized zoonotic diseases										Total Estimated cost (USD)					
TECHNICAL AREA		Immunization										Total Estimated cost (Local currency) (Kwats)					
JEE Indicator		Vaccine coverage (measles) as part of national program (Score 3)										Total cost per year of implementation					
JEE Scores		3										25,288,423,881	29,651,603,675	17,984,936,365	72,924,963,920		
JEE recommendations		* Conduct an EPI coverage survey * Develop a strategy/plan to cover the low coverage areas * Strengthen HR capacity for supply, operations and mid-level management/ supervision * Develop communication plan for demand generation															
Objective		To strengthen immunization program management, human resources, financing and service delivery to provide equitable service to all target population including special strategy for peri-urban, slum, migratory population, geographically and socially hard to reach and conflict area															
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget-get(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency				TOTAL	
											2018	2019	2020	2021	2022		
1	Strengthen leadership management capacity and coordination	EPI programme Manager, WHO	dMVP (2017-2021), HSS2 proposal	(1) Development and Revision of training package: MLW, IIP, VM, RM, CC, Surveillance and DM (2) Training of master trainers (3) Improvement of EPI office (4) Multi level Management training to Township Medical Officer (5) Develop capacity building of Basic Health Workers through IIP trainings at all level (6) Review meetings and development of operational plan at township levels (7) Review meetings and development of operational plan at SR levels (8) Review meetings and development of operational plan at Central level	National National, Sub-national National National, Sub-national National, Sub-national		Y Y Y Y Y	Gawi HSS 2 Grant Gawi HSS 2 Grant Gawi HSS 2 Grant Gawi HSS 2 Grant Gawi HSS 2 Grant	84,285,093 23,504,880 523,500,720 96,923,573 660,414,640 749,308,773 133,858,000 56,113,147	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	84,285,093	84,285,093	84,285,093	-	252,855,280
												23,504,880	23,504,880	23,504,880			70,514,640
												523,500,720	523,500,720				523,500,720
												96,923,573	96,923,573	96,923,573			290,770,720
												660,414,640	660,414,640	660,414,640			1,981,243,920
												749,308,773	749,308,773	749,308,773			2,247,926,320
												133,858,000	133,858,000	133,858,000			401,574,000
												56,113,147	56,113,147	56,113,147			168,339,440

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget-get(y/n)	Existing source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					Year of implementation	
											2018	2019	2020	2021	2022		TOTAL
				(9) Supervision visit for EPI team leader at township level	Sub-National			Y	Gawi HSS 2 Grant	295,199,787	295,199,787	295,199,787	295,199,787	-	885,599,360	2 2 2 2 2 2 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2	
				(10) Procurement of vehicle	National, Sub-National			Y	Gawi HSS 2 Grant	63,920,000	-	-	-	-	1,278,400,000	2 0 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2	
				(11) Deploy finance assistant for Central, State/Region Public Health Departments	National, Sub-National			Y	Gawi HSS 2 Grant	181,152,000	-	181,152,000	181,152,000	181,152,000	-	543,456,000	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
				(12) Capacity build and orientation training on finance for Department of Public Health	National, Sub-National			Y	Gawi HSS 2 Grant	88,541,440	-	88,541,440	88,541,440	88,541,440	-	265,624,320	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
				(13) Provision of tools and materials for the financial management teams	National, Sub-National			Y	Gawi HSS 2 Grant	108,668,533	-	108,668,533	108,668,533	108,668,533	-	326,005,600	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
				(14) Support to Admin and Finance unit of DDPH for the additional financial unit	National			Y	Gawi HSS 2 Grant	52,084,373	-	52,084,373	52,084,373	52,084,373	-	156,253,120	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
				(15) Capacity development of key EPI staff at all levels through international exchange visit, attending international forums/ workshops / tailored made courses to improve skills on various aspects of immunization programme management	National			Y	Gawi HSS 2 Grant	51,680,000	-	51,680,000	51,680,000	51,680,000	-	155,040,000	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
				(16) Supervision by Central and State/Region Level Supervisors	National, Sub-National	Number of sessions supervised by state/region staff		Y	Gawi HSS 2 Grant	174,420,000	-	174,420,000	174,420,000	174,420,000	-	523,260,000	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
				(17) Support M&E team of DDPH	National			Y	Gawi HSS 2 Grant	42,228,453	-	42,228,453	42,228,453	42,228,453	-	126,685,360	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
2	Improve equitable access to service delivery	EPI programme Manager ,National Strategic plan for Measles, rubella elimination and GIS control	dMYP (2017-2021) HSS2 proposal ,National Strategic plan for Measles, rubella elimination and GIS control	(1) AEFI surveillance,reporting, case investigation and casuality assessment	National, Sub-National			Y	Gawi HSS 2 Grant	228,787,813	-	228,787,813	228,787,813	228,787,813	-	686,363,440	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
				(2) Develop strategy in hard to reach areas	Sub-National	Number of Township having RHGs with Penta 3 80% and above and Number of townships reporting drop out rate between Penta 1 and Penta 3 less than 5%		Y	Gawi HSS 2 Grant	45,263,520	-	45,263,520	45,263,520	45,263,520	-	135,790,560	1 1 1 1 1 1 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

				(3) GIS based microplanning to identify hard to reach townships	National, Sub-National	Proportion of townships using GIS based microplanning map for all immunization microplans	Y	Gavi HSS 2 Grant	760,519,480		760,519,480	760,519,480	-	1	1	-	1,521,038,960
				(4) Operational support for hard to reach townships	Sub-National	Number of Townships having RHCs with Pen-ta3 80% and above and Number of townships reporting drop out rate between Pen-ta 1 and Pen-ta 3 less than 5%	Y	Gavi HSS 2 Grant	1,039,080,347		1,039,080,347	1,039,080,347	-	1	1	-	3,117,241,040
				(5) Integration with private sectors (MMA, MCH)	Sub-National		Y	Gavi HSS 2 Grant	117,402,000		117,402,000	-	-	1	1	-	234,804,000
				(6) Support to hospitals	Sub-National	Number of the hospitals providing immunization services in prioritized townships	Y	Gavi HSS 2 Grant	79,900,000		79,900,000	79,900,000	-	1	1	-	239,700,000
				(7) Procurement of furniture and computers	Sub-National		Y	Gavi HSS 2 Grant	291,649,280		291,649,280	291,649,280	-	1	1	-	874,947,840
				(8) Support Immunization and social mobilization corner at 1000 RHC	Sub-National		Y	Gavi HSS 2 Grant	920,001		920,001	368,000,224	-	2	4	-	920,000,560
3	Programme management	EPI programme Manager, WHO, unicef	dMTP (2017-2021), HSS2 proposal	(1) Financial Management and Assurance Oversight at Central and Sub National level	National, Sub-National		Y	Gavi HSS 2 Grant	219,299,093		219,299,093	219,299,093	-	1	1	-	657,897,280
4	Strengthen EPI data management, Monitoring and Evaluation System	EPI programme Manager, WHO, unicef	dMTP, HSS2 proposal	(1) Conduct headcount with support of BHS, volunteers	Sub-National		Y	Gavi HSS 2 Grant	339,766,987		339,766,987	339,766,987	-	1	1	-	1,019,300,960
				(2) Print and supply MLM, IIP, immunization registers, charts reports, etc	National, Sub-National		Y	Gavi HSS 2 Grant	360,360,107		360,360,107	360,360,107	-	1	1	-	1,081,080,320
				(3) VPD outbreak and response	National, Sub-National		Y	Gavi HSS 2 Grant	135,399,787		135,399,787	135,399,787	-	1	1	-	406,199,360
				(4) Support VPD Surveillance	National, Sub-National	Percentage of townships reporting discarded non-measles non-rubella rate / 100,000 population and Proportion of township achieved targeted indicators for VPD surveillance	Y	Gavi HSS 2 Grant	378,148,000		378,148,000	378,148,000	-	1	1	-	1,134,444,000
				(5) EPI coverage survey/National EPI programme review	National, Sub-National		Y	Gavi HSS 2 Grant	693,147,120		693,147,120	-	-	1		-	693,147,120

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed description for costing"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Y/n)	Existing budget source (government, donor)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					Year of implementation
											2018	2019	2020	2021	2022	
				(6) Operational research	Sub-national			Y	Gawi HSS 2 Grant	107,893,333	107,893,333	107,893,333	107,893,333	-	-	323,680,000
				(7) End of grant evaluation	National, Sub-national			Y	Gawi HSS 2 Grant	98,212,400	-	-	98,212,400	-	-	98,212,400
				(8) Management information system development and expansion especially at Central and sub-depots as well as township cold stores (eLMS)	National, Sub-national	Proportion of townships that introduced eLMS		Y	Gawi HSS 2 Grant	682,634,773	682,634,773	682,634,773	682,634,773	-	-	2,047,904,320
				(9) Technical support for Health Information System	National			Y	Gawi HSS 2 Grant	108,800,000	108,800,000	108,800,000	108,800,000	-	-	326,400,000
				(10) Support Midwives to improve immunization supply chain and coverage data management by providing Android tablet to access DHIS2, eLMS, other key health messages	Sub-national			Y	Gawi HSS 2 Grant	2,040,873,120	2,040,873,120	2,040,873,120	-	-	-	4,081,746,240
				(11) Data quality self-assessment	National, Sub-national			Y	Gawi HSS 2 Grant	144,706,720	144,706,720	-	144,706,720	-	-	289,413,440
				(12) Support implementation of data quality improvement plan	National, Sub-national			Y	Gawi HSS 2 Grant	278,348,027	278,348,027	278,348,027	278,348,027	-	-	835,044,080
5	Strengthen demand for immunization services	EPI programme, UNICEF, WHO	dMYP (2017-2021) HSS2 proposal	(1) Advocacy meeting with State and Region administration and stakeholders (including EMOs, ELCA, religious leaders, etc) to increase support for immunization service delivery. (2) Support advocacy meeting at Township level with administrators, NGOs and other stakeholders to increase support for immunization service delivery. (3) Organize meetings and workshops for review and updating communication plan of action for strengthening routine immunization. (4) Support MoHS in the development and implementation of new innovations for generating demands on immunization services	Sub-national			Y	Gawi HSS 2 Grant	74,325,813	74,325,813	74,325,813	74,325,813	-	-	222,977,440
					National			Y	Gawi HSS 2 Grant	7,954,640	7,954,640	7,954,640	7,954,640	-	-	23,863,920
					National			Y	Gawi HSS 2 Grant	219,640,000	219,640,000	219,640,000	219,640,000	-	-	439,280,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible entity(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Y/n)	Existing budget source (government, donor)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL
											2018	2019	2020	2021	2022	TOTAL
				(18) Assessment on knowledge, attitude and practice (KAP) for different geographic areas and different ethnic groups.	Sub-national	Percentage of caregivers knowing about benefit of immunization through KAP study		Y	Gavi HSS 2 Grant	204,000,000	-	204,000,000	-	-	-	408,000,000
				(19) Monitoring and evaluation of multi-channel communication interventions	National			Y	Gavi HSS 2 Grant	25,785,600	-	25,785,600	25,785,600	25,785,600	-	77,356,800
				(20) IPC training on MMCVA volunteers	Sub-national			Y	Gavi HSS 2 Grant	110,599,960	-	110,599,960	-	-	-	221,199,920
				(20) Increase awareness on immunization through commemoration of international immunization days event (including global immunization week).	National, Sub-national			Y	Gavi HSS 2 Grant	27,034,080	-	27,034,080	27,034,080	27,034,080	-	81,102,240
				(21) Increase support to immunization service delivery through Advocacy Meetings facilitated by cEPI to Government, INGOs /NGOs, professional bodies and special administrative regions and other relevant stakeholders	National			Y	Gavi HSS 2 Grant	50,704,880	-	50,704,880	50,704,880	50,704,880	-	152,114,640
				(22) Facilitation Meeting of school teachers in identification of under vaccinated children at school entry	Sub-national			Y	Gavi HSS 2 Grant	533,045,200	-	533,045,200	-	-	-	533,045,200
National vaccine access and delivery (score 4)																
JEE Indicator 1.7.2																
JEE Scores 4																
JEE recommendations																
* Conduct an EPI coverage survey * Develop a strategy/plan to cover the low coverage areas * Strengthen HR capacity for supply, operations and mid-level management/ supervision * Develop communication plan for demand generation																
Objective																
1	Implement Cold Chain Expansion and Improvement Plan	EPI programme, UNICEF, WHO	EVA improvement plan, CCEOP, HSS2, cMPP	(1) Procurement of Container/Box trucks for CCR and 23 Sub-depts (2) Support procurement and installation of cold rooms (40m ³ for central cold room and 10/20 m ³ for sub-depot (3) Phase Servo Stabilizers (15 KVA) shipped and installed	Sub-national National, Sub-national Sub-national			Y	Gavi HSS 2 Grant	40,800,000	-	-	1,020,000,000	-	-	1,020,000,000
								Y	Gavi HSS 2 Grant	69,854,545	-	-	419,127,273	349,272,727	-	768,400,000
								Y	Gavi HSS 2 Grant	2,720,000	-	-	16,320,000	13,600,000	-	29,920,000

(4) Purchase 150 KVA generating set with auto start to provide back up power to 8 cold rooms	Sub-national					Y	Gawi HSS 2 Grant	95,200,000										1			95,200,000			-	-	95,200,000	
(5) Support in preventing fire in cold chain store through provision of fire extinguisher.	Sub-national					Y	Gawi HSS 2 Grant	272,000										3 5 3			96,016,000			-	-	96,016,000	
(6) Ensure cold chain are protected through procurement and installation of voltage stabilizer.	Sub-national					Y	Gawi HSS 2 Grant	136,000										8 1 9 9			11,016,000	95,064,000		-	-	106,080,000	
(7) Procure and install vaccine refrigerators (VLS 200A)	Sub-national	Proportion of RHCs in hard to reach areas (in prioritized townships) equipped with at least one refrigerator for vaccine storage				Y	Gawi HSS 2 Grant	2,472,480										1 5 1			37,087,200	51,922,080		-	-	89,009,280	
(8) Purchase long term passive storage devices (35 days)	Sub-national					Y	Gawi HSS 2 Grant	4,138,480										5 0				206,934,000		-	-	206,934,000	
(9) Support electrification of health facilities in remote hard to reach areas (including provision of solar power systems/minigrid) to increase access to vaccines throughout the month	Sub-national					Y	Gawi HSS 2 Grant	2,720,000										4 4 0 0 0			108,800,000	108,800,000			-	326,400,000	
(10) Technical support and facilitation of operations for management of cold chain installation, repair and maintenance, inventory management	National					Y	Gawi HSS 2 Grant	850,000,000										1 1 1				850,000,000	850,000,000		-	-	2,550,000,000
(11) Additional 7% freight charges	National					Y	Gawi HSS 2 Grant	144,731,200										1 1				144,731,200	144,731,200		-	-	289,462,400
(12) Spareparts for the new and replaced refrigerators (15% of all equipments)	Sub-national					Y	Gawi HSS 2 Grant	337,552,000										1				337,552,000			-	-	337,552,000
(13) Modernize and expand central vaccine store (CCR) through construction 840m2, new cold rooms.	National, Sub-national					Y	Gawi HSS 2 Grant	322,917										8 4 0				271,250,640			-	-	271,250,640
(14) Create storage space of 1800 m2 building for dry goods (expansion of central vaccine store) and (1040 m2 building for dry goods for sub-depots).	National, Sub-national					Y	Gawi HSS 2 Grant	322,917										1 0 8 4 0 0				581,250,879			-	-	917,084,720
(15) Construction of Structure to house 7 additional cold room in selected sub-depots.	Sub-national					Y	Gawi HSS 2 Grant	484,376,046										2 3 2				1,453,128,137	968,752,091		-	-	3,390,632,220
(16) Utility and equipment lease services: power management, distribution, etc and fixtures and fitting (30%)	National, Sub-national					Y	Gawi HSS 2 Grant	356,159,973										1 1 1				356,159,973	356,159,973		-	-	1,068,479,920

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency				
											Year of implementation				
											2018	2019	2020	2021	2022
				(17) Central store continuous temperature monitoring and alarm system with remote data communication and 3 years licence (1700 USD/WIC)/Smart view cold room temperature monitoring	Sub-national			Gavi HSS 2 Grant	6,936,000	-	69,360,000	-	-	-	180,336,000
				(18) Temperature mapping kit to calibrate new and existing cold rooms (27 sensors per kit, micro router and connect gate)	Sub-national			Gavi HSS 2 Grant	4,760,000	-	19,040,000	-	-	-	19,040,000
				(19) GoldTrace 5 (CT5) (Nexleaf)	Sub-national			Gavi HSS 2 Grant	314,160	-	188,496,000	-	-	-	188,496,000
				(20) Freeze indicators	Sub-national	Proportion of RHCs in prioritised townships equipped with temperature monitoring devices in all vaccine refrigerators		Gavi HSS 2 Grant	6,800	-	34,000,000	-	-	-	68,000,000
				(21) Computers, UPS, software updates and IT services	Sub-national			Gavi HSS 2 Grant	2,222,740	-	51,111,520	-	-	-	51,111,520
				(22) Purchase of solar direct drive vaccine refrigerators (TCW 40 SDD)	Sub-national			Gavi HSS 2 Grant	9,462,880	-	1,419,432,000	-	-	-	1,419,432,000
				(23) Data communication fees, DTRs with Simm) 3 USD/month and cold rooms	Sub-national			Gavi HSS 2 Grant	46,169,733	-	46,169,733	46,169,733	-	-	138,509,200
				(24) Develop SOP for the management of shipment follow up and clearance procedures.	National			Gavi HSS 2 Grant	86,516,400	-	-	-	-	-	86,516,400
				(25) Technical support and oversight in contract and procurement management by CEPI and Procurement/supply unit in DoPH.	National			Gavi HSS 2 Grant	92,285,714	-	184,571,429	184,571,429	-	-	646,000,000
				(26) Support distribution of EPI supplies from Sub-depts to townships	Sub-national			Gavi HSS 2 Grant	359,040,000	-	359,040,000	359,040,000	-	-	1,077,120,000
				(27) Procurement of cold van	Sub-national			Gavi HSS 2 Grant	81,600,000	-	163,200,000	163,200,000	-	-	652,800,000
				(28) Operation and maintenance for transport operation (7%) and spares for transport equipment (15%)	National			Gavi HSS 2 Grant	26,928,000	-	26,928,000	26,928,000	-	-	80,784,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					Year of implementation	
											2018	2019	2020	2021	2022		TOTAL
				(42) Support vaccine transport from townships to RHCs, Sub Centers through third party logistics provider in pilot townships	Sub-national			Y	Gawi HSS 2 Grant	97,920,000	-	97,920,000	97,920,000	97,920,000	-	293,760,000	2 2 2 2 2 2 0 0 0 0 1 1 2 2 2 2 8 9 0 1 2
				(43) Purchase 50-100 KVA generating set with auto start to provide back up power to 6 Sub-depots	Sub-national			Y	Gawi HSS 2 Grant	29,920,000	-	149,600,000	29,920,000	-	-	179,520,000	5 1
				(44) Ensure cold chain are protected through procurement and installation of voltage stabilizer.	Sub-national			Y	Gawi HSS 2 Grant	136,000	-	13,192,000	-	-	-	13,192,000	9 7
				(45) Procure and install vaccine refrigerators (VLS 200A)	Sub-national			Y	Gawi HSS 2 Grant	1,632,000	-	-	81,600,000	408,000,000	-	489,600,000	5 2 0 5 0
				(46) Procure and install vaccine refrigerators (VLS 400A)	Sub-national			Y	Gawi HSS 2 Grant	2,040,000	-	-	102,000,000	85,680,000	-	187,680,000	5 4 0 2
				(47) Procure and install vaccine refrigerators (VLS 400A)	Sub-national			Y	Gawi HSS 2 Grant	2,964,800	-	-	154,169,600	-	-	154,169,600	5 2
				(50) Freeze protected vaccine carriers	Sub-national			Y	Gawi HSS 2 Grant	81,600	-	-	122,400,000	163,200,000	-	285,600,000	1 2 5 0 0 0 0 0
				(51) Purchase solar direct drive vaccine refrigerators (TCW 2043 SDD)	Sub-national			Y	Gawi HSS 2 Grant	14,022,960	-	14,022,960	98,160,720	-	-	112,183,680	1 7
				(52) Purchase solar direct drive vaccine refrigerators (TCW 2043 SDD)	Sub-national			Y	Gawi HSS 2 Grant	12,240,000	-	-	244,800,000	-	-	244,800,000	2 0
				(53) Purchase solar direct drive vaccine refrigerators (TCW 40 SDD)	Sub-national			Y	Gawi HSS 2 Grant	9,793,360	-	1,566,937,600	372,147,680	-	-	1,939,085,280	1 3 6 8 0
				(54) Spareparts for the new and replaced refrigerators	Sub-national			Y	Gawi HSS 2 Grant	279,412,000	-	-	279,412,000	-	-	279,412,000	1
				(55) Freeze protected vaccine carriers	Sub-national			Y	Gawi HSS 2 Grant	81,600	-	-	469,200,000	-	-	469,200,000	5 7 5 0
				(56) Freeze protected Cold Box	Sub-national			Y	Gawi HSS 2 Grant	544,000	-	-	733,312,000	-	-	733,312,000	1 3 4 8

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

DETECT

General Objective: To do promptly detect threats (due to all hazards) to save lives and ensure proper control measures.

GOAL	National Laboratory System										Total Estimated cost (USD)						
TECHNICAL AREA	Detect 1	Vaccine coverage (measles) as part of national program (Score 3)															
JEE Indicator	D 1.1																
JEE Scores	3										32,333,141.93						
JEE recommendations	<ul style="list-style-type: none"> * Establish and maintain systematic collaboration between human and animal health laboratories, the national laboratory system should be considered one entity * Endorse and implement the National Strategic Plan for Health Laboratories (currently drafted) * Developing national testing guidelines for clinicians and veterinarians based on financial and practical/factual constraints to maximize the capacity for case diagnosis, indicative surveillance and outbreak contexts * Improve simple testing capability in remote areas, including point of care diagnostics and harvesting the flora of new combined lateral flow tests on the market, but under tight quality control by the central laboratory. 										Total Estimated cost (Local currency) (Kyats)						
Objective	To strengthen the organizational & management structures for coordination & integration of laboratory services to support clinical & public health objectives										Total cost per year of implementation						
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL	
1	Formation of National Laboratory Coordination Committee (NLCC) according to Myanmar National Policy on Health Laboratories (MNPHL) which has been already endorsed in September 2016	NHL, MOHS	Myanmar National Policy on Health Laboratories	(1) First Stakeholders meeting on advocacy/awareness to focal person at central level for processing the establishment of NLCC according to MNPHL (20 participants, 15 Away, 1 days, 1 times)	National	NLCC was established Number of stakeholder Meetings done	Advocacy for stakeholder to Understand importance of formation of NLCC	Y	Development partners	3,620,000	1	3,620,000	-	-	-	-	3,620,000
		NHL, MOHS	Myanmar National Policy on Health Laboratories	(2) 2nd Stakeholders meeting at central level for processing the finalization of establishment of NLCC according to MNPHL (20 participants, 15 Away, 1 days, 1 times)	National	NLCC committee was finalized and established Number of stakeholder Meeting done	Advocacy for stakeholder to Understand importance of formation of NLCC	Y	Development partners	3,620,000	1	3,620,000	-	-	-	-	3,620,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL
			Myanmar National Policy on Health Laboratories	(3) Quarterly Coordination meeting of NLCC (20 participants, 15 Away, 1 days, 4 times/year)	National	Number of stakeholder Quarterly Meetings	Multi task and duties of Members	Y	Government	3,620,000 $(9000 * 20 - 15) * 1 + 15 * 3 * 30000 + 15 * 95000 + 1 * 250000 (True) + 20 * 1 * (15000) True + 10000 True + 20 * 25000 True * 1 + 0 + 0$		7,240,000	14,480,000	14,480,000	14,480,000	50,680,000
2	Finalization on development of the Drafted National Strategic Plan for Health Laboratories (NSPHL) (currently drafted)	NHL, MOHS/ MOALU/ MODefence	Drafting of Myanmar National Policy on Health Laboratories	(1) Stakeholder meeting to finalize the National Strategic Plan for Health Laboratories (currently drafted) (50 participants, 40 Away, 1 days, 1 times)	National	NSP for health laboratories finalized	Timely Endorsement	Y	Development partners	9,115,000 $(9000 * 50 - 40) * 1 + 40 * 3 * 30000 + 40 * 95000 + 1 * 250000 (True) + 50 * 1 * (15000) True + 10000 True + 50 * 25000 True * 1 + 0 + 0$	9,115,000	-	-	-	9,115,000	
			MOHS	(2) Launching and dissemination workshop/Meetings for NSPHL (60 participants, 50 Away, 1 days, 1 times)	National & sub-national	Awareness and dissemination of NSP for health laboratories was done		Y	Development partners	11,240,000 $(9000 * 60 - 50) * 1 + 50 * 3 * 30000 + 50 * 95000 + 1 * 250000 (True) + 60 * 1 * (15000) True + 10000 True + 60 * 25000 True * 1 + 0 + 0$	11,240,000	-	-	-	11,240,000	
3	Develop, Review and revise of laboratory related guidelines and instructions.	NHL, MOHS	Existing laboratory guidelines and instructions (infection control guideline, waste management instruction, bio-safety guideline, etc.)	(1) Meetings/Workshops for review and revise of existing guidelines on each areas (40 participants- away 34, 2 days at langon, 1 times per year for every year)	National	Number of laboratory related guidelines and instructions reviewed, revised and developed	Multisectorial Participation	N		10,018,000 $(9000 * 40 - 34) * 2 + 34 * 4 * 30000 + 34 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000) True + 10000 True + 40 * 25000 True * 1 + 0 + 0$	-	10,018,000	10,018,000	10,018,000	40,072,000	
4	Strengthening of EQAS for medical laboratories at all levels	NHL, MOHS	Myanmar National Policy on Health Laboratories	(1) Training of participants for EQAS (30 participants, Away 30, 2 days, 6 times/year) (2) times each for HIV, Syphilis, CD4 by different trainers)	National & sub-national	Number of Trainings conducted, Number of participating laboratories for EQAS	Infrastructure, Human Resource	Y	Multiple development Partner (E.g UNOPS, JICA, WHO)	6,410,000 $(9000 * 0 - 30) * 2 + 30 * 30 * 4 * 30000 + 30 * 95000 + 2 * 250000 (True) + 0 * 2 * (15000) True + 10000 True + 0 * 25000 True * 1 + 0 + 0$	38,460,000	38,460,000	38,460,000	38,460,000	192,300,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

				(2) Transportation, costs of specimen collection packages, supplies and participation fees related to EQAS (Virology, Bacteriology, Fungal, Parasitology, Immunology and Clinical Pathology departments at NHL)	International, National & sub-national	Number of participating laboratories for EQAS Number of sample sent for EQAS	Human Resource, Lab facilities, Coordination	N	81,450,000										81,450,000	81,450,000	81,450,000	81,450,000	81,450,000	81,450,000	407,250,000
			(3) Monitoring & Evaluation visits to follow up hospitals and laboratories under EQAS (2 persons for 3 days, 3 State/Region per year)	Sub-national	Number of participating laboratories with good scores in EQAS Number of M&E and Supervision visit done	Budget	N	$2 * 3 * 31000 + 2 * 850,000 + 95000 + 1 * 132000 + 3 * 3 * 1 * 26000 = 850000$											2,550,000	2,550,000	2,550,000	2,550,000	2,550,000	2,550,000	12,790,000
		MOHS	(1) International training on updated technology upon diagnosis of emerging and re-emerging diseases for laboratory staffs (Total 5200 USD x 2 persons x every years)	National & sub-national	Numer of staff trained	Budget	N	6,864,000											13,728,000	13,728,000	13,728,000	13,728,000	13,728,000	13,728,000	68,640,000
		MOHS	(2) Trainings and refresher trainings for diagnosis of EIDs at national level (20 participants, Away 15, 2 days, 2 times/year)	National & sub-national	Number of training conducted and Number of staff trained	Budget	N	$(9000 * (20 - 15) + 15 * 95000 + 2 * 250000) / (\text{True}) + 20 * 2 * (15000) / (\text{True}) + 10000 / (\text{True}) + 20 * 25000 / (\text{True}) * 1 + 0 + 0$	4,865,000										9,730,000	9,730,000	9,730,000	9,730,000	9,730,000	9,730,000	48,650,000
		MOHS	(3) Training and refresher training of laboratory technician for sample collection and transportation according to international Air Transport Association (IATA) guidelines (20 participants, Away 15, 2 days, 2 times/year)	National & sub-national	Number of training conducted and Number of staff trained	Budget	N	$(9000 * (20 - 15) + 15 * 95000 + 2 * 250000) / (\text{True}) + 20 * 2 * (15000) / (\text{True}) + 10000 / (\text{True}) + 20 * 25000 / (\text{True}) * 1 + 0 + 0$	4,865,000										9,730,000	9,730,000	9,730,000	9,730,000	9,730,000	9,730,000	48,650,000
	MOHS	MOHS	(1) procurement of equipment, supplies and test kits related to diagnosis of emerging and reemerging diseases	National & sub-national	Number and type of equipment, supplies and test kits and test kits procured	Budget	Y	9,401,553,183											9,401,553,183	9,401,553,183	9,401,553,183	9,401,553,183	9,401,553,183	9,401,553,183	47,007,765,915
	MOHS	MOHS	(2) Maintenance & calibration of equipment (70 equipments/year, 1000 USD/ equipment	National & sub-national	number of Maintenance and calibration of equipment done	Budget	N	1,320,000											92,400,000	92,400,000	92,400,000	92,400,000	92,400,000	92,400,000	462,000,000

JEE Indicator		Specimen referral and transport system															
JEE Scores		3															
JEE recommendations		<ul style="list-style-type: none"> * Establish and maintain systematic collaboration between human and animal health laboratories, the national laboratory system should be considered one entity * Endorse and implement the National Strategic Plan for Health Laboratories (currently drafted) * Developing national testing guidelines for clinicians and veterinarians based on financial and practical factual constraints to maximize the capacity for case diagnosis, indicative surveillance and outbreak contexts * Improve simple testing capability in remote areas, including point of care diagnostics and harvesting the flora of new combined lateral flow tests on the market, but under tight quality control by the central laboratory. 															
Objective		To establish & manage quality management system in all laboratories															
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority (s) for Implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where action to be implemented (National or sub-national)	"Output indicators (Monitor- ing and Evaluation)"	Comments or Potential challenges	Existing budget(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL	
1	Development of guidelines for specimen collection, packaging and transport system	MoHS, MoALI	Biosafety Guidelines	(1) Hiring international consultant for the development of Guidelines (1 person, 5 days) (2) Consensus meeting/workshop to develop comprehensive guidelines for specimen collection, packaging and transport system (50 participants, Away 40, 1 day)	National	Consultant Hired for Developed of guidelines for specimen referral and transport system	Budget	N		1*5*(238920 + 6078600) + 1*1584000 = 6078600	1	6,078,600	-	-	-	6,078,600	
		MoHS, MoALI	Biosafety Guidelines	(2) Consensus meeting/workshop to develop comprehensive guidelines for specimen collection, packaging and transport system (50 participants, Away 40, 1 day)	National	Comprehensive guidelines for specimen referral and transport system developed	Budget	N		$(9000 * (50 - 40) + 40 * 95000 + 1 * 250000) (True) + 50 * 1 * (15000 True + 10000 True) + 50 * 25000 True * 1 + 0 + 0$	1	9,115,000	-	-	-	9,115,000	
JEE Indicator		Effective modern point of care and laboratory based diagnostics															
JEE Scores		2															
JEE recommendations		<ul style="list-style-type: none"> * Establish and maintain systematic collaboration between human and animal health laboratories, the national laboratory system should be considered one entity * Endorse and implement the National Strategic Plan for Health Laboratories (currently drafted) * Developing national testing guidelines for clinicians and veterinarians based on financial and practical factual constraints to maximize the capacity for case diagnosis, indicative surveillance and outbreak contexts * Improve simple testing capability in remote areas, including point of care diagnostics and harvesting the flora of new combined lateral flow tests on the market, but under tight quality control by the central laboratory. 															
Objective		To establish & manage quality management system in all laboratories															
1	Expanding Point of Care (POC) testing sites at decentralized sites	MoHS	Myanmar National Policy on Health Laboratories	(1) Training of POC testing on HIV, TB and Malaria (30 participants, Away 30, 2 days, 2 times/year) (2) Times each for HIV, Syphilis, CD4 by different trainers	National and sub-national	Number of POC sites expansion with POC testing and staff trained	Assess and monitor the quality of point of care laboratory test results Systematic test kit evaluation and validation	N		$(9000 * (0 - 30) * 2 + 30 * 4 * 30000 + 30 * 95000 + 2 * 250000 (True) + 0 * 2 * (15000 True + 10000 True) + 0 * 2500 True * 1 + 0 + 0$	6	38,460,000	38,460,000	38,460,000	38,460,000	38,460,000	192,300,000

JEE Indicator	D.1.4	Laboratory Quality System															
JEE Scores	3																
<p>JEE recommendations</p> <ul style="list-style-type: none"> * Establish and maintain systematic collaboration between human and animal health laboratories, the national laboratory system should be considered one entity * Endorse and implement the National Strategic Plan for Health Laboratories (currently drafted) * Developing national testing guidelines for clinicians and veterinarians based on financial and practical/factual constraints to maximize the capacity for case diagnosis, indicative surveillance and outbreak contexts * Improve simple testing capability in remote areas, including point of care diagnostics and harvesting the flora of new combined lateral flow tests on the market, but under tight quality control by the central laboratory. 																	
<p>Objective</p> <p>To establish & manage quality management system in all laboratories</p> <p>To strengthen biosafety/biosecurity in laboratory and health system</p>																	
1	Develop (Improvement of) National Quality Standard for Laboratories	NHL- MOHS; LBVD- MOALI Policy on Health Laboratories	(2) Supervisory visits to oversee the point of care testing sites (3 persons for 3 days; 3 times per year)	subnational	Number of POC sites under M & E visit E visit Number of supervision visit done	Tight schedules for M & E visit	N	1,038,000 $3 * 3 * 31000 + 3 * 1038000$ $95000 + 1 * 132000$ $* 3 + 3 * 1 * 26000$ $= 1038000$	3 3 3 3 3	3,114,000	3,114,000	3,114,000	3,114,000	3,114,000	3,114,000	3,114,000	15,570,000
			(1) Hiring International Consultant for Training on Development of Quality Manual for laboratories that do not have manual Accreditation. (1 International Consultant, 5 days)	National	Number of Lab trained with development of own Quality manual for Laboratory Accreditation	International Consultant	N	6,078,600 $1 * 5 * (238920 + 660000) + 1 * 1584000 = 6078600$	2 2 2 2 2	12,157,200	12,157,200	12,157,200	12,157,200	12,157,200	12,157,200	48,628,800	
			(2) Training on Development of Quality Manual for laboratories that do not have manual Accreditation (20 participants from 20 laboratories, Away 20, 3 days trainings, 2 times per year)	National	Number of Lab trained with development of own Quality manual for Laboratory Accreditation	International Consultant	N	7,200,000 $(9000 * (20 - 20) + 20 * 95000 + 3 * 250000 (True) + 20 * 3 * (15000True) + 10000True) + 20 * 25000True * 1 + 0 + 0$	2 2 2 2 2	14,400,000	14,400,000	14,400,000	14,400,000	14,400,000	14,400,000	57,600,000	
			(3) Hiring of International Consultant for Review and Revise on Quality Manual for NHL (1 International Consultant, 5 days)	National	NHL Quality Manual reviewed and revised for Laboratory Accreditation	International Consultant	Y	6,078,600 $1 * 5 * (238920 + 660000) + 1 * 1584000 = 6078600$	1	6,078,600	-	-	-	-	-	6,078,600	
			(4) Workshop/Meeting on Review and Revise on Quality Manual for NHL (15 participant, Away 10, 2 days, 1 times)	National	NHL Quality Manual reviewed and revised for Laboratory Accreditation	International Consultant	Y	3,527,500 $(9000 * (15 - 10) + 10 * 95000 + 2 * 250000 (True) + 15 * 2 * (15000True) + 10000True) + 15 * 25000True * 1 + 0 + 0$	1	3,527,500	-	-	-	-	-	3,527,500	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (get(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					TOTAL
											Year of Implementation					
											2018	2019	2020	2021	2022	
				(5) Training for Quality Management System (QMS) (20 participants, 10 days, 2 times/year)	National & Sub-national	Number of Laboratory staff trained on QMS for Laboratory Accreditation		N		4,865,000	9,730,000	9,730,000	9,730,000	9,730,000	43,785,000	
				(6) Laboratory accreditation for NHL (USD 400,000 for 3 labs)	National	Number of Laboratory Accredited		N		528,000,000	-	-	-	-	1,584,000,000	
2	Develop National Comprehensive Electronic Health Laboratory Information System through Upgrading Laboratory Information Management System for NHL and development of LIMS for other laboratories in country	NHL- MOHS; LBVD- MOALI	National Health Laboratory LIMS	(1) Hiring local experts (software/database) for development of National Comprehensive Electronic Health Laboratory Information System - Upgrading Laboratory Information Management System for NHL and development of LIMS for other laboratories in country - Developing Laboratory Information Management System	NHL	Expert hired for development	findings of technical experts for software development	N		1 * 45 * (80000 + 200000) + 1 * 0 = 12600000	12,600,000	12,600,000	-	-	12,600,000	
				(2) Workshop on development of National Comprehensive Laboratory Information System with local (software/database) experts (40 participants, 20 days, 2 times)	NHL	Database established Number of workshop conducted	findings of technical experts for software development	N		(9000 * (40 - 20) + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000True) + 10000True) + 40 * 25000True) * 1 + 0 + 0	7,260,000	14,520,000	-	-	14,520,000	
				(3) Development of database/software, IT equipments, internet facilities for Laboratory Information System at NHL (USD 25,000)	NHL	A Laboratory Information System developed and functioning	Procurement of IT equipments which are really needed	N		33,000,000	33,000,000	-	-	-	33,000,000	
				(4) Training of NHL Staff on Laboratory Information System (30 participants, 10 days, 2 times)	NHL	Number of staff trained	retaining of trained staff	N		(9000 * (30 - 10) + 10 * 4 * 30000 + 10 * 95000 + 2 * 250000 (True) + 30 * 2 * (15000True) + 10000True) + 30 * 25000True) * 1 + 0 + 0	4,585,000	9,170,000	9,170,000	9,170,000	41,265,000	
				(5) Annual Maintenance and operation cost of Laboratory Information System (USD 1000)	CEU, SCU, LBVD, NHL, Animal Lab	Function data base	Inclusion of maintenance cost to MOHS budget	N		1,320,000	1,320,000	1,320,000	1,320,000	1,320,000	5,280,000	

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

DETECT

General Objective: To do promptly detect threats (due to all hazards) to save lives and ensure proper control measures.

GOAL		Total Estimated cost (USD)											
TECHNICAL AREA		Total Estimated cost (Local currency) (Kyats)											
JEE Indicator		Total cost per year of implementation											
JEE Scores		Total Cost Year in Local Currency											
JEE recommendations		Total Estimated cost (USD)											
4		759,307,900	1,033,264,100	877,630,500	726,903,500	620,383,500	2,575,316,600						
* Indicator based surveillance needs to include capacity building among primary responders and provide education and follow-up of adherence.													
Objective													
To strengthen Indicator- and event based surveillance System													
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for Implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	TOTAL	
1	Capacity building on surveillance activities under one health strategic plan including Rapid Response Team (RRT) Training	CEU, LVRD	FETP training and courses	(1) Secretariat Meeting to support One Health Committee every 3 months for overseeing the activities (20 participants, 15 Away, 1 day, 4 times per year)	Naypitaw or yangon	Number of Meetings done Meeting minutes and recommendations	Availability of committee member for meetings	Y		3,620,000	2018 2019 2020 2021 2022	14,480,000 14,480,000 14,480,000 14,480,000 14,480,000	72,400,000
		CEU		(2) Bi-Monthly Meeting on Surveillance review by one health team (5 participants, 3 days, 1 day, 1 times per month)	Naypitaw or yangon	Number of Monthly Meeting conducted and Surveillance review reports developed	Establishment of one health secretariat team	Y		710,500	2018 2019 2020 2021 2022	4,263,000 4,263,000 4,263,000 4,263,000 4,263,000	21,315,000
				(3) Conduct joint surveillance and outbreak activities with LVRD and wildlife (10 members, 7 day visit, for estimated of 10-15 outbreaks) 2 times of this activity are included in activity Pa-2.1.5 under Zoonotic Disease area	States and Regions	Outbreak investigations and control reports	Well trained staff for joint outbreak investigation	N		4,226,000	2018 2019 2020 2021 2022	63,390,000 63,390,000 63,390,000 63,390,000 63,390,000	316,950,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency									
												2018	2019	2020	2021	2022	TOTAL				
2	Strengthening of Information sharing mechanism on one health including cross border information sharing	CEU, LVBD	Daily Event, weekly Reports among State, Regional and Central,	(1) Workshop/Meeting to develop SOPs/mechanism for data sharing and disseminate to stakeholders - Review and Revise SOPs will be included in consecutive meetings (100 participants, 80 Away, 1 day, printing of SOPs about 5,000 copies) (2) Annual evaluation Meetings for surveillance capacity (60 participants, 40 Away, 2 days)	Naypyitaw	Number of Meeting conducted for SOP development and revision SOPs developed	Cooperation among stakeholders	N		(9000* (100 - 80) + 80 * 95000 + 1 * 250000 (True) + 100 * 1 * (15000)True + 100000True) * 1 + 0 + 0	1	1	1	1	1	25,480,000	-	25,480,000	-	25,480,000	76,440,000
3	Revise and update communicable diseases, zoonoses guidelines, and training to Special Disease Control Unit (SDCU) teams, clinicians and BHS	CEU	FETP Modules/training courses	(3) Cross border coordination meeting to support surveillance at border areas (30 participants, 20 Away, 2 days, 2 times per year) (1) Hiring of National Consultant to revise and update guidelines and SOPs - food poisoning, disease surveillance and outbreak control guidelines by CEU by technical assistance from experts (1 national consultant, 80 days)	Cross border province	No of meetings concluded Mechanism Functioned	Commitment from cross border health authorities and health staff	Y	WHO	(9000* (30 - 20) + 20 * 95000 + 2 * 250000 (True) + 30 * 2 * (15000)True + 100000True) * 1 + 0 + 0	2	2	2	2	2	6,555,000		6,555,000		6,555,000	65,550,000
						Guidelines revised and updated	Findings of consultant with appropriate technical capacities (Naypyitaw location)	N		1 * 80 * (80000 + 200000) + 1 * 0 = 22400000	1					22,400,000	-	22,400,000	-	22,400,000	22,400,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

JEE Indicator	D.2.2	Interoperable, interconnected, electronic real-time reporting system																			
JEE Scores	2	2																			
JEE recommendations	* A one-health approach encompassing human, animal and wildlife surveillance should be considered.																				
Objective	To develop real-time reporting system																				
1	Development of data-base and data sharing mechanism among MOHS, MOALI and others	CEU	Data Assistant for APP, ILUSARI, VPD using information for action (IFA) software	Naypyitaw	Guidelines printed	Findings of technical experts	N	Word Bank	1,860,000 (9000* (20-5) + 5* 95000 + 1* 250000 (True) + 20 * 1* (15000True) + 10000True) + 20 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 20 Days = 1; Participants away = 5 Days away = 3 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	2	3,720,000	-	-	-	-	3,720,000	-	-	-	3,720,000
			(3) Print and disseminate the guidelines and SOPs (5000 copies each)	States and Regions	Guidelines printed	Time availability by trainers and trainees	Y	Word Bank	5000*		1	-	-	-	-	-	-	-	-	10,000,000	
			(4) Central Training to SDCU teams and 101 to 2 staff at every township focal point (50 participants; 40 Away; 3 days; 15 times) (40 participants from central and 660 participants from townships)	States and Regions; Townships	Number of staff who got training		Y	Donor (WHO)	(9000* (50-40) + 40 * 95000 + 3 * 250000 (True) + 50 * 3 * (15000True) + 10000True) + 50 * 2500True) * 1 + 0 + 0	1 Training : Per diem = 9000 Participants = 50 Days = 3; Participants away = 40 Days away = 5 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	3 4 4 4	-	-	-	-	-	-	-	-	-	220,425,000
Interoperable, interconnected, electronic real-time reporting system																					
JEE Scores																					
JEE recommendations																					
Objective																					
			(1) Workshop on development of Database and data sharing Mechanism with experts for database software (40 participants; 30 Away; 2 days; 2 times)	Naypyitaw	Number of workshop conducted Database and Mechanism developed	Findings of technical experts	N		9,230,000 (9000* (40-30) + 30 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000True) + 10000True) + 40 * 2500True) * 1 + 0 + 0	1 Workshop : Per diem = 9000 Participants = 40 Days = 2; Participants away = 30 Days away = 4 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	2	18,460,000	-	-	-	-	18,460,000	-	-	-	18,460,000
			(2) Hiring International Consultant for development of database and training Modules (1 International Consultant; 20 days)	Naypyitaw	Number of workshop conducted Database and Mechanism developed	Findings of technical experts	N		19,562,400 (1* 20 * (238920 + 660000) + 1* 1584000 = 19562400	Number = 1; No of Days: 20; Per diem = 238920; Daily rate = 660000; Travel = 1584000	1	19,562,400	-	-	-	-	19,562,400	-	-	-	19,562,400
			(3) Procurement and installation of IT equipments, internet facilities for database and set up data base at CEU (2); SDCU, LBVD, NHL and LBVD lab (20,000 USD per unit, total 22 units)	CEU, SDCUs, LBVD, NHL, Animal Lab	Establishment of database and set up data base at CEU (2); SDCU, LBVD, NHL and LBVD lab	Procurement of IT equipments which are really needed	N		26,400,000 20000*1320		6 6 5 5	158,400,000	158,400,000	132,000,000	132,000,000	158,400,000	-	-	-	580,800,000	
			(4) Recruitment of staff for operation of database (1 staff per unit, 120,000 MMK per month) Same staff hiring in activity line D.2.3.1.2 for data management	CEU, SDCUs, LBVD, NHL, Animal Lab	Number of staff recruited and trained	retaining of trained staff	Y	Government	(9000* (25-20) * 5 + 20 * 7 * 30000 + 5 * 100000 (True) + 25 * 5 * (10000True) + 0True) + 25 * 2000True) * 1	1 Admin : 120000 : 12 Months	6 12 17 22										

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency					
												2018	2019	2020	2021	2022	TOTAL
				(5) Training of staff for database and its operation (15 participants, 10 Away, 5 days, 1 time/year) (about 2 staff from each unit)	CEU, SDCUS, LBVD, NHL, Animal Lab	Number of staff trained	retaining of trained staff	N		6,437,500 $(9000 * (15 - 10) * 5 + 10 * 7 * 30000 + 10 * 95000 + 5 * 250000) (\text{True}) + 15 * 5 * (15000 \text{True} + 10000 \text{True}) + 15 * 25000 (\text{True}) * 1 + 0 + 0$	1 1 1 1 2 2 2 2 0 0 0 0 1 1 2 2 8 9 0 1 2	6,437,500	6,437,500	6,437,500	6,437,500	6,437,500	32,187,500
				(6) Annual Maintenance and operation cost of Database and IT equipments (1000 USD per year)	CEU, SDCUS, LBVD, NHL, Animal Lab	Number and frequency of malfunctions Function data base	Inclusion of maintenance cost to MOHS budget	N		1,320,000	6 12 17 22 22	7,920,000	15,840,000	22,440,000	29,040,000	104,280,000	
Integration and analysis of surveillance data																	
JEE Indicator D.2.3																	
JEE Scores 3																	
JEE recommendations																	
* Look for possible bias in systematic data collection caused by geographical factors, capacity limits and knowledge among stakeholders																	
Objective																	
1	Improve data management capacity by training of staff, software development	CEU	Data Assistant for ILLISARI, VPD using information for action (IFA) software	(1) Conduct Datamanagement training for central staff, SR staff, LBVD, NHL, LBVD lab (40 participants, 30 Away, 2 days, 2 times per year) (2) Hiring of staff for Data management cost including data entry, analysis etc (22 persons, incentive 120,000 Kyats/ month) Same staff hiring in activity line D.2.1.4 for data management	CEU, SDCUS, LBVD, NHL, Animal Lab	Number of training conducted Number of Staff Trained.	appropriate software and interoperability among data management system	N	Government	9,230,000 $(9000 * (40 - 30) + 30 * 95000 + 2 * 250000) (\text{True}) + 40 * 2 * (15000 \text{True} + 10000 \text{True}) + 40 * 25000 (\text{True}) * 1 + 0 + 0$	2 2 2 2 2 2 2 2	18,460,000	18,460,000	18,460,000	18,460,000	18,460,000	92,300,000
					CEU, SDCUS, LBVD, NHL, Animal Lab	data quality assessment	Potential for inconsistent among sectors	Y		1,440,000	6 12 17 22 22						

JEE Indicator		Syndromic surveillance systems																					
JEE Scores		3																					
JEE recommendations		* Review CD laws for IHR, review surveillance systems (indicative and event triggered), including list of notifiable diseases and syndromes																					
Objective		To strengthen Indicator- and event based surveillance System																					
1	Approval of CD laws dissemination to stakeholders and public	CEU	CD law drafted	Naypyitaw	CD law approved	Commitment from government and stakeholders to implementation of CD law	N	1,370,000	(9000* (20-5) *1 + 5* 3* 30000 + 5* 95000 + 1* 250000 (False) + 20 * 1* (15000)True + 10000True) + 20 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 20 Days = 1; Participants away = 5 Days away = 3 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000. Stationary = 2500; Print Dis = 60000. Printing costs = 0, Disseminating costs = 0	2	2											
				Naypyitaw	print CD laws	Private sectors involvement in CD laws implementation	N	23,789,000	(9000* (70 - 34) *1 + 34 * 3* 30000 + 34 * 95000 + 1* 250000 (True) + 70 * 1* (15000)True + 10000True) + 70 * 2500True) * 1 + 13500000 + 1500000	1 Meeting : Per diem = 9000 Participants = 70 Days = 1; Participants away = 34 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000; Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 13500000, Disseminating costs = 1500000	1	1									23,789,000		
				Naypyitaw	print CD laws	Private sectors involvement in CD laws implementation	N	18,835,000	(9000* (50 - 10) *1 + 10 * 3* 30000 + 10 * 95000 + 1* 250000 (True) + 50 * 1* (15000)True + 10000True) + 50 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 50 Days = 1; Participants away = 10 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000; Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 15000000, Printing costs = 0, Disseminating costs = 0	10	7									188,350,000	131,845,000	320,195,000
				Naypyitaw	bylaw developed	Commitment from stakeholders	N	22,400,000	1* 80 * (80000 + 200000) + 1* 0 = 22400000	Number = 1; No of Days: 80; Per diem = 80000; Daily rate = 200000; Travel = 0	1								22,400,000		22,400,000		
				Naypyitaw	bylaw developed	Commitment from stakeholders	N	19,865,000	(9000* (30 - 20) *1 + 20 * 3* 30000 + 20 * 95000 + 1* 250000 (True) + 30 * 1* (15000)True + 10000True) + 30 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 30 Days = 1; Participants away = 20 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000; Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 15000000, Printing costs = 0, Disseminating costs = 0	3										59,595,000		59,595,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency				
												2018	2019	2020	2021	2022
				(6) Stakeholders Meeting on Annual update lists of Notifiable Diseases (40 participants, 30 Away, 1 day, 1 times per Year)	Naypyitaw	annual updated list of notifiable diseases	availability and interest of participants	N		6,990,000	1 1 1 1 1	6,990,000	6,990,000	6,990,000	6,990,000	34,950,000
2	Operational Supports for syndromic surveillance system		Existing system functioning	(1) Cost for Case investigations and specimens collections and transportation (About 450 cases for AFP, 1100 cases for fever with rash, 500 cases for other VPDs, 1500 cases for ILI and SARl per year) (2) Lab reagents, test kits and some vaccines for case investigations and surveillance, and providing vaccination for septical diseases at National Health Laboratory and Public Health Laboratory (Mandalay)	NHL and PHL	Complete timeliness of specimen arrived to NHL Availability of reagents at all times	Under reporting and timeliness and completeness of reporting Cost of lab reagents	N		99,100,000	1 1 1 1 1	99,100,000	99,100,000	99,100,000	99,100,000	495,500,000
									205,525,000	205,525,000	1 1 1 1 1	205,525,000	205,525,000	205,525,000	205,525,000	1,027,625,000

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

DETECT

General Objective: To do promptly detect threats (due to all hazards) to save lives and ensure proper control measures.

GOAL		Reporting										Total Estimated cost (USD)			
TECHNICAL AREA		System for efficient reporting to WHO, FAO and OIE										Total Estimated cost (Local currency) (Kvats)			
JEE Indicator	D.3.1											181,497.88			
JEE Scores	3											283,136,700			
JEE recommendations		* Improve workforce capability and awareness; including IHR responsibilities, risk assessment and reporting of a potential PHEIC, for human and animal health sectors (at national and subnational levels) * Improve Information Communications Technology (ICT) for reporting and information sharing													
Objective		To strengthen communication Mechanism for information sharing in and out Country													
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National (or sub-national))	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency	Total Estimated cost (USD)		
										2018	2019	2020	2021	2022	TOTAL
1	Development of Capacity for relevant person through training on reporting, risk assessment, IHR responsibilities in animal and human health sectors at Central, State and Region	MOHS/MOALI	Existing activities on preparedness, surveillance and emergency response Process among sector and Stakeholders	(1) Annual Joint Training on reporting, risk assessment, IHR responsibilities in animal and human health sectors at Central, State and Region (50 participants, 40 Away, 2days, 1 times per year)	Naypyitaw/ Subnational (State/ Region)	number of training conducted Number of Staff Trained	involvement of all stakeholders	N	11,905,000	(9000* (50 - 40) + 40 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000)True + 10000(True) + 50 * 2500(True) * 1 + 0 + 0	1 1 1 1 1	11,905,000 11,905,000 11,905,000 11,905,000 11,905,000	59,525,000		
2	Development of Training Manual on IHR and Health security	MOHS/MOALI	Existing activities on preparedness, surveillance and Emergency response Process among sector and Stakeholders	(2) Hiring International Consultant to Develop Training manual (Modules) for IHR and health security by CEU with technical supports from WHO, USDOC (1 International consultant, 60 days- 3 months)	Naypyitaw	Manual developed and published for trainings	Experts with technical capacity with understanding of local context	N	55,519,200	1* 60 * (238920 + 660000) + 1* 1584000 = 55519200	1	55,519,200	55,519,200		
		MOHS/MOALI		(3) Disseminate Workshop/ Meeting on Training manual for IHR and health security to stakeholders from Central, States and Regions (60 participants, 50 Away, 1 days, 1 times, 5,000 copies printing and distribution)	Naypyitaw and SR	Workshop done and Manual published	involvement of all stakeholders in training program	N	21,240,000	(9000* (60 - 50) + 50 * 95000 + 1 * 250000 (True) + 60 * 1 * (15000)True + 10000(True) + 60 * 2500(True) * 1 + 0 + 0	1	21,240,000	21,240,000		

JEE Indicator		Reporting network and protocols in country														
JEE Scores		2														
JEE recommendations		* Establish written processes and protocols for identifying and reporting potential PHEIC up to central level MOHS / National Foca Point. * Ensure regular, systematic information sharing between human and animal health sectors														
Objective		To Strengthen information sharing and practices in Country														
1	Develop Protocols and SOPs for regular Public-Health Emergency International Concerns (PHEIC) Reporting Mechanism between animal and human sectors	MOHS, MOALL Existing Reporting Process among sector and Stakeholders	Naypyitaw	SOPs and Protocol developed	Involvement of stakeholders in development of SOPs Finding Expert Persons	N	11,200,000	$1 * 40 * (80000 + 200000) + 1 * 0 = 11200000$	Number = 1; No of Days = 40; Per diem = 80000; Daily rate = 200000; Travel = 0	1	11,200,000	-	-	-	-	11,200,000
		(1) Hiring of National Consultant to Develop protocols and SOPs for PHEIC Reporting Mechanism by focal points from CEU, LBVD, WHO and OIE with supports from technical experts (1 National Expert/Consultant, 40 days or 2 months)	Naypyitaw	dissemination of SOPs and protocol	Difficulties in actual implementation of protocol among stakeholders	N	14,580,000	$(9000 * (60 - 50) + 50 * 95000 + 2 * 250000 (True) + 60 * 2 * (15000True) + 10000True) + 60 * 2500True) * 1 + 0 + 0$	1 Workshop: Per diem = 9000 Participants = 60 Days = 2; Participants away = 50 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	14,580,000	14,580,000	-	-	-	29,160,000
		(2) Dissemination and Awareness workshop on SOPs and protocol of Reporting Mechanism to stakeholders from Central, State and Region level (60 participants, Away 50, 2 days, 2 times)	Naypyitaw	Number of copies of SOPs and protocols to all stakeholders printed and distributed	Involvement and Commitments of stakeholders	N	10,000,000			1	10,000,000	-	-	-	-	10,000,000
2	Simulation exercises of test the protocols and SOPs Reporting Mechanism to be active	MOHS, MOALL Existing Reporting Process among sector and Stakeholders	Naypyitaw	number of simulation exercises conducted	Availability and interest of all sectors in simulation exercises	N	4,865,000	$(9000 * (30 - 20) + 20 * 95000 + 1 * 250000 (True) + 30 * 1 * (15000True) + 10000True) + 30 * 2500True) * 1 + 0 + 0$	1 Workshop: Per diem = 9000 Participants = 30 Days = 1; Participants away = 20 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2	9,730,000	9,730,000	9,730,000	9,730,000	9,730,000	48,650,000
		(1) Conduct Simulation Exercises to test the protocols and SOPs by every six months (30 participants, 20 Away, 1 day, 2 times per year)	Naypyitaw													

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

DETECT

General Objective: To do promptly detect threats (due to all hazards) to save lives and ensure proper control measures.

GOAL		Workforce Development										Total Estimated cost (USD)			
TECHNICAL AREA		Human resources are available to implement IHR core capacity requirements										Total Estimated cost (Local currency) (Kzats)			
JEE Indicator	D.4.1											3,505,474.36			
JEE Scores	3											1,163,717,500			
JEE recommendations	* To develop a HR strategic plan for next 5 years after evaluating existing HR strategic plan. This includes development of HR data base with tracking facilities											1,159,840,000			
Objective		To increase availability of HR interm of quantity and quality										1,010,957,500			
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency	TOTAL		
										2018	2019	2020	2021	2022	
1	HR planning to increase health personnel stock level to enable implementing IHR Core functions for Country Health Security	CEU,DHRH, LBVD	Information on Relevant Existing Workforces Department of Human Resource for Health (DHRH) is implementing HR Information System(HRIS) with assistance from JHPIEGO and 3MDG Fund	(1.) Stakeholder Meeting to identify required Health workforce cadres for IHR Core functions - To develop Classification, job description, career pathways etc (35 participants, 25 Away, 1 day, 1 times)	National and Sub national	IHR essential health workforce for each category and Plan was developed	Drop out or Attrition, Commitments from Decision Makers.	N		5,927,500	1	5,927,500	-	-	5,927,500
						(9000*(35-25) *1 + 25 * 3 * 30000 + 25 * 95000 + 1 * 250000 (True) + 35 * 1 * (15000True + 10000True) + 35 * 25000True) * 1 + 0 + 0				1 Meeting : Per diem = 9000 Participants = 35 Days = 1, Participants away = 25 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0					5,927,500
						(9000*(35-25) *1 + 25 * 3 * 30000 + 25 * 95000 + 1 * 250000 (True) + 35 * 1 * (15000True + 10000True) + 35 * 25000True) * 1 + 0 + 0				1 Meeting : Per diem = 9000 Participants = 35 Days = 1, Participants away = 25 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	5,927,500	-	-	5,927,500
						(9000*(35-25) *1 + 25 * 3 * 30000 + 25 * 95000 + 1 * 250000 (True) + 35 * 1 * (15000True + 10000True) + 35 * 25000True) * 1 + 0 + 0				1 Meeting : Per diem = 9000 Participants = 35 Days = 1, Participants away = 25 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	5,927,500	-	-	5,927,500
						(9000*(35-25) *1 + 25 * 3 * 30000 + 25 * 95000 + 1 * 250000 (True) + 35 * 1 * (15000True + 10000True) + 35 * 25000True) * 1 + 0 + 0				1 Meeting : Per diem = 9000 Participants = 35 Days = 1, Participants away = 25 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	5,927,500	-	-	5,927,500

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

2	Build Capacity and increase workforce on epidemiologists, biostatisticians, and lab specialists or set up in-country training for those specialities which facilitate further strengthening of IHR core capacities	DHRH, Medical and allied Universities, MoHS	Existing Capacity Building training by MoHS DHRH is implementing HR Information System (HRIS) - (HR database with tracking system) with assistance from JHPIEGO and 3MOG Fund	(4) Advocacy and Awareness Workshop/Meeting on Health Workforce recruitment plan based on need assessment with decision, policy makers and stakeholders (50 participants, 2.5 Away, 1 day, 1 times)	National and Sub national	Number of trained epidemiologists	Timely Approval, registration and Budget supports	N	6,535,000	$(9000 * (50 - 25) * 1 + 25 * 3 * 30000 + 25 * 95000 + 1 * 250000 (Tues) + 50 * 1 * (15000Tues + 10000Tues) + 50 * 2500Tues) * 1 + 0 + 0$	1 Meeting - Per diem = 9000 Participants = 50 Days = 1, Participants away = 25 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	40	40	40	40	40	40	264,000,000	264,000,000	264,000,000	264,000,000	264,000,000	6,535,000	-	-	-
												40	40	40	40	40	40	264,000,000	264,000,000	264,000,000	264,000,000	264,000,000	6,535,000	-	-	-
2	Build Capacity and increase workforce on epidemiologists, biostatisticians, and lab specialists or set up in-country training for those specialities which facilitate further strengthening of IHR core capacities			(2) Provision of abroad (international) training Program according to need based assessment: Lab Specialists (Pathologist and Microbiologist) (40 persons per year)	National and Sub national	Number of trained Lab Specialists		N	6,600,000			40	40	40	40	40	264,000,000	264,000,000	264,000,000	264,000,000	264,000,000	6,600,000	-	-	-	-
												40	40	40	40	40	40	264,000,000	264,000,000	264,000,000	264,000,000	6,600,000	-	-	-	-
2				(3) Provision of abroad (international) training Program according to need based assessment: Veterinarians (40 persons per year)	National and Sub national	Number of trained Veterinarians	infrastructure, resources Training	N	6,600,000			20	20	20	20	20	132,000,000	132,000,000	132,000,000	132,000,000	132,000,000	660,000,000	-	-	-	-
												20	20	20	20	20	20	132,000,000	132,000,000	132,000,000	132,000,000	660,000,000	-	-	-	-
2				(4) Monthly Regular Management of Workforce Development by analysing HR database with tracking system for further action plan (No cost)	National and Sub national	Regular Analysis of Workforce HR database functioning		N				12	12	12	12	12	-	-	-	-	-	-	-	-	-	-
												12	12	12	12	12	12	-	-	-	-	-	-	-	-	-

JEE Indicator		Field Epidemiology Training Program or other applied epidemiology training program in place															
JEE Scores		3															
JEE recommendations		* To train more epidemiologists, biostatisticians and social scientists abroad or set up in-country training for those specialities which facilitate further strengthening of IHR core capacities.															
Objective		To strengthen the capacity for workforce developed															
No	Summary of Planned Activities at National Level (Strategic actions)	Responsible authority for implementation including budget line holder	Related existing plan/Programme or on going activities	Detailed activities (input description for costing)	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL	
1	Finalize and approve the draft curriculum for national FETP basic course and intermediate course (9-month)	CEU, DPH, Livestock Breeding and Veterinary Department, Medical and allied Universities, other related Ministries	Draft curriculum for FETP basic and intermediate courses	(1) Workshop on finalization of FETP basic and intermediate course (30 participants, 20 Away, 2-day, 2 times per year) Review and revise the contents of curriculum to be comprehensive and in line with international courses, (2) Review and revise teaching methodology and assessment methods, need to be tailored with objectives of the courses, (3) Participants inclusiveness (Medical doctors, BHS, Veterinarians, other members who worked for RRT), (4) Certificate (Career Pathway), (5) Appoint focal person or permanent staff for FETP training in CEU, (6) Invite visiting lecturers from related universities to FETP Training Program (30 participants, 2-day workshop, 2 times per year)	Sub-national	Training curriculum for FETP Basic developed, 9-month FETP-In-termediate curriculum developed	(1) Inter and Intra-departmental collaboration, (2) Dual responsibilities of trainers and mentors will be a burden	Y	Government, President's Malala Initiative, WHO, World Bank	(9000* (30-20) +20 * 95000 + 2 * 250000 (True) +30 * 2 * (15000True +10000True) + 30 * 25000True) * 1 + 0 + 0	1 2 2 0 0 0 1 1 2 8 9 0 1 2	6,555,000	13,110,000	13,110,000	-	-	32,775,000
2	Mentorship program for FETP	CEU, DPH, Medical and allied Universities, (LBVD)	To utilize graduates from international FETP programs and MOHS/LBVD officials with strong background of field epidemiology experiences as Mentors	(1) Provide Mentorship facilitation workshops to equip necessary skills to trained FETP graduates and potential Mentors to become competent mentors (15 potential mentors, 8 Away, 3 days workshop, 1 times per year)	National	Number of competent mentors, Limited Mentor-mentee ratio	Restrictive number of competent mentors, Limited budgets for the training	Y	President's Malala Initiative, WHO, World Bank, ADB	(9000* (15- 8) +3 * 8 * 5 * 30000 + 8 * 95000 + 3 * 250000 (True) +15 * 3 * (15000True +10000True) + 15 * 25000True) * 1 + 0 + 0	1 1 1 1 1 1	4,061,500	4,061,500	4,061,500	4,061,500	20,307,500	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

3	Train more field epidemiologists to strengthen health security interventions and IHR related activities through FEET courses and other applied epidemiology training programs	National and Sub national	Number of persons trained by FEET basic course	20,064,000	one-week workshop with 35 participants: 7,600 USD	1 1 1 1 1 1 1 1	20,064,000	20,064,000	20,064,000	20,064,000	20,064,000	20,064,000	20,064,000	100,320,000
	(1) Train basic level field epidemiologists by providing FEET basic course (Estimated cost for one-week workshop with 35 participants: 7,600 USD, 2 workshops for basic course, one course per year)	National and Sub national	Number of persons trained by FEET basic course	20,064,000	one-week workshop with 35 participants: 7,600 USD	1 1 1 1 1 1 1	20,064,000	20,064,000	20,064,000	20,064,000	20,064,000	20,064,000	20,064,000	100,320,000
	(2) Train mid level field epidemiologists by providing FEET Intermediate 9 month course (20 participants per year)	National and Sub national	Number of persons trained by FEET intermediate course	198,000,000	Total cost of a 9-month course includes costs for 5 workshops, field projects, supervisory visits, operation costs, computer, IT, facilities, references, etc.	1 1 1 1 1 1 1	198,000,000	198,000,000	198,000,000	198,000,000	198,000,000	198,000,000	198,000,000	990,000,000
	(3) Train expert level field epidemiologists by providing FEET advanced 2-year program (2 international FEET fellows per year, 75,000 USD for one fellow for a 2-year program)	National and Sub national	Number of persons trained by FEET advanced course	99,000,000	Currently, PMI is supporting sponsorship for 2 fellows annually to join international 2-yr FEET-Advanced program in Thailand.	2 2 2 2 2 2 2	99,000,000	99,000,000	99,000,000	99,000,000	99,000,000	99,000,000	99,000,000	792,000,000
	(4) Provide FEET basic equivalent short courses or other applied epidemiology trainings for frontline public health workforce (Estimated cost: 6,300 USD per workshop (35 participants for 1 week), 3 workshops per year)	National and Sub national	Number of persons trained by FEET basic equivalent or other applied epidemiology short courses	8,316,000	Rapid Response Training and others	2 2 2 2 2 2 2	8,316,000	16,632,000	16,632,000	16,632,000	16,632,000	16,632,000	16,632,000	83,160,000
	(5) Participate in other international FEET equivalent training programs (such as FEET India, FEET China, etc.)	National and Sub national	Number of persons trained by other international FEET equivalent training programs	6,600,000	To double check the cost with WHO	2 2 2 2 2 2 2	6,600,000	13,200,000	13,200,000	13,200,000	13,200,000	13,200,000	13,200,000	66,000,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

JEE Indicator		Workforce strategy														
JEE Scores		3														
JEE recommendations		* To develop a HR strategic plan for next 5 years after evaluating existing HR strategic plan. This includes development of HR data base with tracking facilities * To increase health personnel stock level in line with SDG targets														
Objective		To increase availability of HR interm of quantity and quality														
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget/get(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency				
												2018	2019	2020	2021	2022
1	Develop public health workforce strategy in line with HR Strategic Plan (2018-2021) (Public Health workforce Planning, Quality, Governance, Financing)	All departments of MoHS (DPH and DHRH focal)	DHRH is developing Human Resource for Health Strategic Plan (2018-2021) in line with National Health Plan (2017-2021)	(1) Consultative workshops to develop public health workforce strategy (40 participants, 30 Away, 3 day, 3 times)	National	drafted Public health workforce strategy developed	Inter- and intra-departmental collaboration and supports	N		11,470,000	3	34,410,000	-	-	-	34,410,000
		DHRH, DPH		(2) Hire a national consultant to support the development of Public Health Workforce strategy (1 National Consultant, 40 days - 2 months)	National	Public health workforce strategy developed	Inter- and intra-departmental collaboration and supports	N		11,200,000	1	11,200,000	-	-	-	11,200,000
		DHRH, DPH		(3) Review and Revised Meetings on Finalization of Drafted Public Health Workforce Strategy by TWG (15 participants, 0 Away, 1 day, 4 times, at DHRH office)	National	Number of TWG meetings		N		797,500	2	1,595,000	1,595,000	-	-	3,190,000
		DHRH, DPH		(4) Advocacy and Awareness Workshop/Meeting on Public Health Workforce Strategy (100 participants, 35 away, 1 day, 1 time, printing and distribution of Strategy book)	National	Workshop done and Number of SOP booklet		N		10,860,000	1	10,860,000	10,860,000	-	-	10,860,000

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022
RESPONSE

General Objective: To establish a functional system and mechanism for effective multi-sectoral national and international response to all public health events.

GOAL		Preparedness										Total Estimated cost (USD)		
TECHNICAL AREA		Multi-hazard National Public Health Emergency Preparedness and Response Plan is developed and implemented										Total Estimated cost (Local currency) (Kvats)		
JEE Indicator	R. 1.1	Develop a national multi-hazard public health emergency preparedness and response plan, which should include processes for funding, managing, and mobilizing emergency resources.										Total cost per year of implementation		
JEE Scores	1											498,907.05		
JEE recommendations	*													
Objective	To Strengthen Preparedness and Reponse again Public Health Emergencies													
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for Implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency		
1	National Multi-hazard Health emergency Preparedness and Response plan	MoHS	Process of development of the plan is ongoing Existing plans	(1) Hire National Consultant (1 National Consultant, 60 days)	National	Draft plan and finalized plan developed		Y	UNICEF	16,800,000 * 60 * (80000 + 200000) + 1 * 0 = 168000000	1	2018 2019 2020 2021 2022	16,800,000 - - - -	16,800,000
		MoHS	Process of development of the plan is ongoing Existing plans	(2) Meeting on Organizing a task force group for National Multi-Hazard Health Emergency Preparedness and Response plan development (50 participants, 20 Away, 1 day, 2 times)	National	Draft plan and finalized plan developed	Tight Schedule of the stakeholders	Y		5,795,000 (9000* (50 - 20) * 1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 50 * 1 * (15000 True + 10000 True) + 50 * 25000 True) * 1 + 0 + 0	1	2018 2019 2020 2021 2022	5,795,000 - - - -	5,795,000
		MoHS	Process of development of the plan is ongoing Existing plans	(3) Workshop to get input for development of Multi-Hazard Health Emergency Preparedness and Response plan (50 participants, 20 Away, 1 day, 2 times)	National	Draft plan developed		Y		5,795,000 (9000* (50 - 20) * 1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 50 * 1 * (15000 True + 10000 True) + 50 * 25000 True) * 1 + 0 + 0	1	2018 2019 2020 2021 2022	5,795,000 - - - -	5,795,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (get/y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency				
												2018	2019	2020	2021	2022
		MoHS	Process of development of the plan is ongoing Existing plans	(4) Conduct Simulation exercise to get inputs for development of National Multi-Hazard Health Emergency Preparedness and Response plan (40 Participant, 30 Away, 2 days, 1 times, at each Central, States and Regions)	National/ Sub-national	Draft plan developed	Tight Schedule of the stakeholders	Y		9,430,000 (9000* (40 - 30) *2 + 30 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000)True + 10000True) + 40 * 25000True) * 1 + 0 + 0	11 7	103,730,000	66,010,000	-	-	169,740,000
		MoHS		(5) Workshop to finalize draft plan (50 participants, 20 Away, 2 days)	National	Finalized plan developed Number of plan printed out and distributed	Tight Schedule of the stakeholders	Y		8,165,000 (9000* (50 - 20) *2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000)True + 10000True) + 50 * 25000True) * 1 + 0 + 0	1	8,165,000	-	-	-	8,165,000
		MoHS		(6) Dissemination workshop (or) Launching Ceremony National Multi Hazard Health Emergency Preparedness Plan (100 participant, 40 Away, 1 day, 1 times)	National	Finalized plan developed	Tight Schedule of the stakeholders	Y		11,140,000 (9000* (100 - 40) *1 + 40 * 3 * 30000 + 40 * 95000 + 1 * 250000 (True) + 100 * 1 * (15000)True + 10000True) + 100 * 25000True) * 1 + 0 + 0	1	11,140,000	-	-	-	11,140,000
		MoHS		(7) Printing, publishing and distribution of developed plan (2000 set of copies, 5000MMK/set)	National	Number of books of Plan printed and distributed.	Duration of printing of book	Y		10,000,000 2000* 5000 MMK/set	1	-	10,000,000	-	-	10,000,000
2	Advocacy on National Multi-hazard Health emergency Preparedness and Response plan	MoHS		(1) Advocacy and awareness Meeting to stakeholders at Central level (50 participant, 20 Away, 1 day, 1 times at Naypyitaw)	National	Number of advocacy meetings	Multi-Sectoral awareness and Commitments	N		5,795,000 (9000* (50 - 20) *1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 50 * 1 * (15000)True + 10000True) + 50 * 25000True) * 1 + 0 + 0	1	-	5,795,000	-	-	5,795,000
		MoHS		(2) Advocacy and awareness Meeting to stakeholders at S/R level (50 participant, 20 Away, 1 day, 1 times at 17 States and Regions)	Subnational (States/ Regions)	Number of advocacy meetings	Timely finalization of modules	N		5,795,000 (9000* (50 - 20) *1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 50 * 1 * (15000)True + 10000True) + 50 * 25000True) * 1 + 0 + 0	17	-	98,515,000	-	-	98,515,000

3	Exercise on National Multi-hazard Health emergency Preparedness and Response Plan	MoHS	(1) Hire international consultant to develop exercise modules of National Multi Hazard Health Emergency Preparedness and Response Plan (1 International, 40 days)	National	Exercise modules developed	Interest and understanding of exercises	N	37,540,800	$1 * 40 * (238920 + 660000) + 1 * 1584000 = 37540800$	Number = 1; No of Days: 40; Per diem = 238920; Daily rate = 660000; Travel = 1584000	1	-	-	37,540,800	-	37,540,800	
		MoHS	(2) Table Top Exercise or simulation exercise on Multi Hazard preparedness and response Plan at Central level (50 participants, 20 Away, 2 days, 2 times)	National	Number of Simulation exercises done	Interest and understanding of exercises	N	8,165,000	$(9000 * (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True) + 50 * 2500True * 1 + 0 + 0$	1 Training: Per diem = 9000 Participants = 50 Days = 2; Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000; Lunch = 15000; Stationary = 2500; Venue = 250000; Print Dis = 100000; Printing costs = 0; Disseminating costs = 0	1	-	-	8,165,000	8,165,000	16,330,000	
		MoHS	(3) Table Top Exercise or simulation exercise on Multi Hazard preparedness and response Plan at State and Region level (50 participants, 20 Away, 2 days, 1 times, at 17 States and Regions)	Sub-national (State/Region)	Workshop conducted	Accurate Lessons learnt is essential	N	8,165,000	$(9000 * (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True) + 50 * 2500True * 1 + 0 + 0$	1 Meeting: Per diem = 9000 Participants = 50 Days = 2; Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000; Lunch = 15000; Stationary = 2500; Venue = 250000; Print Dis = 100000; Printing costs = 0; Disseminating costs = 0	9	8	-	-	73,485,000	65,220,000	138,805,000
4	Review and Revise the National Multi-hazard Health emergency Preparedness and Response plan	MoHS	(4) Workshop to review National Multi Hazard Health Emergency preparedness and response Plan for adaption of national content and context (50 participants, 20 Away, 2 days, 1 times)	National	Workshop conducted	Accurate Lessons learnt is essential	N	8,165,000	$(9000 * (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True) + 50 * 2500True * 1 + 0 + 0$	1 Meeting: Per diem = 9000 Participants = 50 Days = 2; Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000; Lunch = 15000; Stationary = 2500; Venue = 250000; Print Dis = 100000; Printing costs = 0; Disseminating costs = 0	1	-	-	-	8,165,000	8,165,000	
JEE Indicator																	
JEE Scores																	
JEE recommendations																	
* Undertake a National Risk Assessment and Resource Mapping, and update as needed																	
Objective																	
* To strengthen National Public Health Assessment to Identify and Prioritise Public Health Threats																	
1	Conduct Mapping of Public Health Risk and Health Resource	MoHS	(1) Hire international consultant for Health Risk and resource Mapping (1 International Consultant, 60 days- 3 Months)	National	Development of different maps	Multi-Sectoral involvement for accurate and relevant information	N	55,519,200	$1 * 60 * (238920 + 660000) + 1 * 1584000 = 55519200$	Number = 1; No of Days: 60; Per diem = 238920; Daily rate = 660000; Travel = 1584000	1	-	-	55,519,200	-	55,519,200	
		MoHS	(2) Workshop to develop risk and resources mapping within State and Region. (50 participants, 30 Away, 2 days 1 times at each from 17 States and Regions, during 3 months in a year)	National			N	9,985,000	$(9000 * (50 - 30) * 2 + 30 * 4 * 30000 + 30 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True) + 50 * 2500True * 1 + 0 + 0$	1 Workshop: Per diem = 9000 Participants = 50 Days = 2; Participants away = 30 Days away = 4 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000; Lunch = 15000; Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	17	-	-	169,745,000	-	169,745,000	

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (get/y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency						
											2018	2019	2020	2021	2022	TOTAL	
JEE Indicator												Year of Implementation					
R.2.2												2	2	2	2	2	2
JEE Scores												1	1	1	1	1	1
2	Upgrading the facility of PHEOC	MoHS	Currently working Unit for preparedness and response	(1) Upgrading the facility of PHEOC of DoH Procurement equipment, commodities, supplies for Central (Lampsum, 1*15000 USD * 1320MMK per year) (2) Upgrading the facility of PHEOC of DoH Procurement equipment, commodities, supplies for 17 States and Regions (Lampsum, 17*5000 USD * 1320MMK per facility per year)	National	Set up PHEOC facility according to Checklist of PHEOC facilities	Budget Approval	N		19,800,000 1*15000*1320 = 19800000	19,800,000	19,800,000	19,800,000	19,800,000	79,200,000		
		MoHS	Currently working Unit for preparedness and response		S/R		N		6,600,000 1*5000*1320 = 11220000		112,200,000	112,200,000	112,200,000	112,200,000	448,800,000		
Emergency Operations Centre Operating Procedures and Plan																	
JEE Indicator												R.2.2					
JEE Scores												1					
JEE recommendations																	
* Identify and assign permanent staff for the PH EOC within an IMS structure, along with job descriptions and appropriate training																	
* Develop a PHEOC plan / handbook with associated SOPs. Initiate an exercise and continuous improvement programme for emergency preparedness and response by conducting at least one table-top and one functional exercise per year to reinforce IMS personnel training, skills and EOC operations.																	
* Develop SOPs for response operations, daily functions, managing cases of infectious patients, including at the points of entry																	
Objective																	
* To strengthen effective functioning of Public Health Emergency Operation Center against Public Health Emergencies																	
1	PHEOC Plan and SOPs development	MoHS	Currently working Unit for preparedness and response	(1) Hire National consultant to develop SOPs/necessary plans for PHEOCs (1 National Consultant, 120 days) (2) Meeting/ workshop to develop SOPs/necessary plans (50 participants, 20 Away, 2 days, 2 times)	National	Plan/ SOPs developed	Multi-Sectoral Inputs and Interest	N		33,600,000 1*120*(80000+200000)+1*1*0=33600000	33,600,000				33,600,000		
			Currently working Unit for preparedness and response	(2) Meeting/ workshop to develop SOPs/necessary plans (50 participants, 20 Away, 2 days, 2 times)	National	Plan/ SOPs developed	Multi-Sectoral Inputs and Interest	N		8,165,000 (9000*(50-20)*2+20*4*30000+20*95000+2*250000)(True)+50*2*(15000True+10000True)+50*25000True)+0+0	16,330,000				16,330,000		
		MoHS	Currently working Unit for preparedness and response	(3) Meeting/ workshop to review and revise SOPs/necessary plans (50 participants, 20 Away, 2 days, 2 times)	National	Meeting/ workshop conducted	Accurate Lessons learnt is essential	N		8,165,000 (9000*(50-20)*2+20*4*30000+20*95000+2*250000)(True)+50*2*(15000True+10000True)+50*25000True)+0+0	8,165,000	8,165,000		8,165,000	16,330,000		

JEE Indicator		Emergency Operations Program																				
JEE Scores		R.2.3																				
JEE recommendations		* Identify and assign permanent staff for the PH EOC within an IMS structure, along with job descriptions and appropriate training * Develop a PHEOC plan / handbook with associated SOPs * Initiate an exercise and continuous improvement programme for emergency preparedness and response by conducting at least one table-top and one functional exercise per year to reinforce IMS personnel training, skills and EOC operations. * Develop SOPs for response operations, daily functions, managing cases of infectious patients, including at the points of entry																				
Objective		* To strengthen effective functioning of Public Health Emergency Operation Center against Public Health Emergencies																				
1	Strengthening of PHEOC functions effectively	MoHS	Currently working Unit for preparedness and response	(1) Hire National consultant to develop exercise modules for PHEOC. (1 National Consultant, 60 days)	National	Exercise module developed	Technical Expert Person for this	N	16,800,000	1 * 60 * (80000 + 200000) + 1 * 0 = 16800000	Number = 1; No of Days: 60; Per diem = 80000; Daily rate = 200000; Travel = 0	1								16,800,000		
		MoHS	Currently working Unit for preparedness and response	(2) Conduct Simulation Exercise or drills at Central level (50 participants, 30 Away, 2 days, 1 times per year at Central level)	National	Number of exercise conducted	Interest and practicing by participants	N	10,435,000	(9000* (50 - 20) * 2 + 30 * 4 * 30000 + 30 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True + 10000True) + 50 * 25000True) * 1 + 0 + 0	1 Training : Per diem = 9000 Participants = 50 Days = 2, Participants away = 30 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 500000, Printing costs = 0, Disseminating costs = 0	1 1 1								10,435,000	10,435,000	31,305,000
		MoHS	Currently working Unit for preparedness and response	(3) Conduct Simulation Exercise or drills at State and Regional level (50 participants, 20 Away, 2 days, 1 times per year at each State and Region)	Subnational (State / Region)	Number of exercise conducted	Interest and practicing by participants	N	8,265,000	(9000* (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True + 10000True) + 50 * 25000True) * 1 + 0 + 0	1 Training : Per diem = 9000 Participants = 50 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 300000, Printing costs = 0, Disseminating costs = 0	17 17 17								140,505,000	140,505,000	421,515,000
JEE Indicator		R.2.4																				
JEE Scores		Case management procedures are implemented for IHR relevant hazards																				
JEE recommendations		* Identify and assign permanent staff for the PH EOC within an IMS structure, along with job descriptions and appropriate training * Develop a PHEOC plan / handbook with associated SOPs * Initiate an exercise and continuous improvement programme for emergency preparedness and response by conducting at least one table-top and one functional exercise per year to reinforce IMS personnel training, skills and EOC operations. * Develop SOPs for response operations, daily functions, managing cases of infectious patients, including at the points of entry																				
Objective		* To strengthen effective functioning of Public Health Emergency Operation Center against Public Health Emergencies																				
1	To update after review/ revise or develop guidelines / SOPs for prioritized diseases and health emergencies	MoHS	-	(1) Workshop/meeting to update or develop necessary guidelines or SOPs for prioritized diseases (50 participants, 20 Away, 3 days, 1 times per year)	National	Guidelines/ SOPs developed or updated	Technical inputs by multi-sectoral stakeholders	N	10,535,000	(9000* (50 - 20) * 3 + 20 * 5 * 30000 + 20 * 95000 + 3 * 250000 (True) + 50 * 3 * (15000True + 10000True) + 50 * 25000True) * 1 + 0 + 0	1 Workshop: Per diem = 9000 Participants = 50 Days = 3, Participants away = 20 Days away = 5 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 200000, Printing costs = 0, Disseminating costs = 0	1 1 1								10,535,000	10,535,000	42,140,000
		MoHS	-	(2) Printing, publishing and distribution of the developed guidelines and SOPs (2000 set, 5000MMK per set)	National	Number of each type of Guidelines/ SOPs printed or distributed	Budget	N	10,000,000											10,000,000	20,000,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency				
												2018	2019	2020	2021	2022
2	Exercises for guidelines / SOPs/exercise modules for prioritized diseases and health emergencies	MoHS	-	(1) Hire National consultant to develop exercise modules for essential Guidelines and SOPs (1 National Consultant, 40 day, 2 times)	National	Exercise module developed	Tights schedules by trainers and trainees	N		11,200,000 + 1*40*(80000 + 200000) + 1*0 = 11200000	1	11,200,000	11,200,000	-	-	22,400,000
		MoHS	-	(1) Exercise on revised Guideline and SOPs at Central level (50 participants, 30 Away, 2 days, 1 times per year)	National	Number of exercises conducted	Tights schedules by trainers and trainees	N		10,435,000 (9000* (50 - 30) *2 + 30 *4 * 30000 + 30 * 95000 + 2 * 250000 (True) +50 * 2 * (15000True + 10000True) + 50 * 2500True) *1 + 0 + 0	1 1 1	-	10,435,000	10,435,000	-	31,305,000
		MoHS	-	(2) Exercise on revised Guideline and SOPs at 17 State and Regions (50 participants, 30 Away, 2 days, 1 times for each State and Region)	S/R	Number of exercises conducted	Tights schedules by trainers and trainees	N		7,965,000 (9000* (50 - 20) *2 + 20 *4 * 30000 + 20 * 95000 + 2 * 250000 (True) +50 * 2 * (15000True + 10000True) + 50 * 2500True) *1 + 0 + 0	10 7	-	79,650,000	55,755,000	135,405,000	
3	Review and revise the developed documents for guidelines / SOPs/ exercise modules for prioritized diseases and health emergencies	MoHS	-	(1) Workshop / meeting to do review and revise the guidelines/ SOPs and exercise modules (50 participant, 20 Away, 2 days, 1 times per year)	National	Updated guidelines/ SOPs developed	Accurate Lessons, learnings is essential	N		8,265,000 (9000* (50 - 20) *2 + 20 *4 * 30000 + 20 * 95000 + 2 * 250000 (True) +50 * 2 * (15000True + 10000True) + 50 * 2500True) *1 + 0 + 0	1	-	-	-	8,265,000	

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022
RESPONSE

General Objective: To establish a functional system and mechanism for effective multi-sectoral national and international response to all public health events.

GOAL		Linking Public Health and Security Authorities										Total Estimated cost (USD)					
TECHNICAL AREA		Public Health and Security Authorities, (e.g. Law Enforcement, Border Control, Customs) are linked during a suspect or confirmed biological event										Total cost per year of implementation				Total Estimated cost (Local currency) (Nyats)	
JEE Indicator	Respond 3											2018	2019	2020	2021	2022	TOTAL
JEE Scores	R.3.1											0	50335,000	44,025,000	17,575,000	17,575,000	129,510,000
JEE recommendations	1	* Develop a Memorandum of Understanding (MOU) or other agreement between public health and security organizations, which defines the criteria that trigger immediate sharing of information. * Develop SOPs for joint public health and security risk assessment of potential deliberate biological incidents that have both public health and security ramifications, as well as for implementing the information sharing MOU. * Develop a joint exercise program between public health and security authorities that tests and improves plans and procedures.										Year of implementation					Total Estimated cost (Local currency) (Nyats)
Objective	1	Enable country to conduct a rapid, multisectoral response in case of a biological event of suspected or confirmed origin.										Year of implementation					Total Estimated cost (Local currency) (Nyats)
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (get/yr)	Existing budget source (government, donor?)	"Estimated cost (local currency)"	Year of implementation	2018	2019	2020	2021	2022	TOTAL
1	Development of MOU or other Agreement or Definite plan between public health and security organizations for better co-ordination and response to biological events	MoHS/ Ministry of Defense/ Ministry of Home affairs/ MSWRR/ local gov/ MoALI	National Disaster Management Committee already existed, but need to modify for better co-ordination and communication	(1) Mid-level Meetings/ Workshop for develop draft agreement between public health and Security Organizations for better coordination and response to biological Events. (50 participants, 20 Away, 2 days, 2 times)	National	Draft agreement/MOU developed	(1) Poor formal co-ordination (2) Weakness in written documentation (3) No previous experience of MOU/ agreement between Ministries (4) Need for Negotiation Process	N		8,165,000 (9000* (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000 True + 10000 True) + 50 * 2500 True) * 1 + 0 + 0	1	8,165,000	8,165,000				16,330,000
				(2) High Level Meeting on advocacy for drafted MOU or other Agreement or Definite plan to do decision making (1 Time) (40 participants, 20 Away, 2 days 1 times)	National	Finalized Agreement/ MOU	Commitments and interests by Decision makers	N	7,260,000 (9000* (40 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 40 * 2 * (15000 True + 10000 True) + 40 * 2500 True) * 1 + 0 + 0	1		7,260,000					7,260,000
				(3) Workshop on finalization of agreed meeting minutes/agreement documentation (written documents) signed by higher authorities (40 participants, 20 Away, 2 days 1 times)	National	Documented MOU between Public health and Security Authorities	Commitments of Stakeholder and responsible persons	N	5,230,000 (9000* (40 - 20) * 1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 40 * 1 * (15000 True + 10000 True) + 40 * 2500 True) * 1 + 0 + 0	1		5,230,000					5,230,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL
2	To conduct public health emergency response or exercise including all public health security agencies to test the efficiency of the agreement/WOU	MOHS/Ministry of Defense/Ministry of Home Affairs/MSWRR and other related Ministries		(4) Workshop/Meeting on dissemination of Agreements to related ministries for formal acceptance (50 participants, 20 Away, 1 day, 1 times)	National	Ready to implement in biological event according to approved agreement	Functioning of communication channel Established	N		(9000* (50 - 20) *1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 50 * 1 * (15000 True + 10000 True) + 50 * 25000 True) * 1 + 0 + 0	2018	2019	2020	2021	2022	TOTAL
											1	-	5,795,000	-	-	-
2				(5) Regular Coordination Meeting to discuss information sharing criteria and linkage channel clarification (30 participants, 0 Away, 1 days 1 times)	National	Formal communication channel Established	Functioning of communication	N		(9000* (30 - 0) *1 + 0 * 3 * 30000 + 0 * 95000 + 1 * 250000 (True) + 30 * 1 * (15000 True + 10000 True) + 30 * 25000 True) * 1 + 0 + 0	2018	2019	2020	2021	2022	TOTAL
											1	-	1,345,000	1,345,000	-	-
2				(1) Table-Top Exercise or Simulation exercise (50 participants, 20 Away, 2 days, 1 time per year)	National	Number of exercises done	Participation and interest	N		(9000* (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000 True + 10000 True) + 50 * 25000 True) * 1 + 0 + 0	2018	2019	2020	2021	2022	TOTAL
											1	-	8,165,000	8,165,000	-	-
3	Development of SOPs for better co-ordination and risk assessment/ response to biological events	MOHS/MOA-L/Ministry of Defense/Ministry of Home Affairs/MSWRR	CBRN plan	(1) Workshop for development of SOPs for Co-ordination mechanism for coordination and assessment/response to risks to biological events (50 participants, 20 Away, 2 days, 2 times)	National	SOP Drafted	Participation and interest	N		(9000* (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000 True + 10000 True) + 50 * 25000 True) * 1 + 0 + 0	2018	2019	2020	2021	2022	TOTAL
											2	15,930,000	-	-	-	-
3				(2) Workshop to finalize Draft SOP for Co-ordination mechanism and response (50 participants, 20 Away, 2 days, 2 times)	National	SOPs Finalized	Participation and interest	N		(9000* (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000 True + 10000 True) + 50 * 25000 True) * 1 + 0 + 0	2018	2019	2020	2021	2022	TOTAL
											1	7,965,000	-	-	-	-
3				(3) Workshop for dissemination of finalized SOP to related ministries and stakeholders (80 participants, 40 Away, 1 day, 1 times)	National	SOP dissemination workshop done	Participation and interest	N		(9000* (80 - 40) * 1 + 40 * 3 * 30000 + 40 * 95000 + 1 * 250000 (True) + 80 * 1 * (15000 True + 10000 True) + 80 * 25000 True) * 1 + 0 + 0	2018	2019	2020	2021	2022	TOTAL
											1	10,210,000	-	-	-	-

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

4	Co-ordinating meetings between civil and military organizations for information sharing and co-ordinated response for public emergency	MOHS/MoA-L/ Ministry of Defense/ Ministry of Home Affairs/ MSWR	Civil Military Co-ordination meeting regarding Disasters management (2 times already done)	(1) Annual Civil Military Co-ordination and evaluation meeting regarding Disasters management, preparedness and Response (50 participants, 20 Away, 2 day, 1 times per year)	National	Number of Annual Meeting done	Commitments, Supports and interest	N	8,065,000	$(9000 * (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000) (True) + 50 * 2 * (15000 True + 10000 True) + 50 * 2500 True) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 50 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	1	1	8,065,000	8,065,000	8,065,000	32,260,000
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**MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022
RESPONSE**

General Objective: To establish a functional system and mechanism for effective multi-sectoral national and international response to all public health events.

GOAL		Medical Countermeasures and Personnel Deployment										Total Estimated cost (USD)	
TECHNICAL AREA		Capacity to Activate Emergency Operations										Total Estimated cost (local currency) (Kyats)	
JEE Indicator	R.4.1												
JEE Scores	1												
JEE recommendations		* Develop a national plan for identifying procedures and decision making related to sending and receiving medical countermeasures during public health emergencies * Improving access to in-place stockpiles of countermeasures matching the risks that you foresee * Develop a national plan for identifying procedures and decision making related to sending and receiving health personnel during public health emergencies											
Objective		To strengthen procedures and decision-making criteria for requesting and sending medical countermeasures and health personnel during public health emergencies To promote capacity for storage and stockpiling of medicines and medical equipments											
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency	TOTAL
1	Develop National SOPs for receiving/sending mechanism of medical countermeasures	MOHS (FDA/MS)/MMC/MOFA/MOC/LVBD-MoAU ordinary operation procedures)	Routine registration and premission for receiving donation (for ordinary operation procedures)	(1) Internal meeting/ workshops with multi-sectoral approaches and participation to develop and finalization of Receiving/Sending Mechanism/SOP (draft) of Medical Counter Measures with WHO technical assistance (50 participant, 20 Away, 2 day, 2 times) (2) Hiring International Consultant to develop Mechanism/SOP for sending or receiving of medical countermeasures during a public health emergency (1 International Consultant, 10 days)	National	Draft national SOP for receiving/ sending mechanism finalized	(1) No existing SOP (2) No documented procedures for receiving/ sending medical countermeasures in emergency conditions	N	8,165,000	(9000* (50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True + 10000True) + 50 * 2500True) * 1 + 0 + 0	1 1 2 2 2 2 2 0 0 0 0 0 1 1 2 2 2 8 9 0 1 2	8,165,000	16,330,000
					National	SOPs drafted		N	10,573,200	1 * 10 * (238920 + 660000) + 1 * 1584000 = 10573200	1 1	10,573,200	21,146,400

2	Medical Depots construction for receiving/ sending and storing	MOHS, MO-Construction	(3) Table-top exercises to demonstrate sending or receiving of medical countermeasures during a public health emergency for management level (50 participants, 20 Away, 2 days 1 times per 2 years)	National	Number of exercise done, sending or receiving of medical countermeasures mechanism experienced	Need more practices and communication	N	8,265,000	$(9000 * 50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True + 50 * 2500True) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 50 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0; Disseminating costs = 0	1	1	-	-	8,265,000	8,265,000	16,530,000	
			(4) Routine Formal exercise or simulation for sending/receiving of medical countermeasures during a public health emergency for functional level (50 participants, 20 Away, 2 days 1 times per 2 years)	National	Number of exercise done, sending or receiving of medical countermeasures mechanism experienced	Need more practices and communication	N	8,265,000	$(9000 * 50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True + 50 * 2500True) * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 50 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0; Disseminating costs = 0	1	1	-	-	8,265,000	8,265,000	16,530,000	
			(1) Construction of Medical Depot to keep and store Stockpiles of commodities and supplies for readiness of stock at temporary location of Nay-pyitaw, Mandalay, Yangon and Patheingyi	National & sub-national	4 Medical Depots in central and northern, ayeayward-ay, Shan-ay, Mandalay constructed	Budget Approval, Technical Challenges for Disaster resilience structure design	N	150,000,000			4		600,000,000				600,000,000	
System is in place for sending and receiving health personnel during a public health emergency																		
JEE Indicator R.4.2																		
JEE Scores 1																		
JEE recommendations																		
* Develop a national plan for identifying procedures and decision making related to sending and receiving medical countermeasures during public health emergencies																		
* Improving access to in-place stockpiles of countermeasures matching the risks that you foresee																		
* Develop a national plan for identifying procedures and decision making related to sending and receiving health personnel during public health emergencies																		
Objective																		
* To Strengthen implementation in sending and receiving health personnel during the emergency response																		
1	Develop national SOPs for receiving/ sending of mechanisms of health personnel	MOHS/ MOFA/ MMC/ Immigration/ ministry of border affairs	(1) Internal meeting/ workshops with multi-sectoral approaches and participation to develop and finalization of Receiving/Sending Mechanism/SOP (draft) with WHO technical assistance (50 participant, 20 Away, 2 day, 2 times)	National	Draft national SOP for receiving/ sending mechanism	(1) No existing SOP (2) No documented procedures for receiving/ sending medical countermeasures in emergency conditions	N	8,165,000	$(9000 * 50 - 20) * 2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True + 50 * 2500True) * 1 + 0 + 0$	1 Workshop : Per diem = 9000 Participants = 50 Days = 2, Participants away = 20 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0; Disseminating costs = 0	1	1	-	8,165,000	8,165,000	16,330,000		
			(2) Hiring International Consultant to develop Mechanism/SOP for sending or receiving of health personnel during a public health emergency (1 International Consultant, 10 days)	National	SOPs drafted		N	10,573,200	$1 * 10 * (238920 + 660000) + 1 * 1584000 = 10573200$	Number = 1; No of Days : 10 ; Per diem = 238920; Daily rate = 660000; Travel = 1584000	1	1	-	10,573,200	10,573,200	21,146,400		

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget(s)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					TOTAL			
											2018	2019	2020	2021	2022				
				(3) Table-top exercises to demonstrate sending or receiving of Health Personnel during a public health emergency for management level (50 participants, 20 Away, 2 days 1 times per 2 years)	National	Number of exercise done, sending or receiving of medical counter-measures mechanism experienced	Need more practices and communication	N		8,265,000	(9000*50-20)*2 + 20*4*30000 + 20*95000 + 2*250000 (True) + 50*2*(15000True + 10000True) + 50*25000True)*1 + 0 + 0			-	8,265,000	-	-	-	16,530,000
			(4) Role playing Formal exercise or simulation for Personnel during a public health emergency for functional level (50 participants, 20 Away, 2 days 1 times per 2 years)	National	Number of exercise done, sending or receiving of medical counter-measures mechanism experienced	Need more practices and communication	N		8,265,000	(9000*50-20)*2 + 20*4*30000 + 20*95000 + 2*250000 (True) + 50*2*(15000True + 10000True) + 50*25000True)*1 + 0 + 0			-	8,265,000	-	-	-	16,530,000	

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022
RESPONSE

General Objective: To establish a functional system and mechanism for effective multi-sectoral national and international response to all public health events.

GOAL		Risk Communication										Total Estimated cost (USD)																			
TECHNICAL AREA		Risk Communication Systems (plans, mechanisms, etc.)										Total cost per year of implementation			Total Estimated cost (Local currency) (Kvats)																
JEE Indicator												18,875,000	47,018,100	107,776,100	107,776,100	97,053,100	378,498,400														
JEE Scores												Year of Implementation					Total Cost Year in Local Currency														
JEE recommendations												2	2	2	2	2	2018	2019	2020	2021	2022	TOTAL									
Objective												0	0	0	0	0	1	1	2	2	2	8	9	0	1	2					
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible Authority(s) for Implementation including budget line holder"	Related existing plan/framework/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitor-Evaluation)"	Comments or Potential challenges	Existing budget(y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency					Total Estimated cost (Local currency) (Kvats)														
1	Develop an all-hazard National Risk Communication Plan	MOHS/MS-WRR/MOI	(1) International Consultant already appointed (2) TOT training on risk communication for health personnel from central and States and Regions (2) existing National Standing order for Natural Disaster events, CBRN plan for radio and chemical events (draft)	(1) Workshops to develop draft plan for all-hazard national risk communication plan and mechanism (50 participants, 20 Away, 2 days, 2 times)	National	Draft plan developed and finalized	(1) not existing all hazard risk communication plan (2) poor formal co-ordination and its mechanism among ministries	N		8,165,000 (9000* (50 - 20) *2 + 20 * 4 * 30000 + 20 * 95000 + 2 * 250000 (True) + 50 * 2 * (15000True) + 10000True) + 50 * 25000True) * 1 + 0 + 0	1	8,165,000	8,165,000	-	-	-	16,330,000														
			(2) Central level Advocacy Meetings/Workshops of all-hazard national risk communication plan and mechanism (70 participants, 20 Away, 1 days, 1 times per year)	(2) Central level Advocacy Meetings/Workshops of all-hazard national risk communication plan and mechanism (70 participants, 20 Away, 1 days, 1 times per year)	National	Meeting and Advocacy to higher authorities and related sectors and to functioning staff done	Commitments by Multi sectors	N	6,325,000 (9000* (70 - 20) *1 + 20 * 3 * 30000 + 20 * 95000 + 1 * 250000 (True) + 70 * 1 * (15000True) + 10000True) + 70 * 25000True) * 1 + 0 + 0	1	1	1	1	1	1	6,325,000	6,325,000	6,325,000	6,325,000	6,325,000	25,300,000										

2	Availability of Suitable funding to implement national risk communications plan and functions	MOHS/ MS- WRR/ MOI	Budgeting for existing ongoing activities and awareness raising events for advocacies	(1) Meetings on Advocacy on government funding and partner funding with Stakeholders (20 participants, 5 Away, 2 times)	National	Funding source	Less awareness for the risk communication sector	N	1,370,000 $(9000 * (20 - 5) * 1 + 5 * 3 * 30000 + 5 * 95000 + 1 * 25000) (False) + 20 * 1 * (15000) False + 10000 True) + 20 * 2500 True) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 20 Days = 1, Participants away = 5 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Iea break = 10000, Stationary = 2500, Print Dis = 60000, Printing costs = 0, Disseminating costs = 0	1	1,370,000	-	-	-	1,370,000	
Internal and Partner Communication and Coordination																	
JEE Indicator R.5.2																	
JEE Scores 3																	
JEE recommendations																	
* Ongoing assessment of the effectiveness of public information messaging, including formalizing system for feedback and adjusting messaging as appropriate																	
Objective																	
* To strengthen Functioning of Risk Communication																	
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for Implementation including budget line holder"	Related existing plan/ framework / Program or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
1	Communication line developed for risk communication mechanism in case of events	CEU-MoHS, multi-sectoral and multi-level	All Hazards Risk Communication Plans	(1) Multi sectoral Meeting on Formation and Functioning of Formal Organization of Core Task Force (20 participants, 5 Away, 1 day, 2 times, - operation cost)	National	Communication line developed	Lack of formal line of communication	N		1,370,000 $(9000 * (20 - 5) * 1 + 5 * 3 * 30000 + 5 * 95000 + 1 * 25000) (False) + 20 * 1 * (15000) False + 10000 True) + 20 * 2500 True) * 1 + 0 + 0$	1 1 1 1 1	1,370,000	1,370,000	1,370,000	1,370,000	1,370,000	6,850,000
Public Communication																	
JEE Indicator R.5.3																	
JEE Scores 3																	
JEE recommendations																	
* Establish suitable funding to implement national risk communications plan and functions																	
Ongoing assessment of the effectiveness of public information messaging, including formalizing system for feedback and adjusting messaging as appropriate																	
Objective																	
* To promote dissemination of information on health risk and events to Public																	
1	Conduct ongoing assessment of the effectiveness of public information messaging including formalizing system for feedback and adjusting messaging as appropriate	MOHS/ MS- WRR/ MOI	(1) IEC materials for health information, (2) Disaster Alert Notification (DAN), a mobile application for disaster risk communication (3) Multiple platforms for disseminating information to the public (TV channels, radio, social media) with different ethnic languages	(1) Meeting for firstly defining of specific Unit to take Role as lead for risk communication including Public (30 participants, 15 Away, 1 day, 1 times)	National/ S&R	Unit for risk communication at related ministry Designated, and better communication line developed	(1) No permanent designated focal person for risk communication 2) No Public Relation expert especially in MOHS	N		3,985,000 $(9000 * (30 - 15) * 1 + 15 * 3 * 30000 + 15 * 95000 + 1 * 25000) (True) + 30 * 1 * (15000) True + 10000 True) + 30 * 2500 True) * 1 + 0 + 0$	1	3,985,000	-	-	-	3,985,000	3,985,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (get/y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency									
												2018	2019	2020	2021	2022	TOTAL				
			Media relation training conducting in MOI	(2) Trainings on Media Relation, verification and response for the staff from designated Unit by Public Relation expert (50 participant, 34 Away, 3 days, 1 times per year)	National/ Sub-national	Media surveillance functions and rumors verification functions are trained for staff from designated persons Unit	Finding technical experts	N		13,587,000	1	1	1	1	1	-	13,587,000	13,587,000	13,587,000	13,587,000	54,348,000
				(3) hiring of Public Relation Expert (1 international consultant, 5 days per each training)	National/ Sub-national	Media surveillance functions and rumors verification functions are trained for staff from designated persons Unit	Finding technical experts	N		6,078,600	1	1	1	1	1	-	6,078,600	6,078,600	6,078,600	6,078,600	24,314,400

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

Other IHR-related hazards and Points of Entry (PoE)

General Objective: To establish and maintain the core capacities at designated points of entry for routine and timely detection and prompt effective response of any potential hazards.

GOAL		Points of Entry (PoE)										Total Estimated cost (USD)					
TECHNICAL AREA		Routine capacities are established at PoE										Total Estimated cost (Local currency) (Kzats)					
JEE Indicator	JEE Scores	Other IHR & PoE 1	PoE 1	2	3	4	5	6	7	8	9		10				
JEE recommendations * Develop and implement an encompassing National Public Health Emergency Contingency Plan for the designated points of entry and link it with the national public health emergency plans. * Human resource capacity building and plan including for the animal health staff and staff at the ground crossings. * Conduct a formal evaluation for the PoEs core capacities and response to likely public health emergencies. * Establish/improve measures for vector control, safe environment and animal quarantine at the designated PoEs												3,692,639.83					
Objective		To strengthen surveillance, detection, management of response at PoE															
1	To review and revise Current PoEs Plan and SOP in multi-sectoral aspects to create linkage to the national Public Health Emergency Plan	"Responsible authority(s) for implementation including budget holder"	Related existing plan/framework/Programme or ongoing activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					TOTAL
												2018	2019	2020	2021	2022	
		MOHS and All Stakeholders	Disease specific plan and SOP for PHEC (eg, Ebola, Zika, Influenza)	(1) Hire National consultants for 2 weeks to review and provide draft recommendation on Existing PoE plans and SOP/training modules (3 National Consultant for 14 days) (2) Workshop on Agreement and finalization of drafted PoE plan, SoPs and Training Modules with national stakeholders (50 participants, 25 Away, 1 day, 1 times) (3) Trainings and Simulation exercises on revised Plans and SOPs for staff from the designated PoE (50 participants, 25 Away, 2 day, 1 times)	National	All hazard plan and SOP for PoE drafted	Intra- and inter-departmental collaboration of all stakeholders at PoE especially in ground crossing to implement plan	N		1*14* (80000 + 3,920,000 200000) + 1*0 = 3920000	3	11,760,000	-	-	-	-	11,760,000
					National	Draft SOP developed	Conflict of roles in stakeholders at PoEs in SOPs	N		(9000* (50 - 25) + 25 * 95000 + 1* 250000 (True) +50 *1* (15000)True + 10000)True + 50 * 25000True) *1 + 0 + 0	1	9,175,000	-	-	-	-	9,175,000
					National	Number of trainings and staff trained	Multi sector involvement by functional level of stakeholders	N		(9000* (50 - 25) *2 + 25 * 4 * 30000 + 25 * 95000 + 2 * 250000 (True) +50 *2* (15000)True + 10000)True + 50 * 25000True) *1 + 0 + 0	1	11,650,000	-	-	-	-	11,650,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL
											Year of Implementation					
											2018	2019	2020	2021	2022	TOTAL
2	To strengthen existing organisational set up and procurements for Quarantine service (Both human and animal sectors) especially in Ground Crossings	MOHS, MOALI	Organization set up for HR, DOPH (Existing 5 Ground crossing designated PoEs and upcoming International Airports and Seaports (5 International Airports: Hantharwady, Nyaung Uo, Heho, Myeik, Dawei/ and 5 International Seaports: Dawei, Myeik, Kawthaung, Kyauk Phyu, Sitwe)	(4) Monitoring the implementation of POE plans by using SOP through evaluation and supervisory visit at all existing designated PoE (2 persons from Central, 2 days per visit, 1 visit per year for existing 9 designated PoE) (5) Monitor the implementation of POE plans by using SOP through evaluation and supervisory visit upcoming International Airports & Seaports (2 persons from Central, 2 days per visit, 1 visit per year for upcoming 10 designated PoE)	National/ sub-national	Number of supervision visit (1 time every year)	Availability of time for supervision visit	N		2*2*31000+2*630,000 95000+1*132000 *2+2*1*26000 =630000	-	5,670,000	5,670,000	5,670,000	22,680,000	
								N		2*2*31000+2*630,000 95000+1*132000 *2+2*1*26000 =630000	-	6,300,000	6,300,000	6,300,000	25,200,000	
					National	At least 60% of the vacancy in existing organization set up especially in ground crossing filled with new assigned staff	(1) There is no accommodation, transportation and incentive for the staffs especially working in remote border areas. (2) Security is also major challenge in some areas. (3) Also need to recruit the staffs who are willing to work in ground crossing PoEs.	Y	Government	1*275000*12+3*710*12+2*218000*12 +1*150000*12=21480000	-	107,400,000	107,400,000	107,400,000	429,600,000	
					National	(2) HR recruitment for upcoming 10 designated PoE 1 medical officer, 3 BHS, 1 driver, 1 Ambulance, + 1 Veterinary, 2 Veterinary assistant for Existing 5 designated Ground Crossing PoEs: (5 ground crossing- Muse, Tachileik, Myawaddy, KyaukThaung, Mese/Three Pagoda Pass, Nyaung Uo, Heho, Myeik, Dawei/ and 5 International Airports- Yangoon, Mandaing, Naypyithaw, 1 seaport- Yangon)	Time for opening and functioning of upcoming PoEs Organization Set up and Budget Approval	N		1*275000*12+3*710*12+2*218000*12 +1*150000*12=21480000	-	214,800,000	214,800,000	214,800,000	859,200,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (Y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					
											2018	2019	2020	2021	2022	TOTAL
3	To strengthen capacity building processes especially for quarantine services in all designated PoEs (eg- emergency medical services and infection control)	MOHS	FETP, IHR Training	(12) Patient Referral - Fuel cost for ambulance and Speed Boat (a) for 5 ambulances - Fuel 60 Gal per month for 1 ambulance , 1 year for all 5 designated Ground Crossings (b) 1 Speed Boat for 1 year Int Support- Fuel 200 Gal per month for 1 speed boat for 1 year	National and Sub-national	Number of ambulances procured	Procurement and bidding process can take long period	N		21,000,000 200*12*3500	2018	2019	2020	2021	2022	TOTAL
											1 1 1 1 1	21,000,000	21,000,000	21,000,000	21,000,000	21,000,000
3	To strengthen capacity building processes especially for quarantine services in all designated PoEs (eg- emergency medical services and infection control)	MOHS	FETP, IHR Training	(13) Mobilization of existing workforces from other upcoming 10 PoE or from Rapid Response Team, state/region in Public Health Emergency situation. Meeting with stakeholders from PoE and states/regions, and workforce development unit (2 staff, 7 days, for 5 Ground Crossing PoE, 2 times per year)	National and Sub-national	Number and frequency of visit by mobilized staff for PHE events	Administrative arrangement to mobilize staff from other units	N		1,730,000 2*7*31000+2*95000+1*132000 *7+7*1*26000 =1730000 (for 2 times per year)	2020	2020	2020	2020	2020	138,400,000
											1 1 1 1 1	11,650,000	11,650,000	11,650,000	11,650,000	11,650,000
3	To strengthen capacity building processes especially for quarantine services in all designated PoEs (eg- emergency medical services and infection control)	MOHS	FETP, IHR Training	(1) Trainings on Infection Control and Emergency Medical Service (EMS) to all Quarantine staffs from all PoE - At least 1 time training per year followed by regular drill, simulation exercise and TTX in each CME in all PoEs. Also need to provide prior training for the newly assigns staffs before they work in respective PoEs. (50 participants, 25 Away, 2 days, 1 times per year)	National and Sub-national	Number of trainings done and staff trained	Some of existing staffs in all PoE do not have proper training for Quarantine services and also for IHR.	N		11,650,000 (9000* (50 - 25) *2+25*4*30000 +25*95000+2*250000 (True) +50 *2* (15000) true +10000(true) + 50*25000(true) *1 +0+0	2018	2019	2020	2021	2022	116,500,000
											1 1 1 1 1	11,650,000	11,650,000	11,650,000	11,650,000	11,650,000
3	To strengthen capacity building processes especially for quarantine services in all designated PoEs (eg- emergency medical services and infection control)	MOHS	FETP, IHR Training	(2) Conduct Joint Table top exercise and simulation exercise with all stakeholders from PoE for response to public health emergency (50 participants, 25 Away, 2 days, 12 times per year)	National and Sub-national	Number of TTX conducted (2 per every year)	Involvement of stakeholders	N		11,650,000 (9000* (50 - 25) *2+25*4*30000 +25*95000+2*250000 (True) +50 *2* (15000) true +10000(true) + 50*25000(true) *1 +0+0	2018	2019	2020	2021	2022	116,500,000
											1 1 1 1 1	11,650,000	11,650,000	11,650,000	11,650,000	11,650,000
3	To strengthen capacity building processes especially for quarantine services in all designated PoEs (eg- emergency medical services and infection control)	MOHS	FETP, IHR Training	(3) Provide International Study tours for international experience (India, Thailand) (7 days, per Study/Tour, 10 Staff, per year)	National	Number of staff who participate in study/tour	Availability of funding for study tour	N		4,309,800	2018	2019	2020	2021	2022	215,490,000
											10 10 10 10 10	43,098,000	43,098,000	43,098,000	43,098,000	43,098,000

JEE Indicator		Effective Public Health Response at Points of Entry																													
JEE Scores		PoE.2		2																											
JEE recommendations		* Develop and implement an encompassing National Public Health Emergency Contingency Plan for the designated points of entry and link it with the national public health emergency plans. * Human resource capacity building and plan including for the animal health staff and staff at the ground crossings. * Conduct a formal evaluation for the PoEs core capacities and response to likely public health emergencies. * Establish/improve measures for vector control, safe environment and animal quarantine at the designated PoEs																													
Objective		* To strengthen function at PoE management and treatment for public health risks and events																													
1	Advocacy and awareness raising with other IHR implementing partners from other Ministries to improve measures for vector control, safe environment and food safety	MOHS and All Stakeholders	Monthly CME, Annual Evaluation meeting, Stakeholders meeting	(1) Advocacy meeting on improvement of measures for vector control, safe environment and food safety at each PoE with all stakeholders (50 participants, 25 Away, 1 day)	Sub-national	Number of advocacy meeting conducted)	Involvement of stakeholders	Y	ADB	9,175,000	(9000* (50 - 25) *1+25 * 30000 +25 * 95000 + 1 * 250000 (True) +50 *1 * (15000True + 10000True) + 50 * 2500True) *1 +0+0+0	1 Meeting : Per diem = 9000 Participants = 50 Days = 1, Participants away = 25 Days away = 3 Diem away = 3000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Extra pp = 50000, Stationary= 2500, Venue = 250000, Print Dis = 200000, Printing costs = 0, Disseminating costs = 0	1	1	1	1	1	1	1	1	1	9,175,000	9,175,000	9,175,000	9,175,000	9,175,000	9,175,000	9,175,000	45,875,000		
				(2) Conduct monthly joint vector control program in respective PoE especially in international airports and seaport through collaboration with Vector Born Diseases Control (VBDC) Unit and stakeholders	Sub-national	Monthly vector control program in all PoEs.	Some limitation in seaports and ground crossing because of surrounding environment. And also need to develop inter- and intra-departmental collaboration for vector control and safe environment.	N		2,427,000	(9000* (50 - 2) *1+ 2 * 3 * 30000 + 2 * 95000 + 1 * 250000 (True) +50 * 1 * (15000True + 10000True) + 50 * 2500True) *1 +0+0+0	1 Training : Per diem = 9000 Participants = 50 Days = 1, Participants away = 2 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary= 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	4	4	4	4	4	4	4	4	4	9,708,000	9,708,000	9,708,000	9,708,000	9,708,000	9,708,000	9,708,000	48,540,000		
				(4) Provide and distribute pamphlets and poster for vector control and hand washing at all PoEs (200 pamphlets and 100 posters each year)	National and Sub-national	Number of IECs distributed	Interest from public about IECs and involvement of HLPU in development process	N		250,000												250,000									1,250,000
2	To strengthen coordination mechanism for Public Health Emergency response with neighbouring countries especially at cross-border PoE	MOHS/WHO/ OIE/IBD/IS/ Stakeholders	Commitment for cross border coordination mechanism with Thailand and China	(1) Cross border Meeting 6 monthly Coordination and evaluation meeting to strengthen Coordination Mechanism (no cost) (50 participants, 10 Away, 1 day, 2 times per year) This activity will be incorporated with activity line D.2.1.2.3 under Real Time Surveillance.	National and sub-national	Number of Meetings done, MOU or official commitment for cross-border collaboration mechanism with neighboring countries.	Need to strengthen political commitment for PoE issue. Commitments among countries	Y	WHO/ADB	4,805,000	(9000* (30 - 10) *1+ 10 * 95000 + 1 * 250000 (True) +30 * 1 * (15000True + 10000True) + 30 * 2500True) *1 +0+0+0	1 Meeting : Per diem = 9000 Participants = 30 Days = 1, Participants away = 10 Days away = 3 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Extra pp = 50000, Stationary= 2500, Venue = 250000, Print Dis = 200000, Printing costs = 0, Disseminating costs = 0	1	1	1	1	1	1	1	1	1	4,805,000	4,805,000	4,805,000	4,805,000	4,805,000	4,805,000	4,805,000	4,805,000	4,805,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on-going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency					
												2018	2019	2020	2021	2022	TOTAL
				(2) Conduct workshop on Table Top Exercise and Simulation Exercise for Joint or Parallel Outbreak Investigation between two countries that sharing cross border (30 participants 15 Away, 2 days, 1 times per year)	Sub-national	Number of TTX conducted	Involvement of stakeholders commitment for PoE issue. Commitments among Countries	N		7,270,000 $(9000 * (30 - 15) + 15 * 95000 + 2 * 250000) (True) + 30 * 2 * (15000 True + 10000 True) + 30 * 25000 True * 1 + 0 + 0$	1 1 1 1 1 2 2 2 2 2 0 0 0 0 0 1 1 2 2 2 8 9 0 1 2	7,270,000	7,270,000	7,270,000	7,270,000	7,270,000	36,350,000
				(3) Meeting on Strengthen Cross border information sharing network by MBDS and GMS mechanism to do Focal person assigned, reporting form update and cost for information sharing (30 participants 10 Away, 2 days, 1 times per year) This activity will be incorporated with activity line D.2.1.2.3 & 2 under Real Time Surveillance and POE.2.2.1	National and sub-national	Timeliness and completeness of reporting	Involvement from cross border health staff	N		4,805,000 $(9000 * (30 - 10) + 10 * 95000 + 1 * 250000) (True) + 30 * 1 * (15000 True + 10000 True) + 30 * 25000 True * 1 + 0 + 0$	1 1 1 1 1						
				(4) Hire International consultants to develop MOU with border sharing countries (Thailand, China, India) (2 international Consultants, 7 days) Reviewing activities are included in National Legislation activity P.1.1.2.1	National	MOU from MOHS developed	Interest for cross border MOU from MOHS	N		7,876,440 $1 * 7 * (238920 + 660000) + 1 * 1584000 = 7876440$	2				15,752,880	15,752,880	15,752,880
				(5) Hire National consultants to develop MOU with border sharing countries (Thailand, China, India) (2 National Consultants, 7 days)	National	MOU from MOHS developed	Interest for cross border MOU from MOHS	N		14,560,000 $1 * 7 * (80000 + 200000) + 1 * 0 = 14560000$	2				29,120,000	29,120,000	29,120,000
				(6) Meeting on Singing ceremony for MOU with neighboring country (30 participants, 10 Away, 1 day)	National	MOU signed from MOHS	Interest for cross border MOU from MOHS	N		4,805,000 $(9000 * (30 - 10) + 10 * 95000 + 1 * 250000) (True) + 30 * 1 * (15000 True + 10000 True) + 30 * 25000 True * 1 + 0 + 0$	3				14,415,000	14,415,000	14,415,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

3	To develop evaluation tools to conduct formal evaluation and to publish the effectiveness in responding to Public Health Events annually	MOHS/WHO	JEE assessment tool, Annual IHR core capacity assessment tool	(1) Hire international consultant for 2 weeks to develop evaluation tools effective operation of PoE for response (2 international Consultants, 14 days)	National	Annual Evaluation mechanism at all PoE drafted	Some challenges still present for formal evaluation mechanism for all ground crossings before strengthening organisation set up.	Y	ADB	14,168,880	$1 * 14 * (238920 + 660000) + 1 * 1584000 = 14168880$	Number = 1 ; No of Days : 14 ; Per diem = 238920 ; Daily rate = 660000 ; Travel = 1584000	2	-	-	-	-	-	28,337,760	28,337,760
				(2) Meeting to endorse draft evaluation tools for finalization (50 participant, 25 Away, 2 days, 1 times)	National	Evaluation tools developed	Involvement of stakeholders	Y	ADB	11,650,000	$(9000 * (50 - 25) + 25 * 95000 + 2 * 250000) (True) + 50 * 2 * (15000True + 10000True) + 50 * 25000True * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 50 Days = 2 ; Participants away = 25 Days away = 4 Diem away = 30000 Travel costs participants away = 95000 ; Tea break = 10000 ; Lunch = 15000 ; Extra pp = 50000 ; Stationary = 2500 ; Venue = 250000 ; Print Dis = 200000 ; Printing costs = 0 ; Disseminating costs = 0	1	-	-	-	-	11,650,000	11,650,000	
				(3) M & E visit by assigning the team for supervision and evaluation after dissemination of evaluation tools (2 staffs from M&E Unit, 2 days, at 9 designated PoE after action review)	National	1 After action review report published in every year	Commitment and involvement of stakeholders in AAR	Y	ADB	630,000	$2 * 2 * 31000 + 2 * 95000 + 1 * 132000 + 2 * 2 * 1 * 26000 = 630000$		9	9	9	9	9	9	9	22,680,000

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

Other IHR-related hazards and Points of Entry (PoE)

General Objective: To establish and maintain the core capacities at designated points of entry for routine and timely detection and prompt effective response of any potential hazards.

GOAL																	
Chemical Events																	
TECHNICAL AREA	Mechanisms are established and functioning for detecting and responding to chemical events or emergencies																
JEE Indicator	CE.1																
JEE Scores	1																
JEE recommendations	* Finalize and approve the national (CBRN) contingency plan, which defines authorities, roles, and responsibilities across the whole of government for chemical event surveillance, alert, and response * Develop SOPs for chemical event detection, assessment, and response operations * Develop an integrated national chemical surveillance system, which incorporates lab analysis and centralized reporting of chemical events to the national PHEOC																
Objective	To enable early detection of early warning Chemical events or emergencies through Multi-sectoral Involvements																
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/ framework / Program or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Motor-Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (gov-ement, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Estimated cost (USD)					
											2018	2019	2020	2021	2022	TOTAL	
1	Develop SOP (guidelines or manuals) on the surveillance and assessment of chemical events, intoxication and poisoning and to be in place	Laboratories-MoHS (OHEH, DMR, FDA, NHL, CEU (Budget line), MoD (DSMRC), MoHA (CEO Lab, CID Lab), MoN-REC Lab, Ministry of Industry, Ministry of Education Labs	OHEH, DMR, DSMRC Laboratories are detecting environmental chemical events at hoc and project basis (not regularly). FDA is detecting chemicals in food and water some what regular basis. OHEH, DMR, DSMRC, CEO, CID labs are detecting chemical events in human.	(1) Mid level meeting to develop guidelines or manuals for detection of important and relevant chemical events for - collaboration, standardizing of laboratory methods, sharing of equipment, supply of reagents, consumables and sampling materials and logistics - proposing authority/institute /agency with primary responsibility for laboratory standardization and coordination). (25 persons: 10 Away, 2 days, 1 times)	National	SOP drafted Inventory Mapping done, Primary responsible agency for laboratory coordination pointed out, standardization and authorization of result done	Need international consultant and/or national advisor (2 person for laboratory guideline, 1 person for inventory mapping software)	N		4,382,500 (9000* (25 - 10) + 10 * 4 * 30000 + 10 * 95000 + 2 * 250000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 25000True) * 1 + 0 + 0	1	4,382,500					4,382,500
											84,093,040	14,802,088,888	9,028,201,912	5,676,291,912	5,676,431,912		35,233,087,464
											Total cost per year of implementation						
											Total Estimated cost (Local currency) (Yats)						

Laboratory: MoHS, OHEH, DMR, FDA, NHL, CEU (Budget line), MoD (DSMRC), MoHA (CEO Lab, CID Lab), MoNREC Lab, Ministry of Industry, Ministry of Education Labs	OHEH, DMR, DSMRC Laboratories are detecting environmental chemical events at hoc and project basis (not regularly). FDA is detecting chemicals in food and water somewhat regular basis. OHEH, DMR, DSMRC, CEO, CID labs are detecting chemical events in human.	(2) Hiring of international consultant and national advisor (laboratory guideline 2 persons, inventory mapping software 1 person) (2 International Consultant, 3 days)	N	4,280,760	$1 * 3 * (238920 + 660000) + 1 * 1584000 = 4280760$	Number = 1 ; No of Days : 3 , Per diem = 238920 ; Daily rate = 660000 ; Travel = 1584000	2	8,561,520	8,561,520						8,561,520
Laboratory: MoHS, OHEH, DMR, FDA, NHL, CEU (Budget line), MoD (DSMRC), MoHA (CEO Lab, CID Lab), MoNREC Lab, Ministry of Industry, Ministry of Education Labs	OHEH, DMR, DSMRC Laboratories are detecting environmental chemical events at hoc and project basis (not regularly). FDA is detecting chemicals in food and water somewhat regular basis. OHEH, DMR, DSMRC, CEO, CID labs are detecting chemical events in human.	(3) Hiring of international consultant and national advisor (laboratory guideline 2 persons, inventory mapping software 1 person) (1 National Consultant, 7 days)	N	1,960,000	$1 * 7 * (80000 + 200000) + 1 * 0 = 1960000$	Number = 1 ; No of Days : 7 , Per diem = 80000 ; Daily rate = 200000 ; Travel = 0	1	1,960,000	1,960,000						1,960,000
Laboratories: MoHS, OHEH, DMR, FDA, NHL, CEU (Budget line), MoD (DSMRC), MoHA (CEO Lab, CID Lab), MoNREC Lab, Ministry of Industry, Ministry of Education Labs	OHEH, DMR, DSMRC Laboratories are detecting environmental chemical events at hoc and project basis (not regularly). FDA is detecting chemicals in food and water somewhat regular basis. OHEH, DMR, DSMRC, CEO, CID labs are detecting chemical events in human.	(4) Mid level meeting to finalize guidelines or manuals for detection of important and relevant chemical events (25 persons, 10 Away, 2 days, 2 times)	National	4,382,500	$(9000 * (25 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000) + 10000(Travel) + 25 * 2500(Travel) * 1 + 0 + 0$	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 50000, Printing costs = 0, Disseminating costs = 0	2	8,765,000	8,765,000						8,765,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/ framework/ Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency				
											2018	2019	2020	2021	2022
1		Laboratories: MoHS (OHEH, DMR, FDA, NHL, CEU (Budget line)), MoD (DSMRC), MoHA (CEO Lab, MoN-CD Lab), MoN-REC Lab, Ministry of Industry, Ministry of Education Labs	OHEH, DMR, DSMRC Laboratories are detecting environmental chemical events at hoc and project basis (not regularly). FDA is detecting chemicals in food and water some what regular basis. OHEH, DMR, DSMRC, CEO, CID labs are detecting chemical events in human.	(5) Dissemination workshop/meeting on finalize guidelines or manuals for detection of important and relevant chemical events (70 participants per meeting, 30 away, for 2 days)	National	Number of Meetings done Awareness on finalized SOP Inventory Mapping done, Primary responsible agency for laboratory coordination pointed out, standardization and authorization done	Multisectoral participation and commitments	N		8,085,000	8,085,000	-	-	-	8,085,000
2	Develop SOP (guidelines or manuals) on the surveillance and assessment of chemical events, intoxication and poisoning and to be in place) - Setting Up Dedicated Laboratories	Laboratory: MoHS (OHEH, DMR, FDA, NHL, CEU (Budget line)), MoD (DSMRC), MoHA (CEO Lab, CID Lab), MoNREC Lab, Ministry of Industry, Ministry of Education Labs	OHEH, DMR, DSMRC Laboratories are detecting environmental chemical events at hoc and project basis (not regularly). FDA is detecting chemicals in food and water some what regular basis. OHEH, DMR, DSMRC, CEO, CID labs are detecting chemical events in human.	(1) Meeting on setting up a dedicated laboratory at responsible and related departments for detection of chemical events or emergencies. (25 persons, 10 Away, 2 days, 1 times)	National	Number of Meetings done for setting up dedicated Lab	Human resource, Financial resource, Approval	N		4,382,500	4,382,500	-	-	-	4,382,500

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

3	Develop SOP (guidelines or manuals) on the surveillance and assessment of chemical events, intoxication and poisoning and to be in place)- Mechanism for reporting and data sharing System	Laboratory: MoHS (OHEH, DMR, FDA, NHL, CEU (Budget line)), MoD (DSMRC), MoHA (CEO Lab, CID Lab), MONREC Lab, Ministry of Industry, Ministry of Education Labs	(2) Finalization Meeting on Setting up a dedicated laboratory for detection of chemical events or emergencies. (25 persons, 10 Away, 2 days, 2 times)	National	Finalized laboratory organization set up Number of Meetings done for setting up dedicated Lab	Human resource, Financial resource, Approval	N	4,382,500 * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True) + 10000True) + 25 * 25000True) * 1 + 0 + 0	(9000* (25 - 10) + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True) + 10000True) + 25 * 25000True) * 1 + 0 + 0	4,382,500	8,765,000	8,765,000	8,765,000	8,765,000	2	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 50000, Printing costs = 0, Disseminating costs = 0	8,765,000
3	Surveillance system: MoHS (National PHECC, OHEH, CEU (Budget line), MoD, MoHA, MONREC, Development Committees, Ministry of Transport, Ministry of Industry, Ministry of Information	Data reporting is being done but not on regular basis.	(1) Mid level meeting to develop Guidelines or Manuals or Mechanism for reporting and data sharing system; and, proposing authority/ institute/ agency with primary responsibility for chemicals and surveillance/ monitoring. (25 persons x 2 days x 1 times)	National	SOP for surveillance system and real time environmental monitoring system (sample collection, transport, real time monitoring, data sharing, data storage, data analysis, data reporting) drafted	Need international consultant and/ or national advisor (Data information system 2 persons)	N	4,382,500 * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True) + 10000True) + 25 * 25000True) * 1 + 0 + 0	(9000* (25 - 10) + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True) + 10000True) + 25 * 25000True) * 1 + 0 + 0	4,382,500	4,382,500	4,382,500	4,382,500	4,382,500	1	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 50000, Printing costs = 0, Disseminating costs = 0	4,382,500
	Laboratory: MoHS (OHEH, DMR, FDA, NHL, CEU (Budget line)), MoD (DSMRC), MoHA (CEO Lab, CID Lab), MONREC Lab, Ministry of Industry, Ministry of Education Labs	OHEH, DMR, DSMRC laboratories are detecting environmental chemical events at hoc and project basis (not regularly). FDA is detecting chemicals in food and water somewhat regular basis. OHEH, DMR, DSMRC, CEO, CID labs are detecting chemical events in human.	(2) Hiring of international consultants for the development (2 persons for Data information system) (2 international Consultant, 3 days.)	National			N	1 * 3 * (238920 + 660000) + 1 * 1584000 = 4280760	1 * 3 * (238920 + 660000) + 1 * 1584000 = 4280760	4,280,760	4,280,760	4,280,760	4,280,760	2	Number = 1 ; No of Days : 3 ; Per diem = 238920 ; Daily rate = 660000 ; Travel = 1584000	8,561,520	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/ framework/ Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitored and Evaluated)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Total Cost Year in Local Currency				
											2018	2019	2020	2021	2022
		Chemical Team Leading persons		(3) Visit to related agencies for desk review and assessment of current situation. (3 person, 7 days per visit for 15 agencies, 1 time)	Sub-national	Get related information. Obtain coordination. Increased number and motivation of participants in subsequent meetings.	Travel allowances	N		3 * 7 * 31000 + 3 * 2,042,000 95000 + 1 * 132000 * 7 + 7 * 1 * 26000 = 2042000	-	-	-	-	30,630,000
		Surveillance system: MoHS (National PHECC, OHH, CEI (Budget line), MoD, MoHA, MoNREC, Development Committees, Ministry of transport, Ministry of Industry	Data reporting is being done but not on regular basis.	(4) Mid level workshop to finalize Guidelines or Manuals or Mechanism for reporting and data sharing system and -proposing authority/ institute/ agency with primary responsibility for chemicals and surveillance/ monitoring. - Planning for meeting of higher level authorities who can make policy. (25 persons, 10 Away, 2 days, 2 times)	National	Finalized SOP for surveillance system. Meeting of higher level authorities done.	Need internal consultant and/or national advisor (Data information system 2 persons)	N		(9000* (25 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000true + 10000true) + 25 * 2500(true) * 1 + 0 + 0	-	-	-	-	8,765,000
		Chemical Team Leading persons		(5) Conducted Visit to related agencies for field testing of Guideline/Manual/SOPs (3 person, 7 days per visit for 15 agencies, 2 times)	Sub-national	Get related information. Obtain coordination. Increased number and motivation of participants in subsequent meetings.	Travel allowances	N		3 * 7 * 31000 + 3 * 2,042,000 95000 + 1 * 132000 * 7 + 7 * 1 * 26000 = 3799000	-	-	-	-	61,260,000
		MoHS, MoD, MoHA, MoNREC, Ministry of Industry, Development Committees, Ministry of Transport, Ministry of Education		(6) Awareness and Dissemination Meeting (Higher level persons) on finalized Guidelines or Manuals or Mechanism for reporting and data sharing system; and -proposing authority/ institute/ agency with primary responsibility for chemicals and surveillance/ monitoring with higher level authorities who can make decision. (25 persons, 10 Away, 3 days, 1 times)	National	SOP is approved. MOU is signed.	Repeated communication and revision.	N		(9000* (25 - 10) * 3 + 10 * 5 * 30000 + 10 * 95000 + 3 * 25000 (True) + 25 * 3 * (15000true + 10000true) + 25 * 2500(true) * 1 + 0 + 0	-	-	-	-	5,692,500

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

4	Develop SOP (guidelines or manuals) on the surveillance and assessment of chemical events, intoxication and poisoning and to be in place - Establishment of laboratory with necessary equipments, testkits, reagents and supplies;	MoHS, MoD, MoHA, MoNREC, Ministry of Industry, Development Committees, Ministry of Transport, Ministry of Education	Upgrading of existing Laboratory and capacities	(1) Procurement of water, soil and air quality testing equipment, FTIR, LCMS, HPLC, IAS, UV and accessories	National	Respective Laboratories become operational to detect targeted chemical	Human resource, Financial resource (budget), Approval	N	4,612,422,600	4,612,422,600	4,612,422,600	4,612,422,600	4,612,422,600	4,612,422,600	4,612,422,600	4,612,422,600	- 4,612,422,600		1	1	1	1	18,449,690,400
				(2) Procurement of GC, GC/MSMS, IPC OES and ICP MS	National	Human resource, Financial resource (budget), Approval	N	4,452,492,426									- 4,452,492,426		1				4,452,492,426
				(3) Procurement of reagents and supplies for water and soil testing	National	Human resource, Financial resource (budget), Approval	N	22,724,880									- 22,724,880		1				22,724,880
				(4) Construction of Infrastructure for focal laboratory.	National	Human resource, Financial resource (budget), Approval	N	78,000,000									- 78,000,000		1				78,000,000
				(5) Procurement of water and soil quality testing equipment and accessories for focal laboratory	Sub-national	Respective Laboratories become operational to detect targeted chemical	Human resource, Financial resource (budget), Approval	N	504,119,600								- 504,119,600		1	1	1	1	504,119,600
				(6) Procurement of water and soil quality testing reagents and supplies for focal laboratory	National	Human resource, Financial resource (budget), Approval	N	45,449,760									- 45,449,760		1				45,449,760
				(7) Procurement of air quality testing equipment and HPLCs for focal laboratory	National	Human resource, Financial resource (budget), Approval	N	2,208,091,700									- 2,208,091,700		1				2,208,091,700
				(8) Procurement of GCs and ICPS for focal laboratory	National	Human resource, Financial resource (budget), Approval	N	2,213,166,350									- 2,213,166,350		1				2,213,166,350
				(9) Procurement of reagents and supplies for focal laboratory	National	Human resource, Financial resource (budget), Approval	N	101,061,212									- 101,061,212		1	1	1	1	101,061,212
																							404,244,848

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/ framework/ Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency						
												2018	2019	2020	2021	2022	TOTAL	
5	Develop SOP (guidelines or manuals) on the surveillance and assessment of chemical events, intoxication and poisoning) and to be in place - capacity building and Human Resources			(1) HR (10 persons) for focal laboratory (2) Medicin : 500000 : 48 Months, 8 Infirmier : 400000 : 48 Months	National	"Output indicators (Monitoring and Evaluation)"	Human resource, Financial resource (budget), Approval	N		50,400,000 57,103,200 2,886,000	1 1 1 1 0 0 0 0 1 1 2 2 8 9 0 1 2	2018	2019	2020	2021	2022	TOTAL	
				(2) International consultant for focal laboratories (2 persons, 30 days)	National		Human resource, Financial resource (budget), Approval	N		57,103,200 2* 1584000 = 57103200	1		57,103,200	-	-	-	-	57,103,200
				(3) Local consultant for focal laboratory (2 persons, 240 days)	National		Human resource, Financial resource (budget), Approval	N		2* 240 * (3000 + 3000) + 2* 3000 = 2886000	1 1 1 1		2,886,000	2,886,000	2,886,000	2,886,000	2,886,000	11,544,000
		CEU	Yearly Budgeting for regular activities	(4) Advocacy Meeting on budget planning for reagents, consumables, sampling materials, logistics (transport, communication), maintenance, and data reporting and sharing system in order to be in place for all actions by using the action plans and resources (70 participant, 30 Away, 1 day, 1 time)	National	Budget approved from Parliament Number of Meetings done	Approval	N		(9000* (70 - 30) + 30 * 30000 + 30 * 95000 + 1 * 250000 (True) + 70 * 1 * (15000True + 10000True) + 70 * 25000True) * 1 + 0 + 0	1 1 1	8,085,000	8,085,000	8,085,000	-	-	-	24,255,000
		Respective Departments and Focal Department		(5) Specialized Laboratory Training for relevant staffs (35 persons, 10 Away, 30 days x 2 times)	National	Number of staff trained to perform test runs for 2 times	Need international consultant/ trainer (Laboratory expert x 4 persons)	N		(9000* (35 - 10) * 30 + 10 * 32 * 30000 + 10 * 95000 + 30 * 250000 (True) + 35 * 30 * (15000True + 10000True) + 35 * 25000True) * 1 + 0 + 0	2 2 2	-	-	102,275,000	102,275,000	102,275,000	-	306,825,000
		Respective Departments and Focal Department		(6) Surveillance Training for relevant staffs (25 persons, 10 Away, 5 days x 2 times)	National	Number of staff trained to perform data management	Need international trainer (Surveillance 2, Data management 1)	N		(9000* (25 - 10) * 5 + 10 * 7 * 30000 + 10 * 95000 + 5 * 250000 (True) + 25 * 5 * (15000True + 10000True) + 25 * 25000True) * 1 + 0 + 0	2 2 2	-	16,325,000	16,325,000	16,325,000	16,325,000	16,325,000	65,300,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

6	Develop SOP (guidelines or manuals) on the management of chemical events, intoxication and poisoning and to be in place: CBRNE Response	MoHA (Myanmar Police Force, Myanmar Fire Department Task Force, General Administration Department), MoHS, MoD, MoNREC, MoSWRR, Private Health Care Centres and NGOs (including Myanmar Red Cross Association) which have ambulance facilities.	Got some training and exercises for response. Some facilities at Myanmar Fire Department Task Force and MoD for response. Ambulance facilities are present but not well coordinated.	(1) Mid level meeting and workshop to develop guidelines or manuals or SOP for management of important and relevant chemical events for CBRN response and including training modules: - including mapping, collaboration, standardizing of management methods, sharing of facilities, equipment, supply, and logistics and, - proposing authority/ institute/ agency with primary responsibility for chemical response in different situation. (25 persons, 10 Away, 2 days, 6 times)	National	SOP drafted, Inventory Mapping, Point out primary responsible agency	Need international consultant/trainer (CBRN response 2 persons, inventory mapping software 1 person)	N	4,382,500 * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True * 1 + 0 + 0	(9000* (25 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 50000, Printing costs = 0, Disseminating costs = 0	3	13,147,500	13,147,500	-	-	26,295,000
				(2) Mid level meeting to finalize guidelines or manuals or SOP for management of important and relevant chemical events for CBRN response: - including mapping, collaboration, standardizing of management methods, sharing of facilities, equipment, supply, and logistics and, - proposing authority/ institute/ agency with primary responsibility for chemical response in different situation. (25 persons, 10 Away, 2 days, 1 times)	National	SOP is finalized. Meeting of higher level authorities is done.	Need international consultant/trainer (CBRN response 2 persons, inventory mapping software 1 person)	N	4,382,500 * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0	(9000* (25 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 50000, Printing costs = 0, Disseminating costs = 0	1	4,382,500	4,382,500	-	-	4,382,500
				(3) Awareness and Dissemination Meeting (Higher level Authorities) who can make decision on finalized guidelines or manuals or SOP for management of important and relevant chemical events; - including mapping, collaboration, standardizing of management methods, sharing of facilities, equipment, supply, and logistics and, - proposing authority/ institute/ agency with primary responsibility for chemical response in different situation. (25 persons, 10 Away, 2 days, 1 times)	National	SOP is approved, MOU is signed.	Repeated communication and revision.	N	4,382,500 * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0	(9000* (25 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 50000, Printing costs = 0, Disseminating costs = 0	1	4,382,500	4,382,500	-	-	4,382,500

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	Responsible authority(s) for implementation including budget line holder	Related existing plan/ framework/ Programme or on going activities	Detailed activities (input description for costing)	Where is the action to be implemented (National or sub-national)	Output indicators (Monitoring and Evaluation)	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	Estimated cost (Local currency)	Total Cost Year in Local Currency				
											2018	2019	2020	2021	2022
				(4) Procurement of necessary equipment and accessories for detection and response of CBRN	Sub-national			N	3,361,500,000	-	3,361,500,000	-	-	-	3,361,500,000
		Respective Departments		(5) Procurement of necessary consumables for detection and response of CBRN	Sub-national	Respective department become operational to respond to targeted chemical	To make procurement in time and human resources	N	81,000,000	-	81,000,000	81,000,000	81,000,000	81,000,000	243,000,000
		Focal Department for chemical emergency response		(6) Advocacy Meeting on budget planning for detection and Emergency response of CBRN (70 participants, 30 Away, 1 day, 1 times) This activity will be incorporated with other advocacy meetin Budget planning above CE.T.5.4)	National	Budget approved from Parliament		N	(9000* (70 - 30) *1 + 30 * 3 * 30000 + 30 * 95000 + 1 * 25000 (True) + 70 * 1 * (15000)True + 10000True) + 70 * 2500 (True) * 1 + 0 + 0	-	-	-	-	-	-
		Respective Departments and Focal Department	Already done some local and foreign training. But not well integrated among agencies.	(7) Conduct CBRN Response Training for relevant staff (25 persons, 10 Away, 5 days, 2 times)	National	Number trainings and staff trained, CBRN response team formed and coordinated.	Need international consultant/trainer (CBRN 2)	N	8,162,500 * 5 + 10 * 7 * 30000 + 10 * 95000 + 5 * 25000 (True) + 25 * 5 * (15000)True + 10000True) + 25 * 2500 (True) * 1 + 0 + 0	16,325,000	16,325,000	16,325,000	16,325,000	16,325,000	32,650,000
		Respective Departments and Focal Department		(8) Conduct CBRN Response Simulation Exercise and Drills regularly (25 persons, 10 Away, 5 days, 2 times)	National	CBRN response team well-coordinated and prepared.	Need international consultant/trainer (CBRN 2)	N	(9000* (25 - 10) * 5 + 10 * 7 * 30000 + 10 * 95000 + 5 * 25000 (True) + 25 * 5 * (15000)True + 10000True) + 25 * 2500 (True) * 1 + 0 + 0	16,325,000	16,325,000	16,325,000	16,325,000	16,325,000	65,300,000
7	Develop SOP (guidelines or manuals) on the management of chemical events, intoxication and poisoning and to be in place: Poisoning in human	OHEH, National Poison Control Centre (NPC) at DMR, Poison Treatment Centre (PTC) at NVGH, States and Regions Hospitals	Already done some treatment, referral, reporting	(1) Mid level meeting to set up organization, draw Poison Diagnosis and Treatment Guideline, and Reporting system Poisoning in Human including training modules (25 persons, 10 Away, 3 days, 3 times)	Sub-national		International consultant in poison management (2 persons)	N	5542500 (9000* (25 - 10) * 3 + 10 * 5 * 30000 + 10 * 95000 + 3 * 25000 (True) + 25 * 3 * (15000)True + 10000True) + 25 * 2500 (True) * 1 + 0 + 0	16,627,500	-	-	-	-	16,627,500

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

	Already done some treatment, referral, reporting	OHEH, National Poison Control Centre (NPC) at DMR, Poison Treatment Centre (PTC) at WGH, States and Regio- ins Hospitals	(2) Hiring of international consultant for set up organi- zation, draw Poison Diagnosis and Treatment Guideline, and reporting system Poisoning in Human (2 international Consultant, 7 days)	National			N	7,876,440 $1 * 7 * (238920 + 660000) + 1 * 1584000 = 7876440$		Number = 1 ; No of Days : 7, Per diem = 238920 ; Daily rate = 660000; Travel = 1584000	2	-	-	-	-	-	15,752,880	-	15,752,880	
			(3) Mid level meeting to Finalize setting up organization, draw Poison Diagnosis and Treatment Guideline, and reporting system Poisoning in Human (25 persons, 10 Away, 3 days, 2 times)	Sub-national	International consultant in poison management (2 persons)		N	5542500 $(9000 * (25 - 10) * 3 + 10 * 5 * 30000 + 10 * 95000 + 3 * 25000) (True) + 25 * 3 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0$		1 Training : Per diem = 9000 Participants = 25 Days = 3; Participants away = 10 Days away = 5 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	2	-	-	-	-	-	11,085,000	-	11,085,000	
			(4) Awareness and Desemination Meeting (Higher level Authorities) who can make decision on finalized Finalize setting up organization, draw Poison Diagnosis and Treatment Guideline, and reporting system Poisoning in Human (25 persons, 10 Away, 2 days, 1 times)	National	Repeated communication and revision.	SOP is approved. MOU is signed.	N	4,382,500 $(9000 * (25 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 25000) (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0$		1 Meeting : Per diem = 9000 Participants = 25 Days = 2; Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Print Dis = 50000; Printing costs = 0; Disseminating costs = 0	1	-	-	-	-	4,382,500	-	4,382,500		
			(5) International Training Program on poison management for relevant staff (2 persons, 20 days, 2 times per year)	Sub-national	Timely approval and processing		N	13,500,000			2 2 2 2	-	-	-	-	-	27,000,000	27,000,000	108,000,000	
			(6) Local trainings for poison management (25 persons, 10 Away, 5 days, 3 times per year)	Sub-national	International consultant in poison management (2 persons)		N	8,162,500 $(9000 * (25 - 10) * 5 + 10 * 7 * 30000 + 10 * 95000 + 5 * 25000) (True) + 25 * 5 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0$		1 Training : Per diem = 9000 Participants = 25 Days = 5; Participants away = 10 Days away = 7 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	3 3 3 3	-	-	-	-	24,487,500	24,487,500	97,950,000		
			(7) Conduct Supervisory Visit (4 persons, 5 days, 16 times)		Tight schedules		N	1,790,000 $4 * 5 * 31000 + 4 * 1,790,000 95000 + 1 * 132000 * 5 + 5 * 1 * 26000 = 1790000$			16 16 16 16	-	-	-	-	-	28,640,000	28,640,000	114,560,000	
			(8) Annual Coordination and Evaluation Meeting the whole action plan (JEE Meeting)				N	11,380,000 $(9000 * (60 - 20) * 3 + 20 * 5 * 30000 + 20 * 95000 + 3 * 25000) (True) + 60 * 3 * (15000True + 10000True) + 60 * 2500True) * 1 + 0 + 0$		1 Meeting : Per diem = 9000 Participants = 60 Days = 3; Participants away = 20 Days away = 5 Diem away = 30000 Travel costs participants away = 95000; Tea break = 10000, Lunch = 15000, Stationary = 2500; Venue = 250000; Printing costs = 0; Disseminating costs = 0	3	-	-	-	-	-	-	34,140,000	-	34,140,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

JEE Indicator		Enabling environment is in place for management of chemical events														
JEE Scores		1														
JEE recommendations		* Finalize and approve the national CBRN contingency plan, which defines authorities, roles, and responsibilities across the whole of government for chemical event surveillance, alert, and response * Develop SOPs for chemical event detection, assessment, and response operations * Develop an integrated national chemical surveillance system, which incorporates lab analysis and centralized reporting of chemical events to the national PHEOC														
Objective		* To strengthen Multi-sectoral Integrated National Response to Chemical events or emergencies														
No	Summary of Planned Activities at National Level (Strategic actions)	Responsible authority(s) for implementation including budget line holder	Related existing plan/ framework or on going activities	Detailed activities (input description for costing)	Where is the action to be implemented (National or sub-national)	Output indicators (Monitoring and Evaluation)	Comments or Potential challenges	Existing budget (Y/n)	Existing budget source (government, donor?)	Estimated cost (Local currency)	Year of implementation	Total Cost Year in Local Currency				
												2018	2019	2020	2021	2022
1	National policies or plans or legislation for chemical event surveillance alert	Ministry of Industry, City Development Committees, MoHS (OHH, States and Regions Health Departments), MoNREC, MoALI, MoHA (General Administration Department, Myanmar Police Force), MoD, Atomy General Office	CBRN Country Planning	(1) Meeting on getting Refined policies for import, registration and inventory of major hazard sites and facilities. Risk assessment to obtain list of hazardous chemicals of national importance. (25 persons, 10 Away, 2 days, 3 times)	National	Number of Meeting done. Refined policy for import, registration and inventory of major hazard sites and facilities done. Risk assessment to obtain list of hazardous chemicals of national importance done	International Technical experts and experiences	N		4,382,500 (9000* (25 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 250000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0	3	13,147,500	-	-	-	13,147,500
				(2) Hiring of International Consultant expert (2 International Consultant, 1 Chemical, 1 Inventory data, 4 days each times, 3 times)			N		5,179,680 (1 * 4 * 238920 + 238920 + 660000) + 1 * 1584000 = 5179680	6	31,078,080	-	-	-	31,078,080	
		Ministry of Industry, City Development Committees, MoHS (OHH, States and Regions Health Departments), MoNREC, MoALI, MoHA (General Administration Department, Myanmar Police Force), MoD, Atomy General Office		(3) Meeting to get Mechanisms/SOP for coverage, criteria of when and how to alert, duty rosters. Sharing information to respective departments and targeted populations for surveillance and alert (25 persons, 10 Away, 2 days, 3 times)		SOP for coverage, criteria of when and how to alert, duty rosters. Sharing information to respective departments and targeted populations for surveillance and alert	Multi-sectoral participations and interest	N	4,382,500 (9000* (25 - 10) * 2 + 10 * 4 * 30000 + 10 * 95000 + 2 * 250000 (True) + 25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 + 0 + 0	3	13,147,500	-	-	-	13,147,500	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

2	National policies or plans or legislation for chemical event response; Emergency response plan that defines the roles and responsibilities of relevant agencies.	Ministry of Industry, City Development Committees, MoHS (OHH, States and Regions Health Departments), MoNREC, MoLFI, MoHA (General Administration Department, Myanmar Police Force), MoD; Poison treatment, CBRNE Response team	CBRN Country Planning	(1) Meeting to get Mechanism/SOPs for chemical event response: Poison treatment, CBRNE Response, Risk assessment and prevention of recurrent event (25 persons, 10 Away, 2 days, 3 times)	SOP for chemical event response: Poison treatment, CBRNE Response, Risk assessment and prevention of recurrent event	N	4,382,500 * 2 + 10 * 4 * 30000 + 2 * 250000 (True) + 25 * 2 * (15000True) + 10000True + 25 * 25000True * 1 + 0 + 0	(9000 * 25 - 10) + 10 * 95000 + 2 * 250000 (True) + 25 * 2 * (15000True) + 10000True + 25 * 25000True * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Print Dis = 50000, Printing costs = 0, Disseminating costs = 0	3	13,147,500	-	-	-	13,147,500	
3	National policies and plans for chemical event surveillance alert and response. To be in place; Emergency response plan that defines the roles and responsibilities of relevant agencies in place including inventory of major hazard sites and facilities.	Ministry of Industry, City Development Committees, MoHS (OHH, States and Regions Health Departments), MoNREC, MoLFI, MoHA (General Administration Department, Myanmar Police Force), MoD; Poison treatment, CBRNE Response team	(1) Conduct Pre-Event Public Education for awareness increased (4 times)	Type and Number of Pamphlet, Poster, TV and radio advertisement developed and produced	N	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	160,000,000
			(2) Conduct Simulation Exercise and drills on Mechanisms during chemical event response: Poison treatment, CBRNE Response, Risk assessment and prevention of recurrent event including coverage, criteria of when and how to alert, duty rosters, Sharing information to respective departments and targetted populations for surveillance and alert (50 persons, 30 Away, 5 days, 2 times per year)	(9000 * 50 - 30) + 30 * 95000 + 5 * 250000 (True) + 50 * 5 * (15000True) + 10000True + 50 * 25000True * 1 + 0 + 0	1 Meeting : Per diem = 9000 Participants = 50 Days = 5, Participants away = 30 Days away = 7 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	2	2	2	2	2	2	2	2	2	2	141,400,000

MATRIX FOR THE DEVELOPMENT OF NATIONAL ACTION PLAN FOR HEALTH SECURITY 2018 - 2022

Other IHR-related hazards and Points of Entry (PoE)

General Objective: To develop and sustain optimum capacity to prevent, detect and manage chemical events and radiation emergencies.

GOAL		Radiation Emergencies										Total Estimated cost (USD)
TECHNICAL AREA		Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies										2,238,841.78
JEE Indicator	RE.1	Radiation Emergencies										Total Estimated cost (Local currency) (Myab)
JEE Scores	1	Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies										Total cost per year of implementation
JEE recommendations	<ul style="list-style-type: none"> * Finalize and approve the national (CBRN contingency plan, which defines authorities, roles, and responsibilities across the whole of government for radiological event surveillance, alert, and response (to include designating a radiological / nuclear focal point for coordination and communication with the IHR/NFP) * Develop SOPs for radiation detection, assessment, and response operations * Develop an integrated national radiological surveillance system, which incorporates lab analysis and centralized reporting of radiological events to the national PHEOC 											501,475,520
Objective	To increase systems and capacity for management of radiological and nuclear emergencies										1,362,659,220	
No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of Implementation	Total Cost Year in Local Currency
1	Development of National Radiological/Nuclear Emergency Response Plan for detection, assessment and response to radiation emergencies	(DAE, MOE/MOHS, MOD, MOHA, Customs-MOF, MOSRR, Red Cross association, NGOs) and needs funded from International Organization	CBRN National Action Plan (waiting minister's permission) and then submit to parliament	(1) Ad-hoc/advocacy meeting with National Emergency response team for development of National Radiological/Nuclear Emergency Response Plan (25 persons, 10 Away, 2 days, 1 times)	National	Number of Meetings conducted Development of National Radiological/Nuclear Emergency Response Plan awarded	Time, interest, awareness and commitments by Stakeholders and Decision Makers	N	4,232,500	(9000* (25- 10) +2 * 10 * 4 * 30000 +10 * 95000 + 2 * 250000 (True) +25 * 2 * (15000True + 10000True) + 25 * 2500True) * 1 +0 +0	2018 2019 2020 2021 2022	4,232,500 - - - - 4,232,500
				(2) Hiring of international Consultant for development of National Radiological/ Nuclear Emergency Response Plan (2 International Consultant for 10 days - 2 weeks)	National	National Radiological/ Nuclear Emergency Response Plan drafted		N	10,573,200	1 * 10 * (238920 + 660000) + 1 * 1584000 = 10573200	2	21,146,400 - - - - 21,146,400
				(3) Meeting/Workshop on development and finalization of National Radiological/Nuclear Emergency Response Plan with Emergency working group members from relevant ministries and stakeholders (30 persons, 15 Away, 3 days, 1 times)	National	Number of Meetings conducted	Time, interest, awareness and commitments by Stakeholders and Decision Makers	N	7,155,000	(9000* (30- 15) +3 * 15 * 5 * 30000 + 15 * 95000 + 3 * 250000 (True) +30 * 3 * (15000True + 10000True) + 30 * 2500True) * 1 +0 +0	1	7,155,000 - - - - 7,155,000
												21,146,400 - - - - 21,146,400
												7,155,000 - - - - 7,155,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

2	To develop SOPs for the Management of Radiation Emergencies (including risk assessment, reporting, event confirmation and notification and investigation)	(DHE, MOE, MOHA, MOD, MOHA, Customs-MOF, MOSRR, Red Cross associated, NGOs) and needs funded from International Organization	CBRN National Action Plan (waiting minister's permission) and then submit to parliament	(4) Dissemination/advocacy awareness workshop on National Radiological/Nuclear Emergency Response Plan with Emergency working group members from relevant ministries and stakeholders (70 persons, 20 Away, 3 days, 1 times)	National	Number of Meeting conducted	Time, interest, awareness and commitments by Stakeholders and Decision Makers	N	12,425,000	$(9000 * 70 - 20) * 3 + 20 * 5 * 30000$ $+ 20 * 95000 + 3 * 250000$ (True) +70 $* 3 * (15000 \text{True} + 10000 \text{True}) + 70 * 2500 \text{True}) * 1$ $+ 0 + 0$	1 Meeting : Per diem = 9000 Participants = 70 Days = 3, Participants away = 20 Days away = 5, Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 25000, Printing costs = 0, Disseminating costs = 0	1	-	-	-	-	-	12,425,000	-	12,425,000
				(5) Awareness workshop on National Radiological/Nuclear Emergency Response Plan at township levels to concerned ministries and stakeholders 1 times each at Upper Myanmar and Lower Myanmar with Local experts (50 persons, 25 Away, 1 days, 1 times of each, 2 times per year)	Subnational level	Number of Workshops conducted	Time, interest, awareness and commitments by Stakeholders and Decision Makers	N	5,595,000	$(9000 * 50 - 20) * 1 + 20 * 3 * 30000$ $+ 20 * 95000 + 1 * 250000$ (True) +50 $* 1 * (15000 \text{True} + 10000 \text{True}) + 50 * 2500 \text{True}) * 1$ $+ 0 + 0$	1 Meeting : Per diem = 9000 Participants = 50 Days = 1, Participants away = 20 Days away = 3, Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 25000, Printing costs = 0, Disseminating costs = 0	2	-	-	-	-	-	11,190,000	-	11,190,000
				(6) Hiring of Local Consultant for (1) day Awareness workshop on National Radiological/Nuclear Emergency Response Plan at township levels (1 National Consultant, 3 days, 2 times in the first year of Trainings/Workshop)	National			N	840,000	$1 * 3 * (80000 + 200000) + 1 * 0 = 840000$	Number = 1; No of Days : 3, Per diem = 80000; Daily rate = 200000; Travel = 0	2	-	-	-	-	-	1,680,000	-	1,680,000
2	To develop SOPs for the Management of Radiation Emergencies (including risk assessment, reporting, event confirmation and notification and investigation)	(DHE, MOHA, MOD, MOHA, Customs-MOF, MOSRR, Red Cross associated, NGOs) and needs funded from International Organization	CBRN National Action Plan (waiting minister's permission) and then submit to parliament	(1) Meeting/Workshop on Developing, drafting and editing of SOPs for the management of Radiation Emergencies (including Risk Assessment, reporting, event confirmation, notification and investigation) with Emergency working group members from relevant ministries and stakeholders (30 participants, 15 Away, 2 days, 2 times)	National level	SoP for management of Radiation Emergencies drafted	Technical experts	N	5,570,000	$(9000 * 30 - 15) * 2 + 15 * 4 * 30000$ $+ 15 * 95000 + 2 * 250000$ (True) +30 $* 2 * (15000 \text{True} + 10000 \text{True}) + 30 * 2500 \text{True}) * 1$ $+ 0 + 0$	1 Workshop : Per diem = 9000 Participants = 30 Days = 2, Participants away = 15 Days away = 4, Diem away = 30000, Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 25000, Printing costs = 0, Disseminating costs = 0	2	-	-	-	-	-	11,140,000	-	11,140,000
				(2) Hiring of International Consultant for Development of SOPs for the management of Radiation Emergencies (1 International Consultant, 20 days - 1 Month)	National Level	SoP for management of Radiation Emergencies drafted	Technical experts	N	19,562,400	$1 * 20 * (238920 + 660000) + 1 * 1584000 = 19562400$	Number = 1; No of Days : 20, Per diem = 238920; Daily rate = 660000; Travel = 1584000	1	-	-	-	-	-	19,562,400	-	19,562,400
				(3) Workshop on finalization of SOPs for the management of Radiation Emergencies (30 persons, 15 Away, 2 days, 2 times)	National Level			N	5,570,000	$(9000 * 30 - 15) * 2 + 15 * 4 * 30000$ $+ 15 * 95000 + 2 * 250000$ (True) +30 $* 2 * (15000 \text{True} + 10000 \text{True}) + 30 * 2500 \text{True}) * 1$ $+ 0 + 0$	1 Workshop : Per diem = 9000 Participants = 30 Days = 2, Participants away = 15 Days away = 4, Diem away = 30000, Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationary = 2500, Venue = 25000, Printing costs = 0, Disseminating costs = 0	1	-	-	-	-	-	5,570,000	-	5,570,000

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	"Estimated cost (Local currency)"	Total Cost Year in Local Currency					
												2018	2019	2020	2021	2022	TOTAL
												2018	2019	2020	2021	2022	TOTAL
				(4) Dissemination/advocacy/Awareness/Training workshop on SoPs for the management of Radiation Emergencies including exercises with Emergency working group members from relevant ministries and stakeholders (70 persons, 20 Away, 3 days, 1 times)	National	Number of Meeting conducted	Time, interest, awareness and commitments by Stakeholders and Decision Makers	N		(9000* (70 - 20) + 20 * 5 * 30000 + 20 * 95000 + 3 * 250000 (True) + 70 * 3 * (15000True + 10000True) + 70 * 2500 (True)) * 1 + 0 + 0	12,425,000	12,425,000	-	-	-	12,425,000	
				(4) Training with exercises on SoPs for the management of Radiation Emergencies for reporting, event confirmation, notification/ investigation to relevant ministries and other stakeholders (30 persons, 3days, 2 times in first year and 1 times in consecutive year)	National/ Sub-National level	Number of Trainings conducted Number of Staff trained	Interest and practice utilization by Staff.	N		(9000* (30 - 15) + 3 * 15 * 5 * 30000 + 15 * 95000 + 3 * 250000 (True) + 30 * 3 * (15000True + 10000True) + 30 * 2500 (True)) * 1 + 0 + 0	7,155,000	14,310,000	7,155,000	7,155,000	7,155,000	35,775,000	
				(6) Drilling Exercises on SoPs for the management of Radiation Emergencies for reporting, event confirmation, notification/ investigation (30 persons, 15 Away, 2 days, 5 times per year)	Township level	Number of Trainings conducted Number of Staff trained	Interest and practice utilization by Staff.	N		(9000* (30 - 15) + 2 * 15 * 4 * 30000 + 15 * 95000 + 2 * 250000 (True) + 30 * 2 * (15000True + 10000True) + 30 * 2500 (True)) * 1 + 0 + 0	5,570,000	27,850,000	27,850,000	27,850,000	27,850,000	111,400,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

JEE Indicator		RE.2 Enabling environment is in place for management of radiation emergencies																	
JEE Scores		1																	
JEE recommendations * Finalize and approve the national CBRN contingency plan, which defines authorities, roles, and responsibilities across the whole of government for radiological event surveillance, alert, and response (to include designating a radiological / nuclear focal point for coordination and communication with the IHR NFP) * Develop SOPs for radiation detection, assessment, and response operations * Develop an integrated national radiological surveillance system, which incorporates lab analysis and centralized reporting of radiological events to the national PHEOC		* To empower stakeholder and implementers having strong supports and commitments for management of Radiation and nuclear emergencies/event																	
Objective																			
1	1. To develop National Authority for overseeing Radiological/ Nuclear Emergency Response Plan (DAE, MOHS, MOD, Custom dept, MLFRD, Red cross association, NGOs) 2. To designate IHR National Focal point for the Emergency Response Team	(DAE- MOE, MOHS, MOD, Customs- MOF, MOLFED, Red Cross association, NGOs) and needs funded from International Organization 2. IHR NFP should be the Director General of Atomic Energy.	(1) Coordination Meetings with relevant ministries and state holders to Organize the National Emergency Response (Authority) Team, Radiation Emergency Working Group, Designated National Focal Point (Unit) and their Objective, TOR (25 persons, 10 Away, 2 days, 2 times)	National Authority formed 2. IHR National Focal Point designated 3. Number of Meeting conducted	Y	G	(9000* (25 - 10) + 10 * 95000 + 2 * 250000 (True) + 25 * 2 * (15000 True + 10000 True) + 25 * 2500 True) * 1 + 0 + 0 4,282,500	1 Meeting : Per diem = 9000 Participants = 25 Days = 2, Participants away = 10 Days away = 4 Diem away = 30000 Travel costs participants away = 95000, Tea break = 10000, Lunch = 15000, Stationery = 2500, Venue = 250000, Printing costs = 0, Disseminating costs = 0	1	4	30	30	6,000,000	24,000,000	180,000,000	180,000,000	390,000,000	8,565,000	
2	Routine Surveillance/ Monitoring Activities for radiation	DAE- MOE Monitoring and surveillance on radiation is ongoing action to prevent emergencies	(1) Implementation of Environmental monitoring Station (Yagon Laboratory for export), rice, sea water, etc, at the Dept of Atomic Energy 1. Semi- Auto balance 2. Calibration Weight blocks 3. Automatic Voltage Stabiliser 4. SZ Puma (20 position) 5. DPS Coarse Sampling System 6. Black Carbon Metre (2) Conduct Surveillance on radiation for radiation users from MOHS, Industry, Agriculture, etc 1. Panasonic-Holder, Cover for XA Dosimeter 2. XA Dosimeter 3. Dry Cabinet 4. Computer & Accessories 5. IUPS 650VA (Metal) 6. Printer, Canon LP2900B (3) Regular Inspection of Radiation Facilities 1. Inspection Car 2. Radioactive source Long tong 3. shielded transport containers 4. Digital Survey meter 5. Electronic Personnel Dosimeter	DAE- MOE (Naypyitaw, Yagon) 1. Radio-activities monitoring Recorded systematically and report to minister DAE- MOE (Naypyitaw, Yagon) 1. Radio-activities monitoring Recorded systematically and report to minister DAE- MOE (Naypyitaw, Yagon) 1. Radio-activities monitoring Recorded systematically and report to minister	Y	G	5,665,000 (2019), 6,000,000 (2020), 180,000,000 (2020), 180,000,000 (2020)	1. Radio-activities monitoring, test kits, reagent, public awareness Recorded systematically and report to minister	1	4	30	30	6,000,000	24,000,000	180,000,000	180,000,000	390,000,000	8,565,000	

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

No	Summary of Planned Activities at National Level (Strategic actions)	"Responsible authority(s) for implementation including budget line holder"	Related existing plan/framework/Programme or on going activities	"Detailed activities (input description for costing)"	Where is the action to be implemented (National or sub-national)	"Output indicators (Monitoring and Evaluation)"	Comments or Potential challenges	Existing budget (y/n)	Existing budget source (government, donor?)	"Estimated cost (Local currency)"	Year of implementation	Total Cost Year in Local Currency					
												2018	2019	2020	2021	2022	TOTAL
												2 0 1 8	2 0 1 9	2 0 2 0	2 0 2 1	2 0 2 2	TOTAL
		DAE-MoE		(4) Regularly provision of Awareness program and Capacity building training to radiation users from MoHS, MoHA, MoB at Iangon DAE office Procurement of 1 Teaching Equipments (40 participants, 30 Away, 10 days 1 times per year)	Where is the action to be implemented (National or sub-national)	Number of awareness trainings and capacity building training conducted	Time and interest and cooperation by users	Y		27,250,000	1 1 1 1	27,250,000	27,250,000	27,250,000	109,000,000		
		DAE-MoE	Ongoing trainings	(5) Establishing Workshop/training/Meeting on the capacity building for Radiological Emergency Preparedness and response program to CBRN team members by International Atomic Energy Agency, EU-CBRN-COE, with assistant from 2 International Experts (30 participants, 10 Away, 2 days 1 times per year)	National level	Number of trainings/workshops/meetings conducted	Time and interest and cooperation by users	Y	IAEA International Atomic Energy Agency, EU-CBRN-COE,	5,570,000	1 1 1 1	5,570,000	5,570,000	5,570,000	22,280,000		
				(6) Hiring of international Consultant for Workshop/training/Meeting on the capacity building for Radiological Emergency Preparedness and response program to CBRN team members by International Atomic Energy Agency, EU-CBRN-COE (2 International Consultant for 4 days, 1 times per year for training)	National	National Radiological Nuclear Emergency Response Plan drafted	Time and interest and cooperation by users	Y	IAEA International Atomic Energy Agency, EU-CBRN-COE,	5,179,680	2 2 2 2	10,359,360	10,359,360	10,359,360	41,437,440		
				(7) Conduct Capacity building Training with Simulation exercises on Radiological Emergency Preparedness and response for CBRN members with assistance by 2 International Experts (30 persons, Away 10, 3 days, 1 times per year)	National	National Radiological Nuclear Emergency Response Plan drafted		N		6,125,000	1 1 1 1	6,125,000	6,125,000	6,125,000	24,500,000		
				(8) Hiring of International Consultant for Capacity building Training with Simulation exercises on Radiological Emergency Preparedness and response for CBRN members (2 International Consultant for 4 days, 1 times per year for training)	National	National Radiological Nuclear Emergency Response Plan drafted	Time and interest and cooperation by users	Y	IAEA International Atomic Energy Agency, EU-CBRN-COE,	5,179,680	2 2 2 2	10,359,360	10,359,360	10,359,360	41,437,440		

NATIONAL ACTION PLAN FOR HEALTH SECURITY (NAPHS)

3	1. To establish the Emergency Radiation monitoring Laboratory for surveillance and risk assessment and Establishment of Biosimetry service	CBRRN, National Radiological/Nuclear Emergency Plan, National Radiation Emergencies Management SOPs	(1) Establishment of Mobile system for Emergency monitoring and surveillance Procurement of equipments, IT, test kits, reagents, supplies, and commodities 1. Needed mobile system for Emergency monitoring and surveillance 2- High Purity Germanium (HpGe) detector 3- Sodium Iodide (NaI) detector. 4- Alpha/beta counting system with a simple changer 5- Liquid Scintillation Counting System (LSC) for low-level beta counting. 6- Standards (Mixed gamma in Marinell beaker, Radio-iodine in charcoal filter and filter paper, Am-241 (alpha emitter) on planchette, Cs-137 and Sr-90 (beta emitters) on planchette, LSC, H-3, C-14 and two radon in water standards 7- Portable detectors (Alpha Scintillation survey meters and probes, micro-R meters, Radionuclide identifiers with neutron detection capability, GM Survey pancake probes, Survey meters with extendable probes to reach rail cars, Air samplers with tripods and external battery supply) 8. sample collection tools 9- Communications (Two flat screen TVs, Satellite phone, Cellular phone service, Land lines and FAX machine, Direct TV Service) 10- Potassium Iodine (KI) tablets for emergency workers.	National Level, DAE, MoE	Essential Equipments and assessories procured. Number of Emergency Radiation Monitoring and surveillance	Approval, supports and commitments by Decision makers and Stakeholder as it is under planning (consideration) by DAE Difficulties in procurement of 1- HpGe detector 2. NaI (3x3 inch) 3. alpha-beta counting system 4. Radionuclide identifier 5. LSC Tricard 3180	N	88,200,000 225,000,000 (2019), 88,200,600 (2020), 736,0500,000 (2020), 736,0500,000 (2020),	88,200,000	732,060,000	732,060,000	229,320,000	-	2.6	1	1	1	1	1	1	21,600,000
4	Public Awareness Program	Posters, Pamphlets, Sticker currently using in awareness for users	(1) Development of Poster (3000), pamphlet (10000) ,Guesters (3000) on Radiation Hazards and Protections	National	Number of IEC materials on Public awareness for Radiation Emergencies printed and distributed	Technical Inputs for IEC development	N	5,400,000 Poster 3000*5000, Pamphlet 10000*50, Sticker 3000*50, 3000*1000 ,distribution 5*50000	5,400,000	5,400,000	5,400,000	5,400,000	-	1	1	1	1	1	1	21,600,000	

